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Disruption of creative marketing supply chain due to generative artificial intelligence.

Justin Evertse

A research proposal submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management in the field of Digital Business

Johannesburg, 2022

ABSTRACT

This study explores the transformative impact of generative AI on the creative marketing industry's supply chain process, focusing on the challenges and opportunities presented by AI in content creation. The advent of AI has revolutionised the way content is generated, leading to a paradigm shift in the creative landscape.

The study investigated the implications of this shift for creativity, originality, and efficiency within the marketing and advertising sectors. Through a qualitative research methodology, including interviews with various industry stakeholders, this study delved into the nuances of AI's integration into creative processes and its effects on workflow, production, and distribution channels within the creative marketing industry.

The research is grounded in theories of disruptive innovation and technology organisation enterprise theory, providing a theoretical framework to analyse the impact of AI technologies on traditional creative and marketing practices. It addresses crucial concerns such as the ownership of AI-generated content, the role of human creativity in the age of AI, and the ethical considerations surrounding AI in creative industries. The study's findings highlight a dual impact: AI as a tool for enhancing creative processes, enabling more efficient and diverse content generation, and AI as a disruptor, challenging traditional roles and workflows within the industry.

Significantly, the study identifies a shift towards more collaborative models between AI and human creativity, suggesting that the future of the creative marketing industry lies in leveraging AI to augment human talent rather than replace it. This balance presents opportunities for innovation and new forms of content creation but also necessitates a re-evaluation of skill sets, job roles, and industry standards to adapt to an AI-integrated environment. The research underscores the importance of ethical guidelines and industry-wide discussions on the use of AI, advocating for policies that support creativity, protect intellectual property, and ensure fair competition in the evolving landscape.

In conclusion, this qualitative research study provides an insightful analysis of the complex dynamics between generative AI and the creative marketing industry. It offers a comprehensive understanding of the challenges and opportunities AI presents,

emphasising the need for a strategic approach to integrate AI technologies. By highlighting the potential for AI to augment human creativity and transform supply chain processes, the study contributes valuable perspectives to the ongoing discourse on the future of creativity and technology in marketing and advertising.

KEYWORDS

Digital business, AI, disruption, creative marketing, supply chain, suppliers, providers, agency, production, processes, procurement, deliverables, key performance indicators, key performance areas, technology onboarding, small and medium business, freelancer impact, third-party supplier impact, marketing environment, customer empowerment, platform commerce, social media, tutorials, micro technology, cloud computing, pattern recognition, scalable technology, ownership, agency profitability, macro marketing environment, paid media, above the line, through the line, below the line, advertising verticals, human capital

DECLARATION

I, Justin Evertse, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the field of Digital Business at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Name: Justin Evertse

Signature: 

Signed at: Sandton

On the 20th day of February, 2024

DEDICATION

A heartfelt tribute to my incredible and supportive family - Danielle, Bayley, and Aiden Evertse - whose unwavering love and encouragement have made all of this possible.

Brian, your belief in my ability to complete this monumental task, even during moments of self-doubt, has empowered me to tackle challenges head-on. Thanks for never giving up.

To Gia Girard, walking alongside you on this journey has been an incredible privilege. Through the highs and lows, your steadfast companionship has been my anchor. Here’s to the next chapter.

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LIST OF ACRONYMS

AI	Artificial intelligence	Simulates human intelligence
API	Application programming interface	Allows software communication
AR	Augmented reality	Digital overlay on real world
CDM	Content Distribution Management	Platform for user engagement dynamics
CRM	Customer relationship management	Manages the company's customer interactions
ERP	Enterprise resource planning	Manages business processes
GPT	Generative pre-trained transformer	AI for text understanding/generation
IoE	Internet of everything	Connection of people, process, data, things
IoT	Internet of things	Network of interconnected devices
ML	Machine learning	AI that learns from data
NLP	Natural language processing	Understands human language
RPA	Robotic process automation	Automates business processes
SaaS	Software as a service	Cloud-based software service
SEM	Search engine marketing	Increases visibility in search results
SEO	Search engine optimisation	Improves website traffic from search engines
UX/UI	User experience/user interface	Design for human-computer interaction
VR	Virtual reality	3D computer-generated environment
VUI	Voice user interface	Voice command interface

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 Statement of purpose

The author created an empirical research study on the factors influencing the current production supply chain process in the creative marketing industry with the rapid introduction of generative artificial intelligence (AI).

1.2 Background to the study

The creative marketing industry has experienced a remarkable transformation in recent years with the rapid advancement of AI technologies. The author aimed to explore the profound impact of AI on the industry's acceleration and its subsequent effect on supply chain workflows. By leveraging AI capabilities, marketers can now streamline their creative processes, enhance customer experiences, and optimise supply chain efficiencies.

The introduction of AI in the creative marketing industry has revolutionised various aspects of the workflow. Machine learning algorithms enable marketers to analyse vast amounts of data, providing invaluable insights into consumer preferences, behaviour patterns, and market trends. This data-driven approach allows marketers to create highly targeted and personalised marketing campaigns, resulting in improved customer engagement and conversion rates. As a result, the demand for AI-powered marketing solutions has skyrocketed, accelerating the industry's growth.

One of the significant areas where AI has made a substantial impact is content creation. AI-powered tools such as natural language processing and image recognition have transformed the way content is generated. Automated content creation platforms enable marketers to produce engaging and relevant content at scale, reducing the time and effort required to create and distribute marketing materials. This acceleration in content creation has increased productivity and allowed marketers to experiment with various creative ideas, leading to enhanced brand messaging and storytelling.

Moreover, AI has facilitated the optimisation of supply chain workflows in the creative marketing industry. Traditionally, managing the supply chain involved multiple stakeholders, complex logistics, and significant manual efforts. However, with the

advent of AI, marketers can now leverage intelligent algorithms to automate and streamline supply chain processes. AI-powered supply chain management systems can forecast demand, optimise inventory levels, and improve logistics and distribution strategies. These advancements have resulted in reduced costs, improved inventory management, and enhanced overall efficiency in the creative marketing supply chain.

In addition, AI has revolutionised customer engagement and experience through the integration of chatbots and virtual assistants. These AI-driven tools can interact with customers in real-time, providing instant responses and personalised recommendations. By automating customer service and support functions, marketers can efficiently handle large volumes of inquiries, improving customer satisfaction and loyalty. The integration of AI-powered chatbots into supply chain workflows has also enabled seamless order tracking, delivery notifications, and post-purchase assistance, ensuring a smooth customer journey.

Furthermore, AI has brought significant advancements in data analytics, enabling marketers to gain deeper insights into consumer behaviour and preferences. By leveraging AI algorithms, marketers can analyse vast datasets to identify patterns, trends, and correlations, helping them make data-driven decisions. These insights enable marketers to optimise supply chain workflows by understanding demand fluctuations, forecasting inventory needs, and identifying potential bottlenecks. The integration of AI-powered analytics tools enhances agility, responsiveness, and adaptability within the supply chain, allowing marketers to meet customer demands more effectively.

In conclusion, the advent of AI has accelerated the creative marketing industry by revolutionising content creation, enhancing customer experiences, and optimising supply chain workflows. AI-powered technologies enable marketers to create highly targeted and personalised marketing campaigns, resulting in improved customer engagement and conversion rates. The integration of AI into supply chain workflows has streamlined operations, reduced costs, and improved overall efficiency. As the creative marketing industry continues to embrace AI, it is poised to witness further advancements, transforming the way businesses engage with customers and manage their supply chain processes.

1.3 Research problem

The marketing and advertising industry is currently in a process of rapid transformation, with the advent of AI making a clear rise in late 2022 into early 2023.

AI is often seen as a simple system of pattern recognition. This brings into question the origin of the original material that is being created and the ownership of this original product. Joanna Zylinska (Zylinska J. ,2020) offered the questions, “Can computers be creative? Is algorithmic art just a form of Candy Crush?”.

Nonetheless, with 3D generator technology such as Midjourney (Midjourney, n.d.), Firefly AI (Adobe, 2022) and many other open-source AI platforms available at a fairly inexpensive rate, the advertising industry known for its heavy billing could stand to lose market share as smaller agencies are able to create similar quality material at a lower price point.

The contrary argument is that larger agencies can downscale the number of internal employees while retaining the same level of quality of work provided in the past. McKinsey Research has shown that these workflow transformation challenges are fast becoming a reality, yet data is lacking in the South African context to better understand the potential effects (Chui, 2023). The author of this research report reviewed, with a process assessment, the supply chain knock-on effect currently happening in the industry and disrupting the supply chain.

Understanding these effects on the WEF’s (World Economic Forum, 2022) three key pillars of human technical skills that are used to keep production flowing in the marketing industry, namely:

- Internal resource
- Contract resource
- Third-party resources (potential disruptor) (World Economic Forum, 2022)

The author clarified the level of disruption to the production supply chain for stakeholders and the trends the industry will likely encounter in the next 12 to 24 months.

1.4 Research questions – Will Creative Generative Artificial Intelligence affect the agency and corporate marketing workforce

The marketing industry is currently being subjected to rapid disruption and transformation due to generative AI. The author researched the nature and scale of this disruptive impact on:

- Corporate marketing companies (largest creative internal resource, client ownership)
- Boutique agencies (disruptive competitor and potential collateral)
- Freelance professionals (increased quality and speed, potential job loss)

The research defined the potential outcome of this disruption and the new processes and procedures implemented that will redefine the supply chain of creative production, namely:

1. Will creative generative artificial intelligence affect the agency and corporate marketing workforce?
2. Will creative generative AI disrupt current creative processes?
3. Will creative generative AI change the process structures materially within the modern marketing environment in 24 months?

1.5 Rationale

When reviewing the topic, the author noted that in the marketing industry, significant reports and papers are being drafted about the future of the creative industry (Adobe, 082522_Future of Creativity, 2022; Adobe, Study Creators in the Creator Economy, 2022). When comparing reports from other sources (McKinsey, 2022; Harvard Business Review, 2022; PWC, 2022) and scholars (Nisreen Ameen, 2021; et al) that have investigated the impact of AI disruption in this sector, there was limited information about the supply chain knock-on effect and its impact on the stakeholders.

Many reports and documents have been written about supply chain disruption by AI (Wang Y, 2016; Christensen C. M., 1995) understanding that the nature of a workflow is greatly impacted through pattern recognition, generative intelligence and robotic process automation, largely influencing the supply chain functions.

The author noted that there was a lack of researchable information when bringing together two key topics: Any agency marks success by the ability to manage a client's creative expectations together with their physical and operational requirements. When adding an accelerated tool into this particular industry, it has been noted that the knock-on effect has not been largely discussed and published. (Burgoyne E. , 2013)

The knock-on effect in the supply chain for operational and distribution companies has been largely researched and understood as the nature of that particular function is non-creative. When reviewing creative technologies and productions, the outcomes produced focus largely on the creative and less on the operational. (Chopra S. ,et al, 2021)

From large organisations to small boutique agencies, the operations process is widely agreed upon by professionals within the industry to be of material consequence to a client's satisfaction and achievement of deliverables.

Herein, the research from both the key topics on this disruptive technology can be reviewed to correct the author's research feedback from key professionals and stakeholders within the industry to provide a better-converged knowledge of these two crucial factors.

1.6 Delimitations of the study

The study focused on qualitative feedback and key influencers and stakeholders within the marketing industry, namely:

1. Corporate agency
2. Boutique agency
3. Freelancer

The author focused on the internal and external supply chain functions, namely:

1. Internal staff
2. Third-party staff, namely
    - Party freelancers
    - Consultants
    - Business providers

The study addressed the disruption of the creative output for the creation of rich media (Meta, TikTok, and Google) and focused only on paid media. The paid media focus excludes organic content, influencers, and PR executions.

The study researched information from one of the following levels:

- Corporate agency
  - Managing director, and/or
  - Creative director
  - Project manager/director
- Boutique agency
  - Owner/director
  - Managing director
  - Creative director
- Freelancer
  - Video freelancer
  - Photography freelancer
  - Copywriter
  - Graphic designer

1.7 Definition of terms

Artificial intelligence (AI): AI refers to the development of computer systems or algorithms that have the ability to perform tasks that typically require human intelligence, such as learning, problem-solving, and decision-making, often using techniques like machine learning and natural language processing (Dobrev D. , 2012).

Workflows: Workflows refer to the sequence of activities, tasks, and processes involved in completing a specific project or achieving a particular goal within a creative marketing agency. Workflows can include creative ideation, content creation, approval processes, resource allocation, and project management.

Creative marketing agency: A creative marketing agency is a specialised company that provides services related to marketing and advertising. These agencies focus on creating and executing innovative and engaging marketing strategies, including

branding, content creation, digital marketing, and campaign development, to help businesses reach their target audience and achieve their marketing objectives.

Qualitative methodology: Qualitative methodology refers to an approach to research that focuses on understanding the subjective experiences, perspectives, and meanings of individuals. It involves collecting and analysing non-numerical data, such as interviews, observations, and textual materials, to uncover insights and generate in-depth understanding (Solís, 2020).

Roles of AI in workflows: AI workflow roles refer to the specific functions and contributions of AI within the creative marketing agency. The roles may encompass areas such as automation of repetitive tasks, data analysis and insights generation, personalisation and targeting, content generation, and optimisation of resource allocation (Feldman S, 2017).

1.8 Assumptions

1. Stakeholders are professionals who believe they have contextual knowledge to contribute from experience.
2. Respondents contribute a truthful and accurate opinion to the questions asked.
3. Creative production is assumed to require multiple disciplines to deploy a creative execution.
4. The author assumes that the sample of stakeholders that apply to the study comply with one of three factors, namely:
    a. Majority of internal resources with third-party specialty only
    b. Internal resources with third parties to supplement lacking disciplines.
    c. Standalone resource that only uses third-party products in multi-discipline content and provides services to the larger entities above.
5. Creative competence assumes that the stakeholders interviewed have a level of competence to contribute to the study.
6. Experience assumes that the stakeholders involved in the study have had interactions with the concept of AI.

1.9 Chapter outline

The study bridged two theoretical research knowledge bases, namely in the following verticals:

- Creative generative AI disruption
- Operational supply chain AI disruption

These verticals together will aim to better understand the current environment, provide research insight to the various levels of stakeholders on the current nature of the disruption, and contribute to the public knowledge on the operational adjustments that best practice decision makers are choosing.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction: Theory behind supply-chain disruption

In order to understand the basis of the literature review, it is important to understand the author's approach fundamentally. By studying the relative theories and discussing the disruption observed in the introduction of AI into supply-chain operations, a better understanding of the patterns of disruption that can affect the creative marketing industry is possible.

The author cross-referenced the qualitative data against the following theories to observe the outcomes in relation to the propositions of this study: theories of disruptive innovation (Christensen,1997), technology-organisation-environment (TOE) (Tornatzky, L. G., Fleischer, M, 1990), and modes of disruption (Armstrong, B., Lee G, 2023).

> "Particularly, Christensen's theory of disruptive innovation is a benchmark for understanding the factors reviewed when assessing a supply chain disruption".

2.2 Theories behind supply-chain/organisational disruption

The literature review assessed the research documentation in both fields of supply chain disruption by AI and acceleration of creative, generative AI in the creative marketing industry.

The bulk of information on creative AI available is provided by the United States and Europe, with some demonstratable knowledge from South Africa. The author has found that extensive theoretical research knowledge has been completed on supply chain management and the disruption created through AI and robotic process automation without the application to this particular vertical.

The literature review presents current demonstratable knowledge in both fields where the destruction has been researched significantly. The literature begins to bridge the gap between the current knowledge and how the future of human supply chain management in creative agencies will look in 2024.

- A theoretical review of creative generative AI
- A theoretical review of the disruption within the supply chain process with the advent of AI
- A review of the theories that govern disruption with the advent of a new technology
- A review of the theories that discuss innovation and adoption.

2.2.1 Theory of disruptive innovation

Clayton Christensen (Christensen C,1997) provides a framework for understanding how new entrants in a market can successfully challenge established incumbents. This theory can also be applied to supply chain disruption, where innovative practices or technologies can significantly alter the competitive landscape. The relationship between disruptive innovation and supply chain disruption can be explored through five pillars, which, while not directly labelled as such by Christensen (Christensen C,1997) in his original work, can be seen from his concepts for this context:

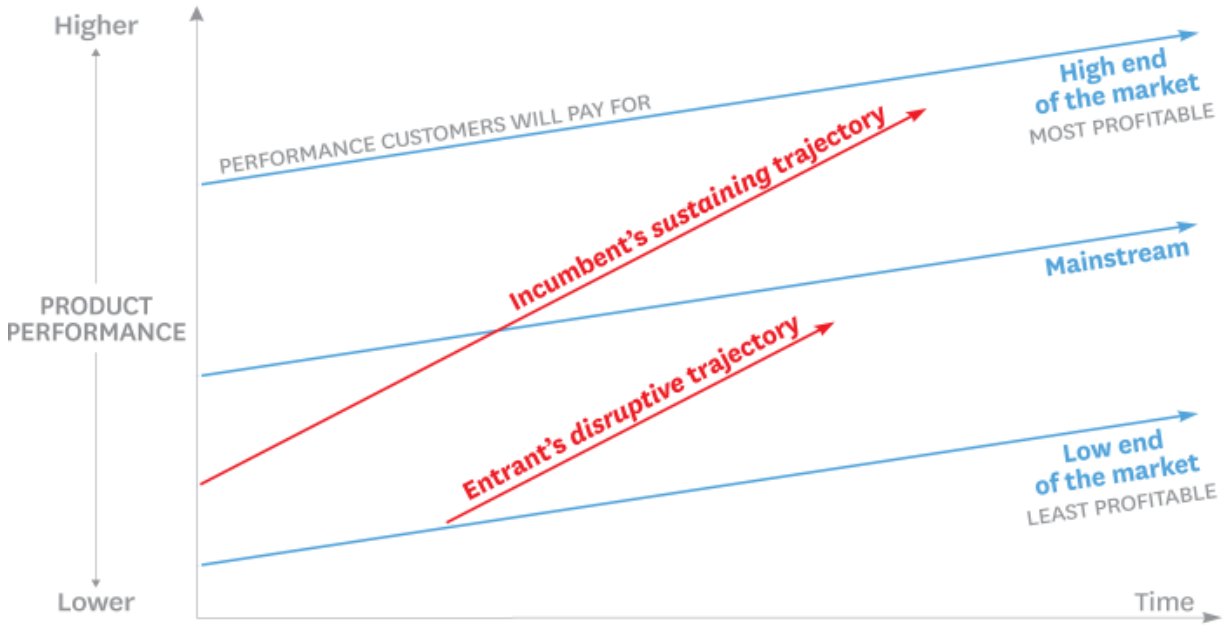


Figure 0.1: Clayton Christensen's (Christensen C,1997) theory of disruptive innovation

Technology enablers

At the heart of disruptive innovation is the role of emerging technologies (Christensen C.,1997). In supply chains, technology enablers such as blockchain, internet of things (IoT), AI, and advanced analytics can create new efficiencies, enhance transparency,

and improve responsiveness. These technologies can enable smaller players to leapfrog traditional barriers to entry or efficiency, disrupting established supply chain norms (Ivanov, 2019).

New market incumbents

Disruptive innovation often starts in niches or overlooked market segments. In supply chains, this could mean targeting underserved regions or industries with innovative logistics solutions, new business models (like direct-to-consumer approaches), or more sustainable supply chain practices. Over time, these new entrants can move upmarket and challenge established players across broader markets (Christensen C.M., et al, 2015).

Value network shifts

Disruptive innovation can change the way value is created and delivered within the supply chain. This involves redefining relationships between suppliers, manufacturers, distributors, and customers (Christensen C. M., et al 1995). For example, digital platforms can connect small suppliers directly with large buyers, bypassing traditional go-betweens. This shift can lead to more efficient supply chains that are more responsive to market demands.

Cost structure realignment

One of the effects of disruptive innovation is the alteration of the cost dynamics within an industry. In supply chains, innovations can lead to significant cost reductions through process improvements, automation, and elimination of waste. These changes can enable new entrants to offer similar or better services at lower prices, challenging incumbents who are tied to higher-cost structures. (Christensen, C., et al, 1995)

Customer demand and expectations

Disruptive innovation often changes customer expectations and demand patterns. In the context of supply chains, innovations can lead to higher expectations for speed, transparency, sustainability, and customisation. Companies that can leverage technology and new business models to meet these changing expectations can gain

a competitive edge, forcing traditional players to adapt or face obsolescence (Christensen, et al, 2004).

Further to this McKinsey & Company (La Berge, et al 2020) discussed how COVID-19 is changing consumer behaviour. The report discusses the acceleration of e-commerce due to the COVID-19 pandemic and the resulting shift in consumer expectations towards faster delivery services, highlighting the need for supply chains to adapt to these new demands for speed and efficiency.

Accenture produced a publication discussing the impact of Blockchain for Supply Chains and Logistics (Cutlan M, et al, 2019). This publication explores how blockchain technology is being used to increase transparency and traceability in supply chains, meeting consumers' growing demands for detailed information about the products they purchase.

Consideration

Understanding and applying Christensen's (Christen C.M, et al 2004) theory of disruptive innovation to supply chain disruption involves recognising how technological advancements and innovative business models can fundamentally change competitive dynamics.

Marketing agencies and corporate marketing departments will adapt their current supply chain processes to meet the new demands and price opportunities placed upon them by generative AI, and using these pillars, a more accurate assessment of potential outcomes is possible.

2.2.2 TOE framework: Relation to disruption in the marketing industry

Although originally not formulated specifically for supply chain disruption, the TOE framework can be effectively applied to understand how companies adapt to and integrate new technologies within their supply chains, facing disruptions and competitive pressures. Here is how each element of the TOE framework relates to supply chain disruption:

Technological context

The technological aspect of the TOE framework considers the internal and external technologies relevant to the organisation. In the context of supply chain disruption, this could include the adoption of advanced digital tools like AI, blockchain, IoT, and analytics to enhance visibility, efficiency, and resilience within the supply chain (Wang, 2016). Companies are compelled to adopt these technologies to cope with disruptions such as demand fluctuations, supply shortages, or logistical challenges.

Organisational context

The organisational aspect focuses on the characteristics and resources of the organisation, including its size, degree of centralisation, complexity, and the managerial structure that influences technology adoption decisions. In supply chain management, organisational readiness, culture, and resources determine a company's ability to implement new technologies and manage disruption. Firms with flexible, adaptive structures and a culture of innovation are better positioned to integrate disruptive technologies and maintain supply chain continuity (Chatterjee, 2021).

Environmental context

The environmental aspect involves the broader industry and market conditions, regulatory frameworks, and competitive pressures that affect an organisation's adoption of technology. Supply chain disruptions often prompt companies to adopt new technologies due to external pressures such as changing consumer demands, regulatory requirements for sustainability, or competitive actions. The environmental context can drive or hinder the adoption of disruptive technologies, influencing how companies respond to supply chain challenges (Srivastava, 2015).

Applying the TOE framework to the context of supply chain disruption offers a comprehensive lens through which to analyse the multifaceted challenges and opportunities presented by technological innovation. TOE application underscores the importance of aligning technology adoption with organisational capabilities and environmental dynamics to effectively manage and mitigate supply chain disruptions.

2.2.3 Armstrong and Lee's (Armstrong, B. & Lee, G.J., 2023) modes of disruption theory

The author used Armstrong and Lee's (Armstrong, B. & Lee, G.J., 2023) modes of disruption theory to analyse the effect of disruption and break it into three key elements and then sub-divided the key elements that define an organisation's value proposition.



Figure 2.2: (Armstrong, B. & Lee, G.J., 2023) modes of disruption theory

The modes of technological disruption are a framework that can improve the understanding of the deeper implications of the technological disruption created by creative generative AI in the marketing industry.

There are three major categories of disruption, namely:

- Demand disruption
- Market engagement disruption
- Supply and production disruption

Within the demand disruption category, the focus remains on product substitution and downstream substitution, as this is where creative generative AI has the highest impact.

Downstream substitution

Downstream substitution due to creative generative AI in the marketing industry refers to the process where generative AI technologies are increasingly being used to automate creative tasks that humans traditionally performed. This shift is significantly affecting various aspects of marketing, from content creation to campaign design, bringing both opportunities and challenges. Here are key areas impacted by this transformation:

Market engagement disruption

Creative generative AI also enables personalisation beyond what has been previously possible, generating unique content that resonates with individual preferences, behaviours, and previous interactions with a brand. This level of personalisation can significantly enhance customer engagement and conversion rates, providing a competitive edge to businesses that leverage it effectively.

Supply and production disruption

Creative generative AI can automate the creation of multiple variations of marketing materials for A/B testing, allowing marketers to quickly identify the most effective elements of a campaign. This can include variations in copy, images, layouts, and more, significantly reducing the time and cost associated with traditional testing methods.

By automating routine and repetitive creative tasks, generative AI allows marketing teams to focus on strategy, brand building, and other high-level tasks. This can lead to more innovative marketing approaches and a better allocation of human resources.

As generative AI takes on more creative tasks, the skill sets required in the marketing industry are shifting. Creativity remains essential, but there is an increasing need for skills in AI oversight, data analysis, and digital ethics. In addition, while some fear job

displacement, there is also the potential for job transformation, with new roles emerging in AI management, ethical oversight, and AI-augmented creative strategy.

2.3 Theory behind creative generative AI

The theories behind creative generative AI encompass a range of principles and approaches that aim to understand and replicate human creativity through machine learning and computational systems.

2.3.1 Computational creativity theory

Computational creativity theory explores the concept of machines exhibiting creative behaviour and generating novel and valuable outputs. It emphasises the ability of AI systems to go beyond mere data processing and mimic human-like creative thinking. This theory views creativity as a combined process where algorithms combine existing knowledge, ideas, and patterns in novel ways to generate new and innovative outputs. Computational creativity involves enabling machines to exhibit creative behaviours by exploring techniques such as neural networks, genetic algorithms, and evolutionary computation (Colton S, et al, 2020).

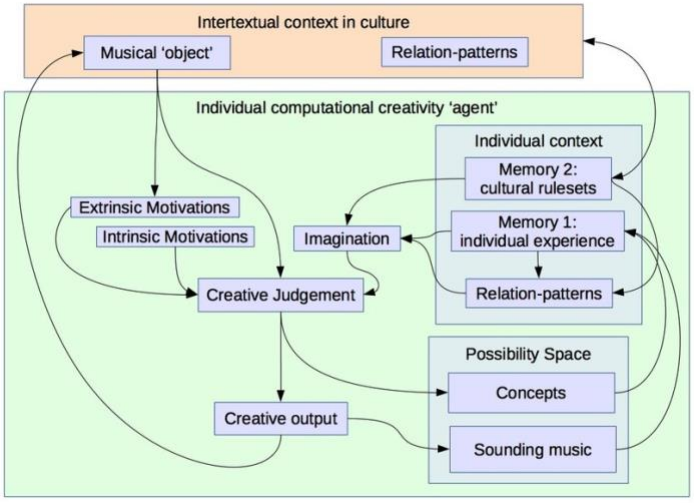


Figure 2.3: Computational creativity theory (Colton S, et al, 2020).

2.3.2 Cognitive psychology and cognitive science theories

Cognitive psychology and cognitive science theories provide insights into the underlying cognitive processes involved in human creativity. These theories emphasise the role of mental representations, problem-solving strategies, and cognitive processes such as memory, attention, and perception in creative thinking. Cognitive psychology is used to develop computational models that simulate these cognitive processes. By emulating human cognitive abilities, generative AI systems can replicate and extend human-like creative thinking processes, enabling the systems to generate novel and imaginative outputs (Gentner, 2010).

2.3.3 Information theory and Bayesian inference theory (Magum, 1997)

Although this theory is complex, it is crucial for the particular research study the author embarked upon, as this theory explores the more human nature of AI creativity.

Information theory and Bayesian inference theory offer theoretical frameworks for modelling creative generative AI systems. Information theory deals with the quantification and transmission of information, while Bayesian inference provides a mathematical framework for reasoning under uncertainty. These theories have been applied to generative AI systems by quantifying the novelty, surprise, and meaningfulness of generated outputs. By incorporating these theories, AI algorithms can assess the value and quality of creative outputs, allowing for the selection and refinement of the most promising and innovative ideas (Magum P, 1997).

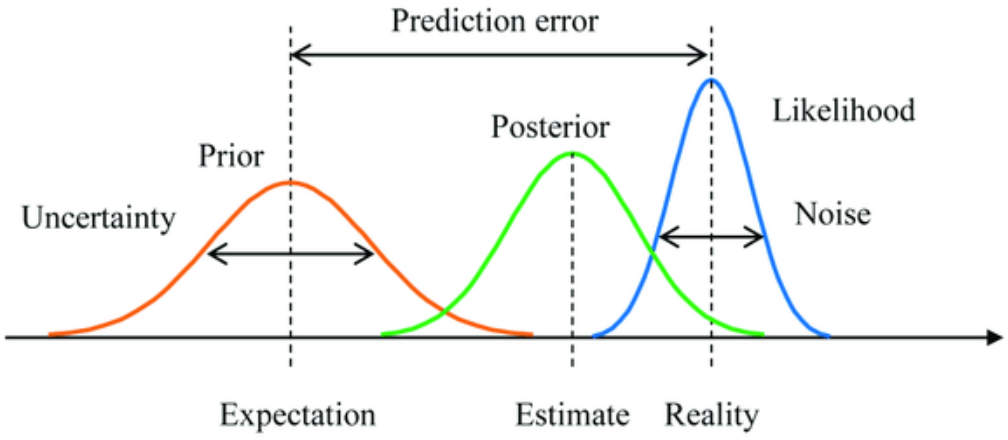


Figure 0.2: Bayesian inference theory (Magum P, 1997).

2.3.4 Theoretical connections

Information theory and Bayesian inference theory often intertwine in the development of creative generative AI systems. Algorithm approaches are combined with insights from cognitive psychology and information theory to create algorithms that can generate original, valuable, and human-like creative outputs.

By understanding and integrating these theories, the boundaries of machine creativity are pushed, enabling AI systems to contribute to various domains, including art, music, storytelling, and design. However, it is important to note that the field of creative generative AI is still evolving, and further research is needed to fully comprehend and replicate the intricacies of human creativity.

2.4 Propositions

2.4.1 1 : Despite hyper-personalisation, a more generalised communication narrative will begin to emerge due to aggregated sourcing of content

2.4.1.1 Theories on creativity

Classic computational theory, cognitive psychology/cognitive science theory and the Bayesian inference theory give theoretical frameworks to support how an AI might replicate creativity using an algorithm or pattern recognition.

2.5 2 : Although creative, the disruption in the next two years will be largely operational

2.5.1.1 Theory on supply chain disruption

Creative AI, when framed through the lens of Christensen's (Christen CM, 2004) theory of disruptive innovation, represents a paradigm shift that could dramatically enhance efficiency across multiple sectors. According to Christensen (Christen CM, 2004) ,disruptive innovation introduces a product or service in a way that the market does not expect, initially targeting underserved or niche sectors before eventually overtaking established competitors through improvements in functionality, accessibility, or cost-effectiveness.

Using Armstrong and Lee's (Armstrong, B. & Lee, G.J., 2023) modes of technological disruption, the author investigates the operational implications that can occur when applying a creative generative AI to a current supply chain and the disruptions that can occur in the various departments, organisations, suppliers and third-party specialist networks.

2.6 3 : Key stakeholders will make future decisions according to technology competency, not only creative human skills

2.6.1.1 Theory on how organisations adopt change and review disruption

In order to understand how potential stakeholders will approach technological/creative hiring practices in the future with the advent of creative generative AI, the author again uses Christensen's (Christen CM, 2004) disruptive innovation theory to understand the potential implications of both a creative hire thought pattern and what the aim of achievement is, and then to do the same when reviewing a technological hire and the proposed justifications for the decision-making process to select that particular candidate.

2.7 Analytical framework

2.7.1 Theoretical framework

Creative generative AI as a tool in the marketing workplace

The theoretical framework underlying the acceleration of a creative workflow using AI encompasses several key concepts and models that contribute to the understanding and implementation of AI technologies in creative processes.

As reviewed above, the essential theoretical framework is the concept of computational creativity, which explores the idea of machines exhibiting creative behaviour. Computational creativity involves the development of AI systems that can generate novel and valuable outputs by combining existing knowledge and patterns in innovative ways. This computational creativity framework highlights the ability of AI algorithms to mimic human-like creative thinking processes and produce original content (Colton, 2008).

Another theoretical framework is the application of machine learning algorithms and deep neural networks. These models enable AI systems to learn patterns and relationships from vast amounts of data, facilitating the automation of various creative tasks. By training AI models on large datasets, marketers and creatives can leverage the predictive capabilities of AI to generate insights, optimise campaigns, and personalise content at scale (Bengio, 2016).

In addition, the concept of augmented intelligence plays a crucial role in the theoretical framework. Augmented intelligence refers to the collaboration between humans and AI technologies to enhance human capabilities and decision-making processes. This framework recognises that AI technologies are tools that support and augment human creativity rather than replacing it entirely. By leveraging AI, creative professionals can harness its computational power to assist in ideation, content generation, and data-driven decision-making (Amabile, 1983).

Supply chain AI, its integration and disruption

The integration of a supply chain workflow into a creative operation using AI is supported by a theoretical framework that combines concepts from supply chain management, AI, and creative operations. This framework establishes the foundation for leveraging AI technologies to enhance efficiency, collaboration, and decision-making within the creative supply chain.

One key theoretical component is the concept of supply chain management, which focuses on the effective coordination and optimisation of processes involved in the creation, production, and distribution of goods or services. The integration of AI technologies into the supply chain workflow enables automation and optimisation of various tasks, such as demand forecasting, inventory management, and logistics planning. AI algorithms can analyse large volumes of data, identify patterns, and provide insights that facilitate more accurate decision-making and resource allocation (Chopra, 2021).

Another theoretical underpinning is the application of AI techniques, including machine learning, natural language processing, and predictive analytics. These AI technologies enable the analysis of data from multiple sources, such as customer preferences, market trends, and production capabilities, to inform supply chain decision-making. AI

algorithms can identify opportunities for process improvement, optimise inventory levels, and streamline production and distribution processes. The integration of AI into the supply chain workflow enhances operational efficiency, reduces costs, and enables agile and responsive decision-making (Monczka, 2019).

Theoretical frameworks in creative operations also contribute to the integration of the supply chain workflow, such as project management and collaboration models. These frameworks emphasise the importance of effective communication, coordination, and collaboration among stakeholders involved in creative projects. AI technologies can facilitate collaboration by providing real-time access to project information, automating project management tasks, and enabling seamless communication between teams and stakeholders. This integration improves visibility, coordination, and speed of creative operations, leading to enhanced efficiency and timely delivery of creative outputs (Beasley, 2015).

The theoretical framework for integrating a supply chain workflow into a creative operation using AI combines principles from supply chain management, AI techniques, and creative operations. This framework enables the automation, optimisation, and collaboration necessary to streamline the creative supply chain, enhance decision-making, and drive operational efficiency in creative operations.

Coincidental collision of two AI functions and their outcome

The disruption within the supply chain and operations management vertical may drive results that have similarities in the creative supply chain process. The two frameworks, although inherently different, are dealing with a similar disruption and could have similar traits and outcomes based on the approach and use of the software.

2.8 Conceptual framework

2.8.1 Creative AI acceleration theory

Below we see the 3 theories behind the assumptions developed. These theories create a framework from which we can review the factors influencing the creative process, and essentially factors that could be disrupted through AI. It will also aim to compare the human traits to the AI technology, developing an underlying basis from which to compare outcomes.

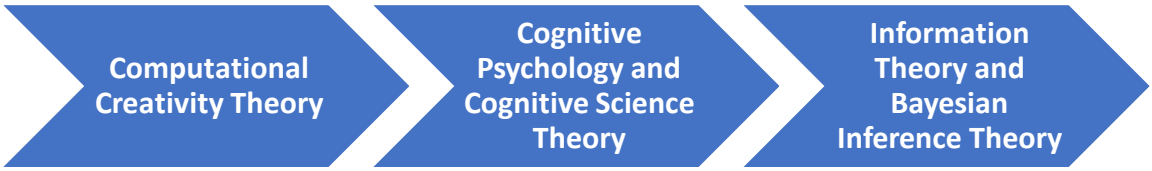


Figure 0.3: Theories for creative AI

2.8.2 The current standard supply chain process

Burgoyne creates an iterative model supply chain, creating a foundation of procedural understanding from which to derive disruption comparisons.

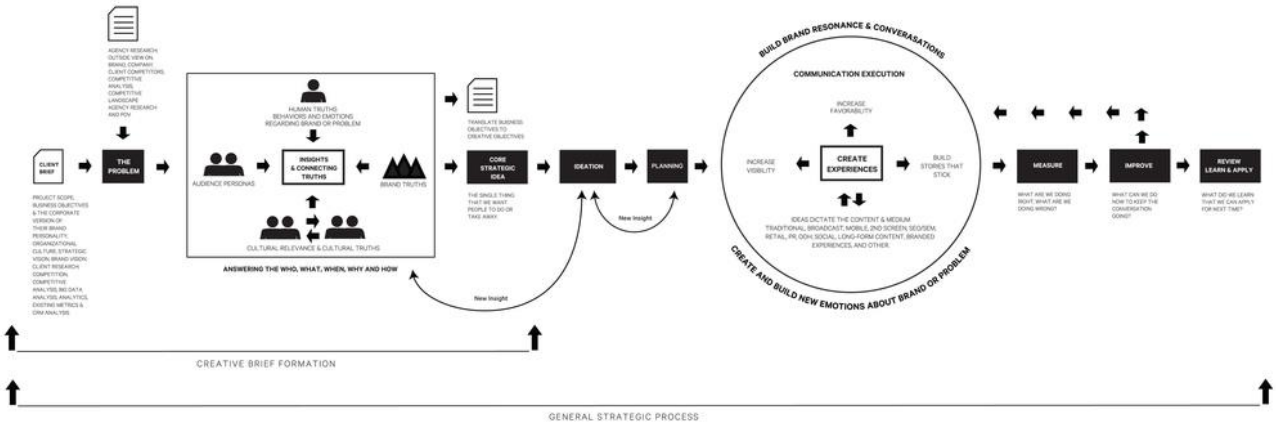


Figure 0.4: Creative supply chain (Burgoyne, 2013)

2.8.3 Theories of disruption – developing a framework from which to review outcomes



Figure 0.5: Disruption theories

2.8.4 Supply chain disruptive AI theory

The conceptual framework that the author is trying to convey and understand is where two key disruptive AI frameworks are at work within a single process. The author began by reviewing the accelerated AI processes within a creative agency and the disruption that it causes. The author then explored the supply chain disruption caused by AI to better understand the key fundamentals as to why specific decisions were made and specific repercussions were experienced.

Within the supply chain theories, light deductions have been made based on operational engagements with machine learning and augmentation. In order to better understand how AI will influence procedures, the author presented key patterns realised in the supply chain review of AI and reviewed how similarities or non-similarities are being experienced with the rapid adoption of generative AI.

Summary - Influence of creative AI theories

When reviewing the basics of AI in the creative space, there are three key theories evident, namely:

1. Computational creative theory
2. Cognitive psychology in cognitive science theory
3. Information theory and Bayesian inference theory

These creative AI components will influence the course and structure of the current standard creative workflow for the process and supply chain.

Summary - Influence of supply chain disruptive AI theories

When reviewing the supply chain AI disruption, there are three key theories that the author attached, namely:

1. Disruptive innovation theory
2. Modes of technological disruption theory
3. Technology organisation enterprise theory

2.9 Conclusion of literature review

2.9.1 Conclusion of Literature Review Part 1: Creative AI acceleration

In this study, the author presented the influences of the creative process and the level of effect on the current supply chain process.

The computational creativity theory reviews what it is to be creative (Zou, 2012). Getty Images, as an example, allows all artificially generated creative artwork as the debates around pattern recognition continue to conflict with copyright.

AI supporters would argue that humans are glorified pattern recognisers and that the productivity transformation frontier would debate the theory, but humans are seen only to create the original idea, and AI is only able to complete pattern recognition algorithms (McKinsey, 2022).

> “Generative AI can substantially increase labour productivity across the economy, and it will ask that investments to support employees as they adjust work activities or change positions.”

2.9.2 Conclusion of Literature Review Part 2: Technological disruption

The accelerated rate of use of AI technology started worldwide in 2023. With the advent of ChatGPT, open-source AI, and machine learning technologies in a short space of time, the world found itself with the tools to revolutionise the creative industry.

As mentioned in Chapter (1), the creative industry, although freeform, is based upon a strong structural supply chain process and procedural consistency.

Herein, the author reviewed the operational procedures that define the candidate of the future, that technology and understanding could surpass the classic creativity that is required as a standard of employment. This could revolutionise the face of the advertising and marketing industry as directors and owners begin to substitute human skills with artificial skills. Employees will be ranked based on their ability to influence both the creative and supply chain theories towards the centre and merge the disruptive technologies closer to the existing procedural understanding within the agencies.

The author explored the theories that take precedence and the parts of the process the theories influence. Furthermore, the author explored to what degree the creative AI technology theories compete against the supply chain procedural theories in the battle for equilibrium.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Qualitative research design

A qualitative approach to assessing AI in a creative marketing agency involves gaining in-depth insights and understanding through subjective observations, interviews, and case studies. This approach focuses on capturing the proposed and nuanced aspects of AI implementation, such as its impact on creativity, collaboration, and overall effect on the supply chain that delivers a final product.

The qualitative assessment in this context includes conducting interviews with agency stakeholders, including creative professionals, marketing strategists, and industry leaders. This study interviewed respondents to explore their perceptions, experiences, and attitudes toward AI integration in the creative process and what drives their decision-making criteria. In addition, observing AI-powered workflows and processes within the agency allowed for a first-hand assessment of its benefits, limitations, and overall impact on creative outputs.

Case studies in South Africa are limited. Therefore, reference case studies from Europe also play a vital role in the qualitative assessment of AI in a creative marketing agency. By examining real-world examples of AI implementation, the author delved into the specific challenges, successes, and lessons learned. The case studies can provide valuable insights into the practical implications of using AI in creative marketing, including its influence on campaign performance, customer engagement, and resource allocation. These studies provide a benchmark from which to review the data.

The qualitative approach facilitates a holistic understanding of AI's impact beyond quantitative metrics. A qualitative approach captures the complexities of human-AI interactions, the role of AI in augmenting creativity, and the perceptions and experiences of agency personnel. By employing qualitative methods, agencies can gain rich insights into the challenges and opportunities associated with AI integration and tailor their strategies accordingly, ensuring that AI enhances rather than detracts from the creative process.

3.2 Research design

The survey-based assessment of creative agency leaders involved gathering data and insights through a structured questionnaire administered to various stakeholders within and outside the agency.

The process began with the design and development of the survey, which included establishing the key decision criteria and formulating relevant questions. The survey covered areas such as client satisfaction, creative capabilities, project management, collaboration, and the integration of AI.

Once the survey was finalised, it was distributed to relevant participants, which included clients, employees, and partners. The survey responses were collected in an interview style. Whereafter the data was collected, compiled, and analysed to identify trends and patterns.

This assessment method provided a qualitative snapshot of the agency's performance, highlighting strengths and weaknesses and uncovering the influence that technology is having over the human capital element. The survey results guided the outcome with theoretical assumptions about the data and the effect on the industry.

In addition, qualitative follow-up interviews or focus groups were conducted to complement the survey findings and gain deeper insights into specific areas of interest.

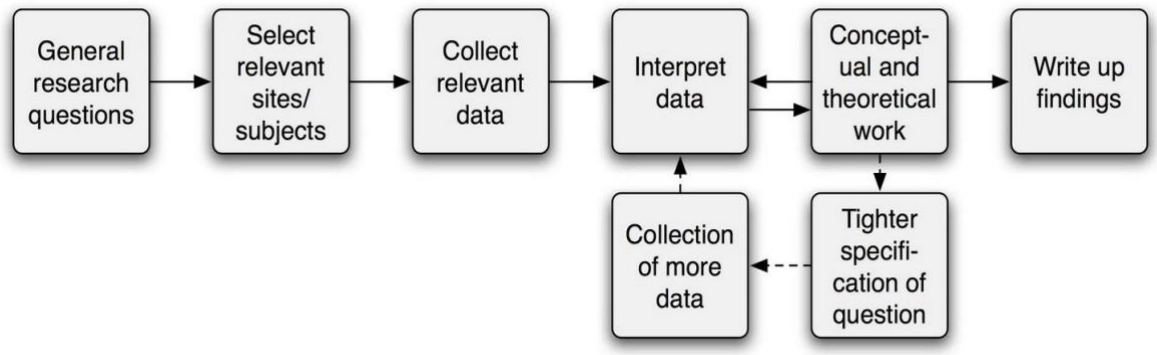


Figure 0.1: Qualitative research approach (Group, 2019)

3.3 Data collection methods

The data collection method that was employed was a digital or face-to-face interview with 15 key leaders and influences that have decision-making abilities within the three tiers of organisation (see Chapter 1).

A survey was drafted and completed in person, with the author guiding the discussion. The survey was created in such a way that based on certain answers, the questions were adapted and answered to define which theory the participant would be inclined to adopt.

Interviews were recorded and transcribed. The answers are assumed to be based on sentiment, knowledge, and experience.

3.4 Population and sample

3.4.1 Population

The population was the professional marketing industry, namely creative production houses, agencies, boutique agencies and key freelancers.

3.4.2 Sample and sampling method

The sampling included the following:

- **Geographic location:** Participants were selected from across South Africa to represent various areas and account for potential variances in the technology employed.
- **Project coordinators:** Project coordinators have the highest influence on hiring decisions and the choice of technologies employed within the organisation.
- **Directors:** Influential leadership and decision makers, such as managing directors and creative directors.
- **Boutique agency directors:** Influential leadership and decision makers, such as managing directors and creative directors.
- **Demographic diversity:** The sample encompassed a range of diverse demographics, such as age and gender.

- **Sample size:** The author estimated that the sample size should be 15–20 participants.

3.5 Research instrument

The research instrument for a qualitative survey of creative agency leaders and managers was designed to gather rich and nuanced insights into their experiences, perspectives, and attitudes regarding various aspects of agency operations, creative processes, and industry trends regarding the role of AI in the decision-making process. This survey instrument captured the depth and complexity of their roles, allowing for a comprehensive understanding of the challenges, opportunities, and best practices in the creative agency landscape.

The research instrument consisted of an open-ended questionnaire that would encourage respondents to provide detailed and subjective responses. These questions covered a wide range of topics, including creative strategy development, client collaboration, talent management, project management, and the integration of technology.

The instrument started with broad inquiries to establish an overall understanding of the agency's operations and then delve into specific areas of interest.

In order to ensure relevance and reliability, the research instrument was carefully crafted with input from experts in the field of creative agencies, qualitative research methodologies, and specific research objectives. The questions were clear, concise, and structured in a flow that allowed for coherent and meaningful responses and guided the respondent towards admitting an inborn trait that identifies the output of their mental transformation process (Armstrong, B. & Lee, G.J., 2023). In addition, the instrument should be designed to respect the respondents' time constraints and confidentiality.

Data collection was done through various methods, such as face-to-face interviews or online interviews. The chosen method aligned with the accessibility and preferences of the targeted participants. During the data collection process, the author maintained a non-biased and neutral stance to encourage open and honest responses.

Once the data was collected, a rigorous analysis of the qualitative responses was conducted. This analysis involved categorising and coding the responses to identify common themes, patterns, and unique perspectives. The author used a thematic analysis and content analysis to extract meaningful insights from the qualitative data.

The findings from the qualitative survey were then used to inform the current decision-making processes within the creative agency and what would influence these decisions in the future.

3.6 Data collection

The procedure for data collection in the qualitative interview survey involved a systematic approach to gathering rich and in-depth information. Firstly, the author identified the target population from the Marketing Hub Group and select participants who had the necessary knowledge and experiences related to the research topic (Fontana, 2005). Then, the author developed the interview guide to explore the research objectives and encourage participants to share their perspectives and experiences (Rubin & Rubin, 2012).

The interviews were conducted face-to-face or online, depending on the accessibility and preferences of the participants (Seidman, 2013). Prior to the interviews, the author aimed to establish a rapport and build trust with the participants, creating a comfortable environment that encourages open and honest communication (Denzin & Lincoln, 2017).

During the interviews, the author listened and probed for further clarification or elaboration and allowed participants to express their viewpoints (Kvale & Brinkmann, 2009). The interviews were audio-recorded with the consent of the participants to ensure accurate data capture (Rubin, 2012).

After the interviews, the audio recordings are transcribed verbatim, capturing all the spoken words and nonverbal cues (Seidman, 2013). The transcripts serve as the primary data source for analysis. The authors engage in a process of thematic analysis or content analysis, where they identify patterns, themes, and key insights from the interview data (Braun, 2006). The analysis involves coding the data, organising

responses into meaningful categories, and interpreting the underlying meanings (Denzin, 2017).

Throughout the data collection procedure, ethical considerations are crucial. The authors must obtain informed consent, protect participant confidentiality, and adhere to ethical guidelines to ensure the well-being and rights of the participants.

Data analysis strategies and Interpretation

The data analysis strategies and interpretation involve several key steps to derive meaningful insights from the collected data. This process is essential in understanding the impact of AI on the creative industry and identifying the nature and extent of disruption caused by its integration into the current supply chain process.

Firstly, the collected data, such as interview transcripts or textual responses, was subjected to a thorough and systematic analysis. The author employed qualitative data analysis techniques, such as thematic analysis or content analysis, to identify patterns, themes, and key findings within the data (Braun, 2006). The analysis involved coding, categorising, and organising the data to uncover significant concepts and recurrent themes related to the disruption caused by AI in the creative industry.

Once the initial coding was completed, the author engaged in a process of data reduction and synthesis. The author condensed the data, focusing on the most salient and relevant themes and patterns. This step enabled a deeper understanding of the findings and allowed for the identification of overarching trends and connections among various themes (Miles, 2014).

Interpretation of the data involved making sense of the findings within the context of the research objectives and theoretical framework. The author applied a critical analysis of the emerging themes, comparing and contrasting the themes with existing literature and theories. The themes identified the implications of the findings, and the author explored the ways in which AI disrupts various aspects of the creative industry, such as creative processes, workforce dynamics, and business models.

The interpretation process also involved triangulation, which meant cross-checking the findings with multiple sources of data, such as interviews, observations, or secondary

sources. This helped ensure the credibility and validity of the interpretations and enhanced the trustworthiness of the research findings.

The author also maintained reflexivity throughout the analysis and interpretation process, reflecting on his own biases and assumptions that may influence the interpretations. This self-awareness helped enhance the rigour and objectivity of the research (Charmaz, 2014).

In summary, the data analysis strategies and interpretation process for a qualitative research proposal on disruption from AI in the creative industry involved systematic coding, reduction, synthesis, and interpretation of the collected data. This process allowed the author to uncover meaningful insights, identify key themes and patterns, and interpret the implications of the findings within the context of the research objectives and existing literature.

3.7 Possible limitations and challenges of the study

- Qualitative research methodology results in opinion-based responses not based on particular experiences.
- The survey is limited to marketing professionals in the South African industry.
- Much of the data used to derive the initial survey came from information in the United States, Europe, and China.

3.8 Quality assurance

3.8.1 External validity or transferability

The reports required consideration by the broader industry to verify the findings, contribute to the larger base of knowledge, and ratify any key findings that resonate within the industry.

3.8.2 Internal validity or credibility

A large body of internal executives and leaders ratified the findings and comments towards the larger body of knowledge that assists in designing the new structures within the supply chain process in the creative marketing industry and refining key processes and their influences.

The adoption of certain assumptions within this study gave validity to the study and improved the quality of the information gathered.

3.8.3 Reliability or dependability

Due to the nature of the research report, the reliability or dependability of the data can only be shaped over time based on real-world experience, human capital data being extracted out of the industry, and seeing where there is alignment between the supply chain disruption analogies and the creative disruption analogies.

This report could become a framework on which to base assumptions and to give direction towards defining the theories noted herein.

3.9 Ethical considerations

The report deals with real-world challenges, particularly with human capital challenges. The topic of AI disruption should be addressed with sensitivity and with a level of positivity to not create anxiety or concern around AI.

A non-disclosure or confidentiality agreement should be agreed upon at the process start to ensure that data is anonymous and that trade secrets are not being shared with a particular profile.

CHAPTER 4: PRESENTATION OF FINDINGS

4.1 Introduction

The interviewees ranged from South African directors, executives, project managers, and administrators, as well as European and United States-based project managers and executives.

The findings showed collections in the codification that highlight where there is alignment and similarities between candidates in the same position in their companies and where there are conflicting results.

The findings were then cross-referenced to answers between various categories of executives where there were similarities and disparities, and the aim was to find where the key trends were exposed.

4.2 Sample

In the request process, the following executives, directors and freelancers responded to the interview and provided comprehensive feedback:

- **Three project coordinators:** Project coordinators largely have the highest influence on hiring decisions and the choice of technologies employed within the organisation.
- **Three directors**: Influential leadership and the decision makers, such as managing directors and creative directors.
- **Three brand directors:** Corporate executives that lead the discussion and decision-making processes in leading marketing teams.
- **Three boutique agency directors:** Influential leadership and the decision makers, such as managing directors and creative directors.
- **Two freelancers:** Professional freelance executives are the starting point of the supply chain and the sample that is likely most affected either positively or negatively.

4.3 Coding, category, and theme

Due to the qualitative nature of the interview and the largely new dynamic of the topic, the findings were often not straightforward answers but rather mused or rationalised answers arriving at a conclusion.

Answers were heard to questions not asked, and data was gleaned that added value to the larger topic, yet not in the order stipulated. Therefore, it was important to create a strong sentiment matrix that could give definitions to the answers and rank them from positive to negative.

	S	**Sentiment**
S	A	Enthusiasm
S	C	Scepticism
S	D	Concerns
S	E	Knowledge
S	F	Awareness
	O	**Outcome expectations**
O	A	Efficiency
O	B	Productivity
O	C	Generalisation
O	D	Personalisation
	F	**Future outlook**
F	A	Positive
F	B	Negative
	R	**Regulatory & policy**
R	A	Current efficacy
R	B	Potential future efficacy

Each answer was initially ranked on the topic of the answer the interviewee chose. Often, the direction of the question was not answered in the expected category, and the interviewee would digress into alternating categories.

In order to allow for this data to enter the study, the codification process had to be flexible enough to allow for these digressions and to allow the author the ability to codify the complete answer rather than just the aligned answer.

Each question was then given up to five codification opportunities, where categories could be ranked: (1) sentiment, (2) outcome expectations, (3) future outlook, or (4) regulatory and policy.

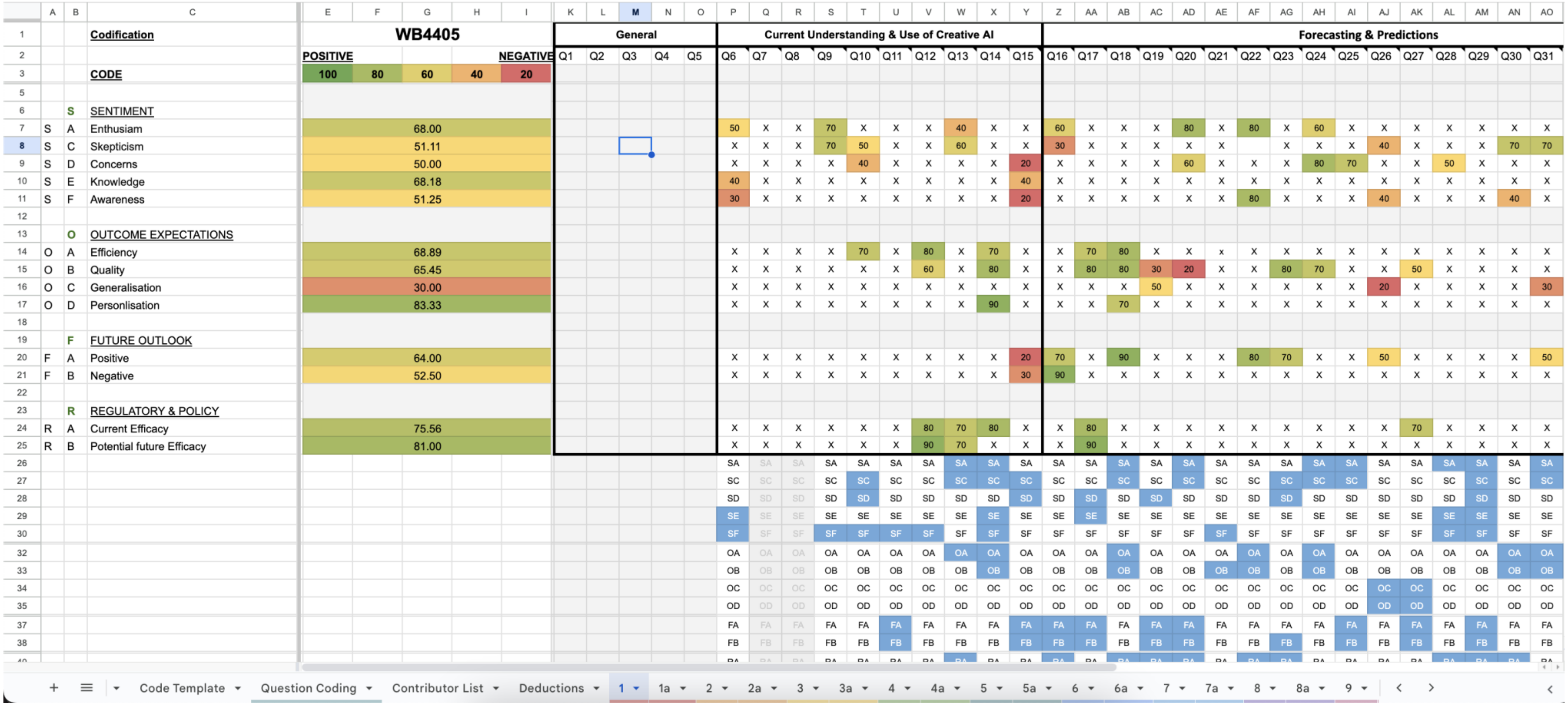


Figure 0.1: Codification matrix (Respondent WB4405)

Some questions were information sourcing and, therefore, did not require any rank or codification. In the codified rankings, the sentiment of the code was ranked from zero to 100, ranking the nature of the response from positive common neutral to negative.

As an example:

If a candidate were particularly positive regarding the efficiency element within the question or comment, a score of (X) would be applied under the efficiency code alongside the question. However, if a candidate were particularly negative regarding the efficiency element within a question, a score of (Y) would be applied under the efficiency code alongside that question.

If a candidate had no particular sentiment towards the question under the efficiency element, the element could be ranked at 50 or crossed out (-) to negate the score.

4.4 Findings relating to Proposition 1: Despite hyper-personalisation, a more generalised communication narrative will begin to emerge due to aggregated sourcing of content

It is debated that AI generated content will be more generic, due to AI's sourcing of content in a generalist pool of information. Herein, despite the ability of AI to create new and unique content. Essentially the technology cannot "create", but rather assimilate.

12	How do you think the creative quality of AI-generated content compares to human-created content?
13	Do you believe that creative AI tools can enhance human creativity rather than replace it? (ENHANCE 100%/REPLACE 0%)
18	How do you envision the role of human creativity changing with the proliferation of creative AI tools? (HUMAN CONTROLLED 100%/AI CONTROLLED 0%)
23	What challenges do you anticipate the industry facing as it integrates more AI tools? (TOWARD MORE HUMAN CONTROL 100%/TOWARD MORE AI CONTROL 0%)
25	How do you anticipate the target audience's reception to AI-generated content? (POSITIVE 100%/NEGATIVE 0%)
26	Will AI lead to more personalised or more generalised marketing campaigns? (PERSONALISED 100%/GENERALISED 0%)
46	When interviewing for a new creative technician, would you prefer a candidate to be particularly skilful in technical IT functions to manage a creative AI, or a creative specialist with a potentially low aptitude for technology? (CREATIVE 100%/AI 0%)

		POSITIVE %		AVERAGE %		NEGATIVE %								
		100	80	60	40	20								
WB4405	TL4406	GD4407	AC4408	BB4409	WR4410	GG4411	TD4412	DP4413	WP4414	FD4415	PK4416	ED4417	BW4418	
Content Generation, Data	Content Generation	Content Generation	Content Generation	Content Generation	Content Generation	Content Generation	Content Generation	Content Generation	Content Generation	Content Generation	Content Generation, Data	Content Generation	Content Generation	**Content Generation**
90%	80%	90%	70%	70%	30%	60%	50%	40%	80%	50%	70%	60%	90%	66%
100%	100%	100%	100%	100%	100%	100%	100%	100%	20%	100%	100%	100%	100%	94%
70%	80%	30%	40%	60%	90%	80%	90%	100%	70%	90%	90%	100%	100%	78%
90%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	92%
100%	100%	100%	0%	0%	0%	100%	100%	0%	100%	0%	100%	100%	100%	64%
100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%	100%	0%	86%
100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	0%	100%	0%	0%	64%
								78%						

Figure 0.2: General sentiment percentage

4.4.1 Content that is influenced by a human creates personalised content (Positive), or an AI that aggregates content to a sum of averages (Negative)

Findings showed that there is an overall positive 78% sentiment that content will remain controlled by humans.

The respondents felt that humans would continue to guide the narrative manually and through controlled input into an AI, shown with an overall average positive sentiment of 94% by the respondents.

The respondents felt that the target audience would not notice nor mind a more prolific AI content stream. An average 86% positive sentiment score was reached and was altogether unanimous.

Finally, the respondents were somewhat divided on the HR component of AI, and sentiment here was rather balanced at 64% positivity. The deeper sentiment scores saw scepticism values appear with a negative sentiment, and it was ultimately seen that decision makers would still hire creative skills over technical AI skills.

4.4.2 Human element

The debate between human creativity and generative AI in the marketing domain is nuanced, with a strong preference for human creativity among marketing executives and agency owners for several reasons. Human creativity encompasses the ability to generate ideas that are novel, valuable, and deeply resonant with human emotions and cultural nuances.

Unlike AI, humans can draw on a tapestry of personal experiences, emotions, and cultural backgrounds, enabling them to create marketing messages and strategies that are innovative and also deeply connected with the target audience's values and beliefs. This emotional and cultural intelligence allows for the creation of campaigns that genuinely engage customers, fostering a deeper brand connection and loyalty that AI-generated content often struggles to achieve (Smith A.N., Yang X, 2004).

Human marketers' ability to empathise with their audience and to contextualise their strategies within the broader cultural and social landscape is crucial for crafting messages that resonate on a personal level, making human creativity an invaluable asset in the marketing field (Holt, 2002).

4.4.3 Adaptability

The dynamic nature of consumer markets and the rapid pace of cultural and social changes demand a level of adaptability and foresight that currently lies beyond the reach of generative AI. Humans possess the innate ability to intuitively grasp and respond to emerging trends, shifts in consumer behaviour, and societal changes in real time. This adaptability allows marketing professionals to pivot strategies swiftly, innovate continuously, and stay ahead of the curve in an increasingly competitive landscape.

Human marketers can navigate the complex web of social norms, ethical considerations, and cultural sensitivities with a finesse that AI, with its reliance on historical data, cannot match. The capacity for critical thinking and ethical judgment enables human creatives to foresee potential controversies or backlash that AI-generated content might inadvertently provoke, safeguarding brands from potential harm (Kaplan A.M, Haenlein M, 2019; Vargo S.L., Lusch R.F.,2004).

4.4.4 Enhancing vs replication

The creative process in marketing thrives on collaboration, iteration, and the spontaneous exchange of ideas – elements that are inherently social and deeply human. While generative AI can significantly enhance efficiency and support the creative process by providing data-driven insights and automating routine tasks, the essence of creativity often emerges from human interaction.

Brainstorming sessions, collaborative workshops, and the serendipitous moments of inspiration that occur in human interactions are irreplaceable sources of innovation and creativity. Marketing executives and agency owners recognise the value of these human-centric processes in driving forward-thinking strategies and breakthrough ideas. The integration of AI tools in the creative process is seen as a means to enhance

human creativity, not replace it, ensuring that the final marketing outputs are innovative and also emotionally and culturally resonant (Bilton C, 2007; Christensen C., 1997).

4.4.5 Perspective

Collectively, these perspectives underscore the enduring preference for human creativity in marketing, highlighting the irreplaceable role of human insight, intuition, and emotional intelligence in crafting compelling, culturally attuned, and innovative marketing strategies.

4.5 Findings in relation to Proposition 2: Although creative, the disruption in the next two years will be largely operational

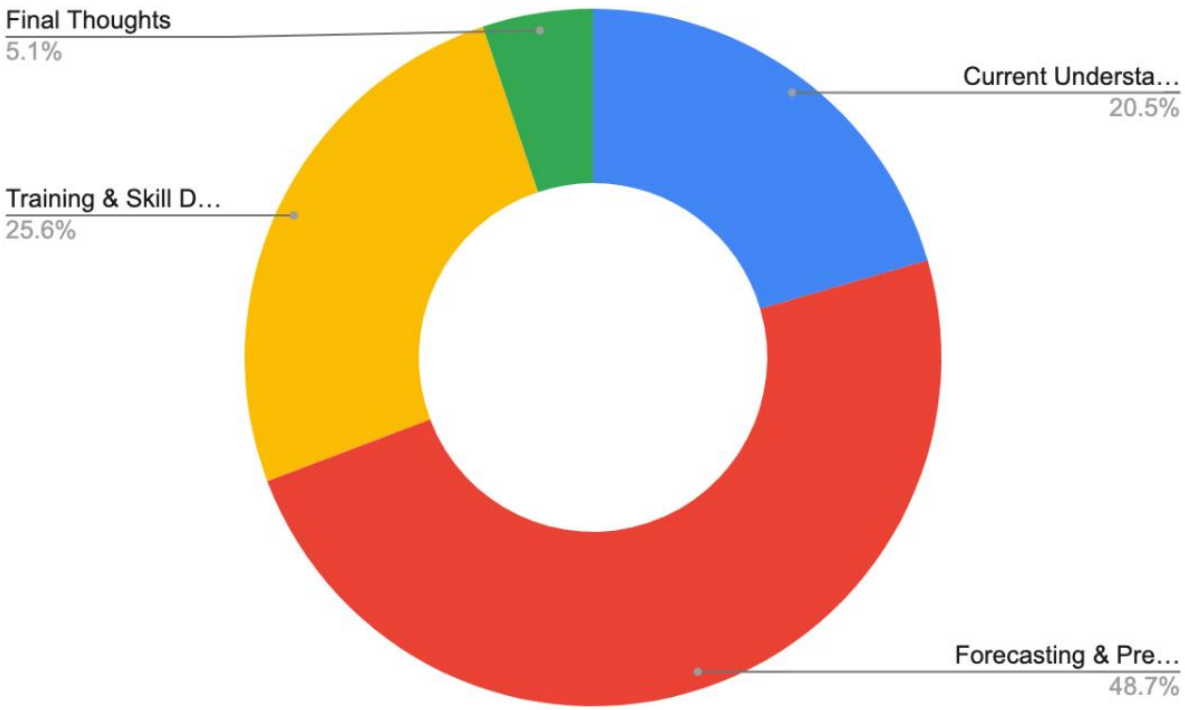


Figure 0.3: Questionnaire sections

Efficiency vs quality (Creative vs AI)

The findings indicate that:

Human component: Questions 13, 14, and 18

Do you believe that creative AI tools can enhance human creativity rather than replace it?
What types of creative tasks do you think AI is most effective for?
How do you envision the role of human creativity changing with the proliferation of creative AI tools?

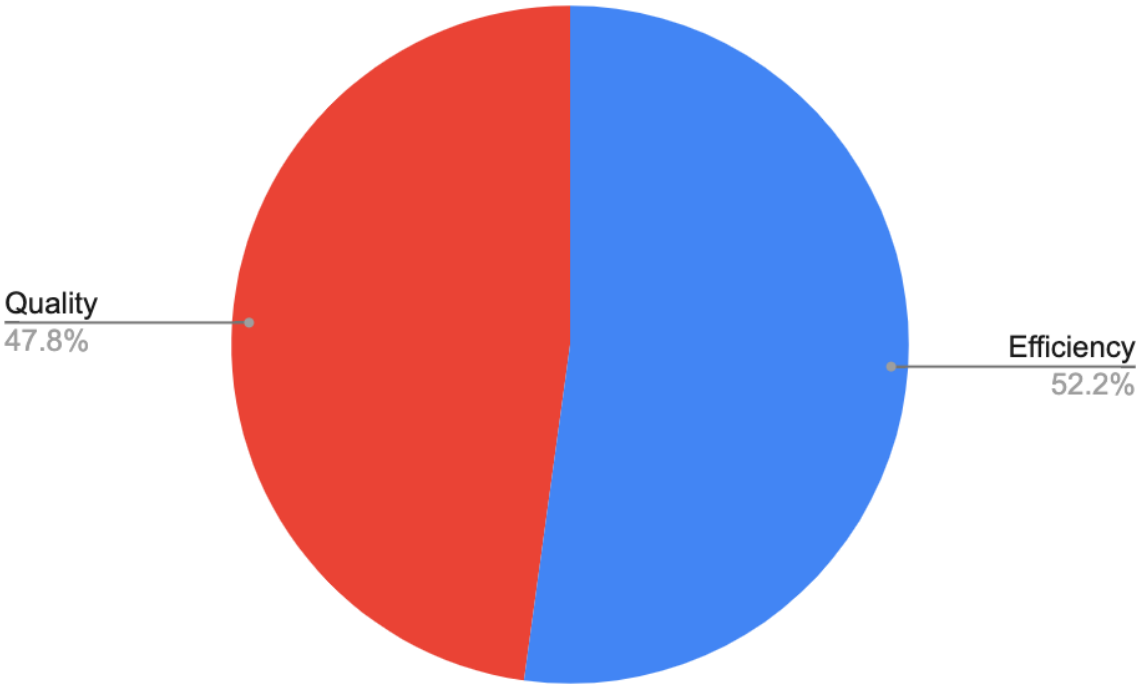


Figure 0.4: Quality vs efficiency questionnaire

Data shows that candidates remain divided on the quality vs efficiency dynamic. Responses from candidates highlighted that executives in larger corporate companies indicated that efficiency was expected together with an increase in quality.

Agency candidates indicated that the need for human intervention to drive creative AI technology and fine-tune it was crucial and that there would not necessarily be an efficiency in cost but rather in time.

Respondent results: Questions 21, 22, and 24

Do you foresee a decrease, increase, or no change in marketing budgets with the adoption of AI tools?
How will the client-agency relationship evolve with the integration of AI in creative processes?

Do you think smaller marketing agencies will benefit or suffer from the rise of AI?

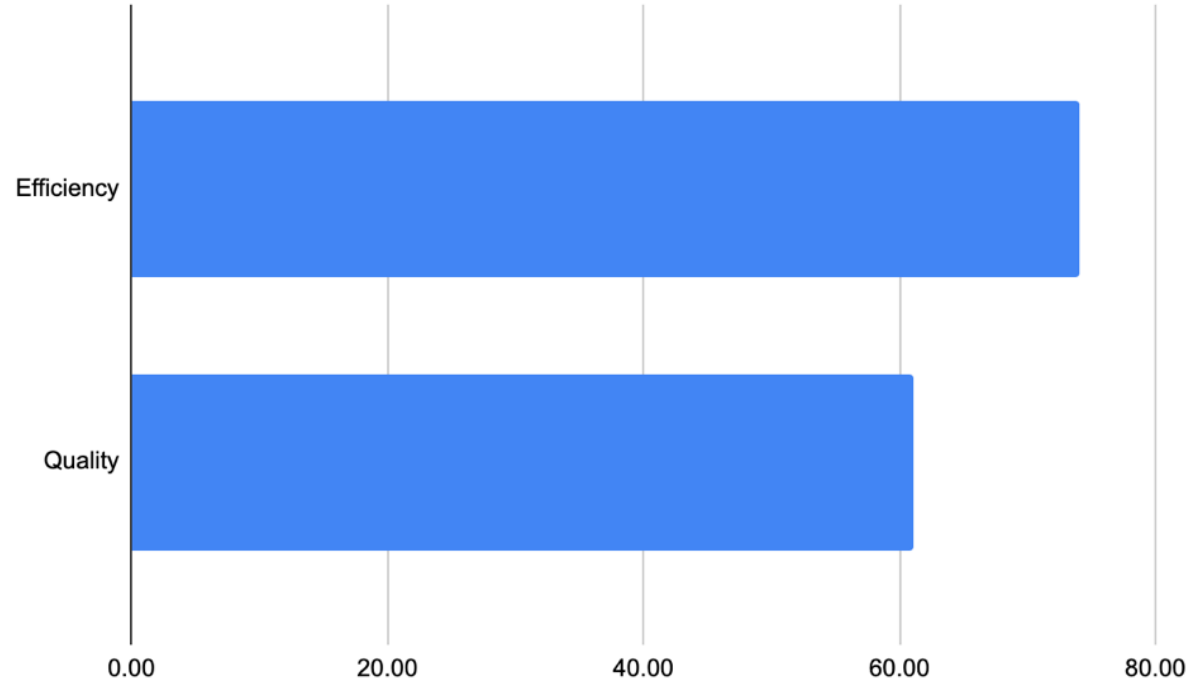


Figure 0.5: Efficiency vs quality poll

> "Budgets would certainly decrease in allocated spend, creative spend would be reduced giving way to more strategic input" (Respondent WB4405, corporate brand director).

With further time allocated to strategy development, creative execution could become secondary to planning. The *need for efficiency (74%)* versus the requirement for *human-controlled quality (61%)* indicates that although human creative control is important, efficiency remains the priority *(+13%).*

	O	**OUTCOME EXPECTATIONS**		
O	A	Efficiency		74.00
O	B	Quality		61.11

Figure 0.6: Percentage rating on questionnaire

Time efficiency and the competitive creative content

Questions 31, 32, and 33

Will AI lead to shorter or longer campaign cycles?
How do you think creative AI will change the competitive landscape of the marketing industry?
What will be the key differentiators for marketing agencies in an AI-driven world?

> With shorter marketing campaigns, we will need AI. Unlike the human element it is programmed to create new ideas. Being able to upskill in AI to execute higher efficiency at the same quality is key" (Respondent TL4406, corporate brand manager).

Operational efficiency through time savings was the trend that was highlighted in this data. Over 90% of the respondents commented that the focus on creative treatment was less important than the financial and operational benefit of reaching your target idea faster.

Questions 42, 43, and 46

How will AI change the recruitment and hiring landscape in marketing?
Do you think there will be a shift towards hiring more technologically inclined marketing professionals?
When interviewing for a new creative technician, would you prefer a candidate to be particularly skilful in technical IT functions to manage a creative AI, or a creative specialist with a potentially low aptitude for technology?

> "Creativity will always be needed and will come first when selecting a driver of technology" (Respondent GD 4407, agency owner).
>
> "Human workforces will be expected to deliver quicker campaigns and outputs at a lower cost with a higher quality. The output remains a higher output at a benchmark of quality" (Respondent TD4412, corporate marketing director)
>
> "The landscape will become more competitive, and with the proliferation of creative AI technologies, the human driving the technology will be the differentiator" (Respondent BB4409, small agency marketing manager).

4.6 Findings in relation to Proposition 3: Key stakeholders will make future decisions according to technology competency, not only creative human skills

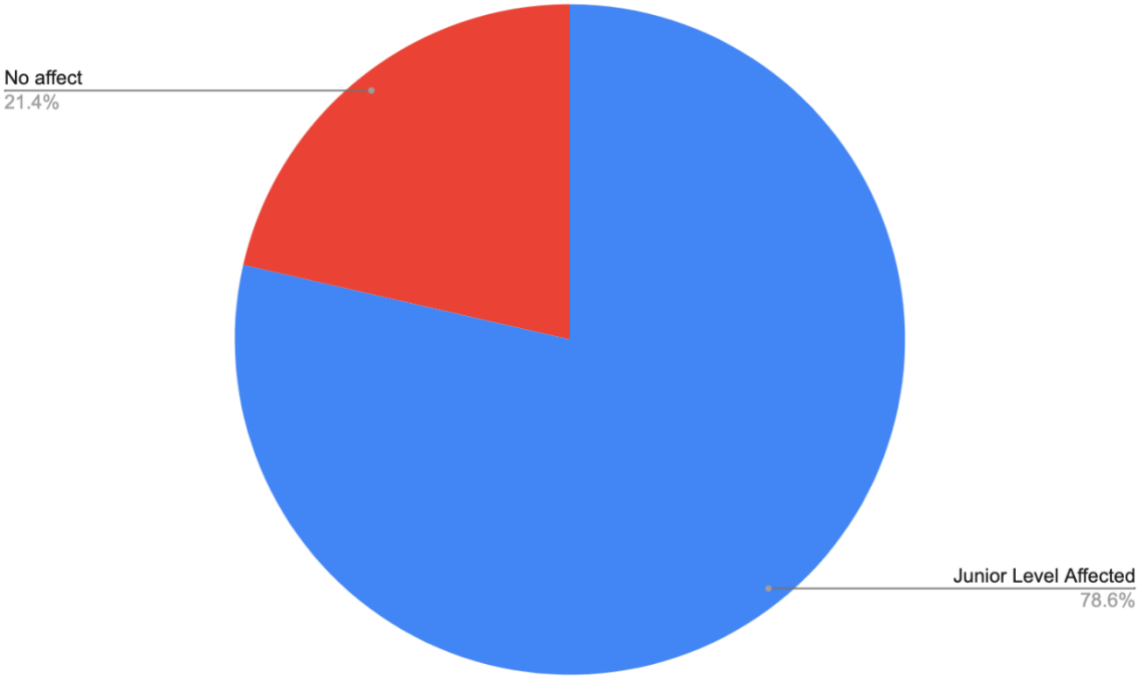


Figure 0.7: HR implications on a junior workforce

The integration of creative generative AI into the marketing industry and beyond represents a paradigm shift that aligns well with Christensen's (Christensen CM, 2004) theory of disruptive innovation. This theory states that disruptive innovations initially offer simpler, more accessible, or more affordable solutions that eventually transform an industry, often displacing established competitors. In the context of creative generative AI, this technology can be seen as a disruptive force, changing how key stakeholders make decisions, prioritise skills, and value contributions within organisations and the broader market.

Technological competency alongside traditional creative human skills: Hybrid skills

When reviewing the *impact on decision-making and skill valuation*, as creative generative AI technologies mature, key stakeholders (including executives, managers,

and team leaders) are increasingly valuing technological competency alongside, or even above, traditional creative human skills. This shift is driven by the need to understand, manage, and strategically deploy AI technologies to maintain competitive advantage. Decision-making processes are evolving to incorporate insights derived from AI analytics, automated content testing, and predictive modelling, emphasising data-driven strategies over intuition or experience alone.

In industries traditionally dominated by human creativity, such as marketing, advertising, and design, the role of creative professionals is being redefined. Stakeholders are now looking for individuals who can blend creative insight with the ability to leverage AI tools effectively. This hybrid skill set enables the creation of more personalised, engaging, and effective campaigns at scale, something that was previously unattainable.

Christensen's (Christensen CM, 2004) theory highlights how disruptive innovations often create new markets and value networks. Creative generative AI has the potential to do just this by enabling the development of new products and services that were previously inconceivable. Stakeholders are making strategic decisions to invest in AI capabilities, recognising that the ability to quickly innovate and adapt to changing consumer preferences is key to future success. (Christensen CM, 2004)

Foresight regarding ethical implications of AI deployment

In accordance with Christensen's (Christensen CM, 2004) disruptive innovation theory, creative generative AI is not merely an additive technology but a transformative force that is reshaping industries, decision-making frameworks, and the valuation of skills. Key stakeholders are recognising that future success depends on a deep understanding of technology, the ability to integrate AI into creative processes, and the foresight to navigate the ethical implications of these advancements. As such, the future landscape will likely be characterised by organisations and individuals who can harness the power of creative generative AI to innovate, personalise, and adapt to rapidly changing market dynamics.

This shift underscores the importance of technology competency, as a complement to human creativity and as a crucial component of strategic decision-making and competitive differentiation (Bessen, 2019).

CHAPTER 5: DISCUSSION OF FINDINGS

5.1 Findings relating to Proposition 1: Despite hyper-personalisation, a more generalised communication narrative will begin to emerge due to aggregated sourcing of content

The perspective that content will become more generalised rather than personalised with the advent of AI due to content aggregation presents a nuanced view of the impact of AI on media and content creation. This standpoint hinges on the idea that as AI technologies aggregate and analyse vast amounts of data to produce or recommend content, they may prioritise broad appeal over individual preferences, potentially leading to a homogenisation of content.

5.1.1 Respondent feedback

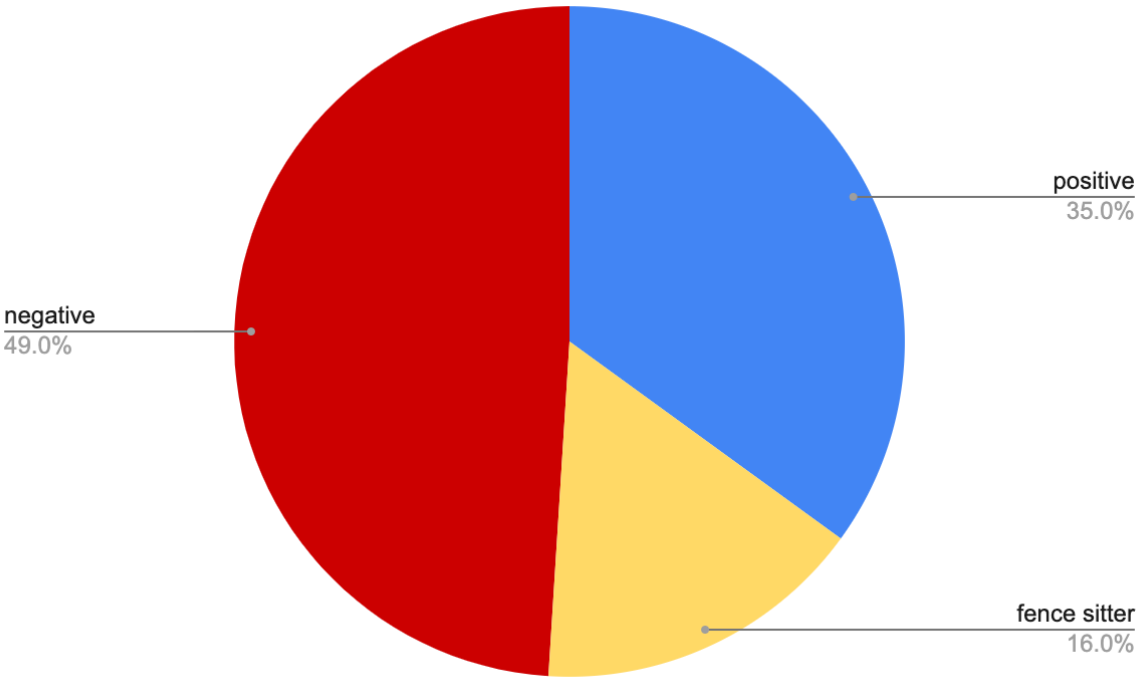


Figure 0.1: Sentiment analysis

Question 26: Will AI lead to more personalised or more generalised marketing campaigns?

Despite the initial hope for personalisation, the initial part of the conversation begins with personalisation. However, for *49%, this is described in a negative tone as they are concerned that a generalised tone that will match their competitors will emerge.*

> "Regardless of the potential the AI has to create unique content, there will always be the need for human empathy and intervention. Without this, we will see a confluence of narratives with very similar sentiments" (Respondent TD4412, negative).

When asked the question, *16% are comfortable that the AI is advanced enough to take these nuances into account* and do not believe this question is an issue.

> "AI is here to give us what we want, and it has done well so far. I don't think this is a concern" (Respondent GD4407, neutral).

However, *35% believe that AI goes beyond pattern recognition and will be able to develop a unique narrative on its own.* They see personalisation as one of the largest benefits of creative generative AI.

> "Personalisation is the future, and we must not forget that not only is the AI taking into account existing content, but also the content it generates. The algorithm will adjust to meet the needs of its audience" (Respondent ED4417).

5.1.2 Argument for generalisation

AI's ability to analyse large datasets means it can identify patterns and preferences across a wide audience. As noted by Davenport, Guha, Grewal, and Bressgott (Davenport T, et al, 2020), AI systems tend to optimise for the largest possible audience to ensure the broadest appeal, potentially side-lining niche or individual preferences in favour of content with mass appeal.

Pariser (Pariser E, 2011) introduced the concept of "filter bubbles", where algorithmic content curation leads to a narrowing of information exposure based on previous user interactions. However, while intended to personalise content, this can also lead to a generalisation of content types within these bubbles, as algorithms may prioritise

content that is more likely to be engaged with by the majority within a specific group rather than truly personalised content.

Platforms like Google News or social media feeds use algorithms to curate content from various sources, aiming to match user preferences. Napoli (2019) argues that while these platforms claim to personalise content, they often rely on generalised user profiles and broad categorisations, which can lead to a more homogenised content experience.

5.1.3 Argument for personalisation

Contrary to the generalisation argument, many scholars argue that AI has the potential to significantly enhance content personalisation. For instance, Covington, Adams, and Sargin (Covington P, 2016) discuss how YouTube's recommendation algorithm personalises content for users based on their individual watch history, demonstrating AI's capability to tailor content to individual preferences.

Anderson (Ander C, 2006) introduced the concept of the "long tail", suggesting that digital distribution allows for a wider variety of content to become economically viable. In the context of AI, algorithms can surface niche content to interested users, potentially increasing the diversity of content consumed rather than leading to homogenisation.

AI technologies also empower users to explore content beyond mainstream offerings. Algorithms can suggest content that individuals may not have discovered on their own, thereby expanding their content horizons rather than limiting them to generalised content.

5.1.4 How AI platforms search for content and why generalisation is a concern

Creative AI is revolutionising the way narratives are created, offering novel approaches to storytelling that leverage vast amounts of data and sophisticated algorithms. These AI systems can generate generalised narratives by synthesising information from a wide range of sources, employing techniques like natural language processing (NLP),

machine learning, and data mining. The following is an overview of how creative AI crafts narratives and sources content to develop these narratives:

Data sourcing and processing

Creative AI begins by sourcing content from various databases, digital libraries, the internet, and other repositories of textual, audio, and visual information. Creative AI uses NLP and data mining techniques to process and understand this content, identifying themes, genres, plot elements, character traits, and styles of writing. AI algorithms can analyse large datasets to discern patterns and trends in storytelling, which inform the generation of new narratives.

For instance, researchers at Stanford University and other academic institutions have explored how AI can learn from existing literature and film scripts to understand narrative structures and character development. These studies often use databases like Project Gutenberg, which offers a vast collection of public domain texts or datasets compiled from screenplay archives (Stanford, 2021; Gutenberg, 2018).

Narrative generation

Once the AI has processed and analysed the sourced content, it employs machine learning algorithms, particularly generative models like generative pre-trained transformer (GPT), to create narratives. These models are trained on extensive datasets, enabling them to generate text that mimics human-like storytelling.

The AI uses the insights gained from its analysis to construct narratives that include a beginning, middle, and end, develop complex characters, and integrate thematic elements. The AI can adjust these narratives based on specific genres or styles, drawing on its understanding of the sourced content to make the stories as engaging as possible.

Creativity and personalisation

AI systems can also personalise narratives for specific audiences by incorporating user preferences, cultural backgrounds, and reading levels. This is achieved by leveraging user data and feedback to refine story elements, ensuring that the narratives resonate with their intended audience.

However, creative AI can experiment with unconventional narrative structures, blend genres, and introduce novel concepts that might not occur in traditional storytelling. This aspect of AI creativity has been highlighted in works by researchers at the MIT Media Lab, where AI-generated narratives have explored new ways of storytelling beyond human conventions (Media Lab, 2019).

These references are indicative of the research and development in the field of creative AI and storytelling. The ability of AI to source, process, and generate narratives is continually evolving, offering exciting possibilities for the future of storytelling.

5.1.5 Conclusion of findings related to Proposition 1

The debate between content generalisation and personalisation in the age of AI is complex. While there are valid concerns about AI leading to more generalised content through aggregation and optimisation for broad appeal, there is also substantial evidence that AI can enhance personalisation, offering tailored content to individual users. The outcome may depend on the implementation and design of AI systems, as well as the underlying business models of content platforms. As AI technologies continue to evolve, their impact on content personalisation versus generalisation will likely remain a dynamic and contested field.

Christensen's (Christensen CM, 2004) theory of disruptive innovation spoke of disruption coming from outside of the companies. However, in Armstrong and Lee's (Armstrong, B. & Lee, G.J., 2023) modes of disruption, some scholars see innovation coming from within the company. As a framework, the author applies the notion of disruption as coming from within the company to review how algorithms self-assess and self-edit.

AI systems have been increasingly designed with self-assessment and self-editing capabilities, enabling them to evaluate their performance and make adjustments to improve accuracy and efficiency. Self-assessment in AI involves mechanisms like feedback loops, where an AI analyses the outcomes of its actions or predictions and compares them with the expected results or external feedback (Silver, 2017).

This self-assessment process allows the AI to gauge its effectiveness and identify areas for improvement. Self-editing, on the other hand, involves the AI modifying its own algorithms or parameters based on the self-assessment findings. Techniques such as reinforcement learning, where AI learns from trial and error by receiving rewards or penalties, exemplify this capability. Moreover, evolutionary algorithms mimic natural selection processes, allowing AI systems to evolve and optimise over time by discarding less effective strategies and adopting more successful ones (Russell, 2016). These advancements in AI enhance their autonomy and also their adaptability to complex and changing environments.

The basis of an AI is its ability to self-assess and self-edit, review current iterations and content, and apply future interpretations using previous patterns to create a unique narrative.

5.2 Proposition 2 findings: Although creative, the disruption in the next two years will be largely operational

The concept that creative AI disruption will be largely operational in the next two years is a multifaceted viewpoint that emphasises the practical, day-to-day impact of AI technologies on business operations rather than just their potential to drive innovation in content creation or ideation processes. This perspective suggests that while creative AI can generate novel ideas, designs, and content, its most significant immediate impact will be on improving operational efficiencies, automating routine tasks, and optimising business processes.

Respondent feedback: Related questions

Q14: What types of creative tasks do you think AI is most effective for?
Q27: How might AI impact the storytelling aspect of marketing?
Q31: Will AI lead to shorter or longer campaign cycles?
Q32: How do you think creative AI will change the competitive landscape of the marketing industry?

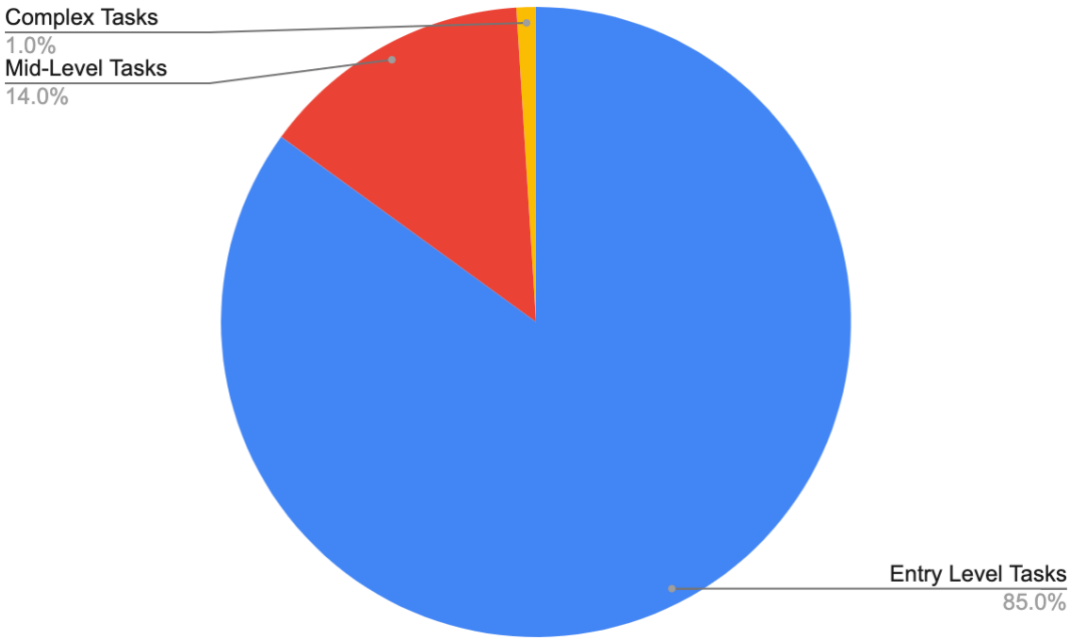


Figure 0.2: Task risks

Responses

Most respondents (85%) stated outright that the tasks that creative generative AI is sufficient to complete on its own are junior-level tasks.

> "We currently use creative generative AI to create storyboards and complete junior level tasks that would be needed in the initial stages of the process. I anticipate this is where our AI focus will remain" (Respondent ED4417, corporate marketing director)

Few (14%) stated that creative generative AI had the potential to complete both junior and mid-level tasks that humans usually complete.

> "We have engaged with third-party suppliers that prompt the AI more effectively, giving us mid-level {human quality} work" (Respondent SP4418, senior copywriter mid-size agency).

Complex tasks – none of the respondents commented that AI could complete a high-level staff member's job function.

5.2.1 Overview of the core benefit of AI

According to a study by Bughin, Hazan, and Ramaswamy (Bughin J, et al, 2017), AI is poised to automate a wide range of operational tasks, from data entry and analysis to customer service and inventory management. (Bughin J, et al, 2017), argue that this automation will lead to significant cost savings and efficiency gains for businesses, allowing a reallocation of human resources to more strategic tasks.

Process optimisation

Davenport and Ronanki (Davenport, T.H., & Ronanki, R, 2018) highlight that AI's most immediate contributions to businesses lie in *its ability to optimise existing processes, such as supply chain management or financial operations*. By analysing vast datasets more accurately and quickly than humanly possible, AI can identify patterns and insights that can lead to more informed decision-making and operational improvements.

Workforce transformation

The World Economic Forum's (WEF, 2020) report, Future of Jobs, suggests that the operational impact of AI will also extend to the workforce, with AI automating routine tasks and creating demand for new skill sets focused on managing and complementing AI technologies. This shift is expected to transform job roles and functions across industries, emphasising the operational over the purely creative (WEF, 2020).

5.2.2 Data visualisation

Figure 5.3 depicts the three highest sentiment reactions by the respondents, with efficiency coming in at an overwhelming 20% above the second-highest average.

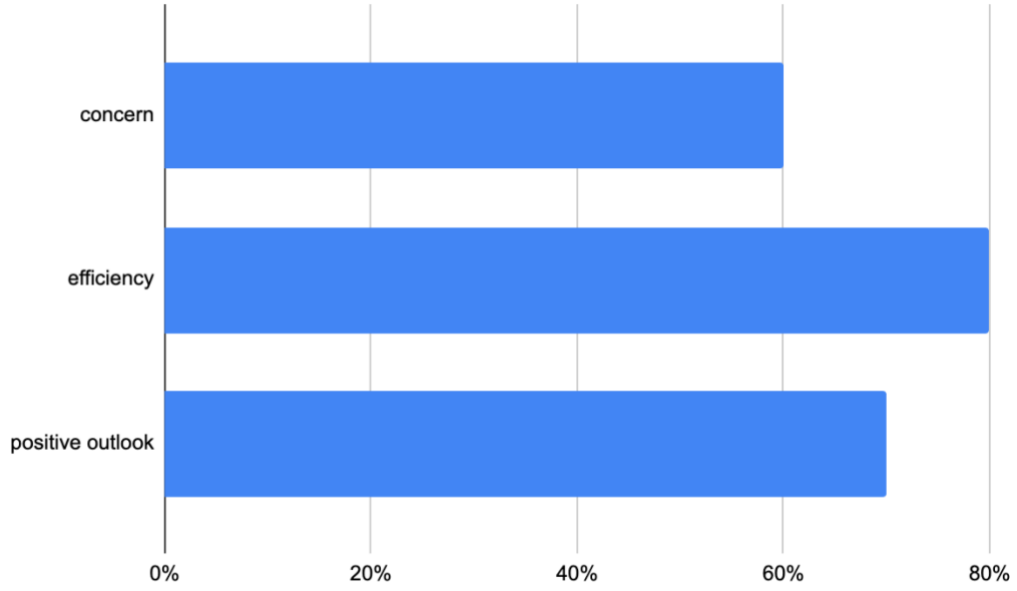


Figure 0.3: Top three topics by sentiment

5.2.3 Theoretical application: Theory of disruptive innovation

Creative AI, when framed through the lens of Christensen's (Christensen CM, 2004) theory of disruptive innovation, represents a paradigm shift that could dramatically enhance efficiency across multiple sectors. According to Christensen (Christensen CM, 2004), disruptive innovation introduces a product or service in a way that the market does not expect, initially targeting underserved or niche sectors before eventually overtaking established competitors through improvements in functionality, accessibility, or cost-effectiveness.

Creative AI fits this model by automating and optimising tasks that were previously thought to require human intuition and creativity, such as content creation, design, and decision-making. This automation makes these services more accessible to a broader audience and also significantly reduces the time and resources required to produce work of a high standard, thus enhancing overall efficiency.

Moreover, creative AI's potential to disrupt comes from its ability to learn and improve over time, offering increasingly sophisticated solutions that can adapt to a wide range of industries. This adaptability means that sectors traditionally resistant to automation, such as creative industries, are now facing transformative changes. By automating

aspects of content creation, for example, creative AI allows organisations to scale their operations more rapidly and with lower costs than ever before. As Christensen (2015) suggests, the key to disruptive innovation is making services cheaper and also making them more accessible and applicable to a wider range of contexts.

Creative AI embodies this by democratising creativity and decision-making, thereby enabling a shift towards more innovative, efficient, and inclusive practices across industries.

Creative generative AI technologies, such as those capable of generating text, images, music, and other forms of creative content, offer significant benefits due to operational efficiencies and process streamlining. The initial benefits are especially pronounced in these areas for five reasons:

Automation of repetitive tasks

Creative generative AI can automate repetitive and time-consuming tasks that were previously done manually. For instance, generating reports, creating content for social media, or drafting preliminary design concepts. This automation leads to operational efficiencies by freeing up human workers to focus on more strategic and creative tasks, thus increasing productivity. A study by McKinsey and Company (2020) highlights that automation can lead to a 0.8 to 1.4% increase in global GDP annually.

Speed and scalability

Generative AI can produce creative outputs at a scale and speed that far exceeds human capabilities. This is particularly beneficial for industries that require a high volume of creative content, such as marketing, advertising, and entertainment. The ability to generate multiple iterations of content quickly allows for rapid testing and optimisation cycles, leading to faster time-to-market and improved responsiveness to market trends.

Personalisation at scale

Creative generative AI can tailor content to individual preferences and contexts, making it possible to deliver highly personalised experiences to customers without the need for manual customisation. This capability is especially valuable in marketing and

customer engagement, where personalisation has been shown to significantly increase engagement rates and customer satisfaction. According to Adobe's (Adobe, 2022) State of Personalisation Report, businesses that invest in personalisation strategies see, on average, a 19% uplift in sales.

Cost reduction

By automating the generation of creative content, businesses can significantly reduce the costs associated with content production, including labour costs and the time required to produce or revise content. This cost reduction can make creative projects more financially viable and allow resources to be allocated to other strategic areas, such as research and development or customer service improvements.

Rationale and application to theory

The operational benefits of creative generative AI are rooted in its ability to enhance efficiency, scalability, personalisation, and innovation while simultaneously reducing costs and mitigating risks. As these technologies continue to evolve, their impact on operational processes and business strategies is likely to grow, further emphasising the importance of integrating AI into creative and operational workflows.

5.2.4 Theoretical application: Armstrong and Lee's modes of technological disruption (Armstrong, B. & Lee, G.J., 2023)

Supply chain disruption will be largely due to downstream substitution, as the efficiencies achieved through uptake in the adoption of creative generative AI will render certain suppliers or roles obsolete.

The initial marker will be a reduction in third-party suppliers, as the AI substitutes their services – a change that can be applied with immediate effect with little cause or damage to the company.

Figure 5.4 depicts a proposed downstream substitution situation within the marketing agency ecosystem.

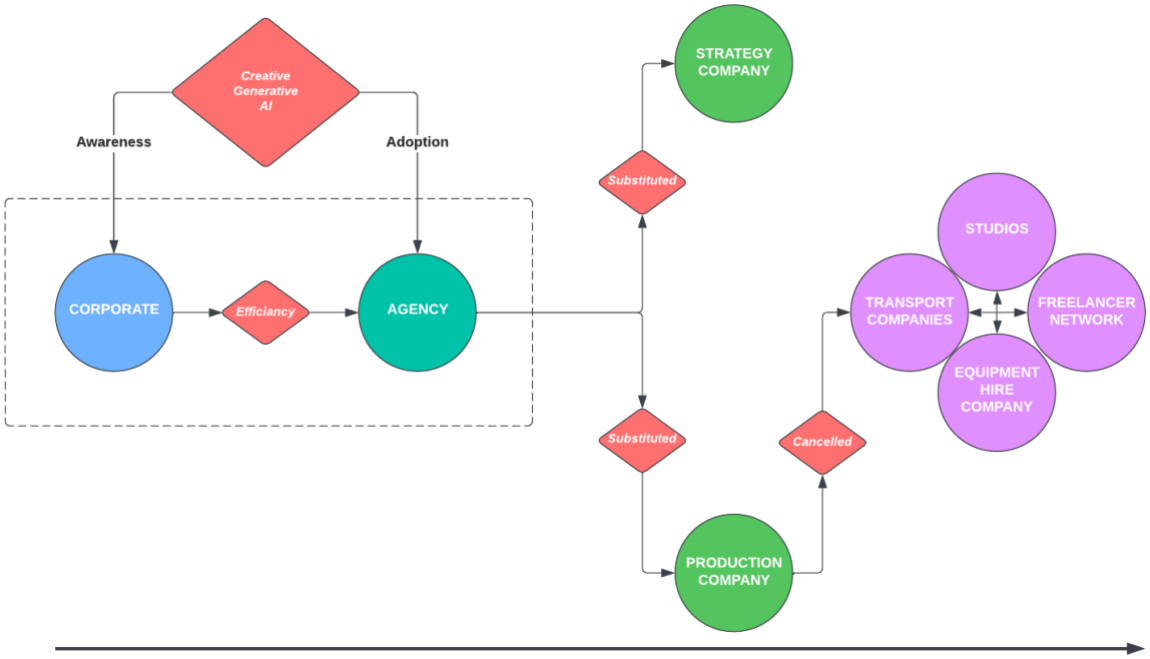


Figure 0.4: Supply chain stakeholders

Substitution/Downstream substitution

The left-hand side of Figure 5.4 shows the main disruption caused by the corporation to call for efficiency due to awareness of what creative generative AI can do from a budget and cost perspective. Then, the AI engages with the corporation from an awareness perspective and also with the agency from an adoption perspective. The corporate calls for efficiency, and the agency makes the necessary changes to keep the client. Even though this will disrupt their organisation, it mitigates financial disruption and disintermediation in case the client goes straight to the production companies.

The second interaction is where the agency substitutes AI with its relationships with both strategy companies and production companies to create creative content and deliver on the efficiency requested by the client. Due to the substitution, production companies cancel contracts with a fairly large network of studios, transport companies, freelance networks, and equipment-to-hire companies. The disruption brought by AI has caused a severe downstream substitution for short-form and medium-form content.

Currently, AI cannot fulfil long-form video content. Due to the nature of the AI, it cannot currently maintain consistency to allow for a long-form story to be generated through an algorithm engine. The purpose of this study is to review the effect on the supply chain in marketing companies.

Disintermediation

A more unlikely situation would be that the corporate clients disintermediate the agency and go to the production company with the same brief to use AI as an efficient tool to create content.

From a content perspective, this would make no sense as the production company is likely a subject matter expert in the creation of quality video content; however, the agency is the trusted partner that covers a range of services that the production company does not.

5.2.5 Conclusions related to Proposition 2

AI has been proven to not be good at human empathy, and therefore, an emotive storytelling process without the interaction or control of the human director is unlikely. The agency largely drives the creative strategic process in this space and, therefore, can instruct and prompt AI to create what is necessary.

The outcome again remains the same, and the client remains beneficial, which is why AI, from a creative perspective, is so successful. It has targeted the benefit to where the financial spring begins and trickles down to affect suppliers and specialists in the video industry.

5.3 Proposition 3: Key stakeholders will make future human resource decisions according to technology competency, not only creative human skills

5.3.1 Current landscape

Creative AI is reshaping the landscape of employment and the nature of job positions in agencies and corporate companies. As it continues to evolve, its impact is felt in the automation of daily tasks and also in the creation of new roles and the transformation

of existing ones. In the interviews, *71% of the candidates shared both sentiments that the human role is still necessary yet will also be disrupted due to a specialisation of roles.*

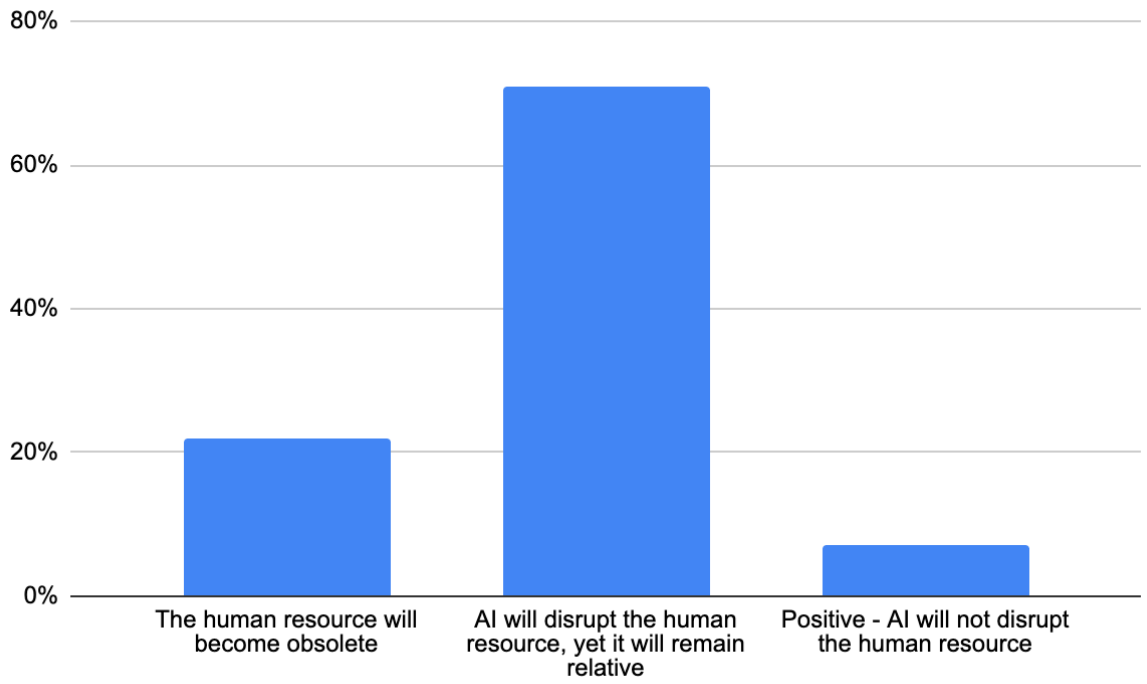


Figure 0.5: Human resource answer poll

With AI taking over repetitive and administrative tasks, there is a growing demand for professionals who excel in strategic thinking, creativity, and innovation. Jobs that require human intuition, emotional intelligence, and creative problem-solving are becoming more prominent, as these are areas where AI still lags behind humans.

In reviewing feedback from the interviewed candidates, the author observed a trend that, despite the advent of this technology, copywriters are still used in marketing agencies.

Relative direct questions

RESPONDENT Q&A

86% of the respondents agreed with this statement:

> Were copywriters put out of work with the introduction of ChatGPT4? **No.** Will copywriters that are entering the workforce potentially struggle to get work? **Yes**
>
> "We saw with ChatGPT that although we still needed a copywriter on staff to check the quality of work, more junior copy requirements become obsolete, leaving an opportunity for efficiency in our department operationally, and overnight. It didn't however, dramatically change the quality of the content being created" (Respondent GD4407, medium agency owner).

5.3.2 Theory

As AI automates routine tasks, demand increases for jobs that require human creativity and strategic insight, highlighting the complementary role of AI in enhancing human capabilities rather than replacing them (Bessen, 2019).

The integration of AI into business processes is creating new specialisations and roles. For example, positions such as AI ethicists, who ensure AI technologies are used responsibly, and AI trainers, who teach AI systems how to mimic human behaviours, are becoming increasingly important. Similarly, roles focusing on the intersection of AI and user experience, like AI interaction designers, are emerging to design better ways for humans to interact with AI systems.

In 'There is a blind spot in AI research', Crawford and Kano (2016) discuss the necessity for new job roles that focus on the ethical, legal, and social implications of AI, suggesting the emergence of positions such as AI ethicists and policy advisors to navigate these challenges.

Increased need for AI literacy

As AI tech becomes more embedded in various business functions, there is a growing need for employees across all levels and departments to have a basic understanding of AI and data literacy. This need for employee AI literacy does not mean everyone has to be an AI expert, but a foundational knowledge of how AI works and its implications for their work is becoming essential. In the introduction to 'This is Watson',

Ferruci (2012) emphasises the importance of AI literacy across all levels of employment, suggesting that understanding the capabilities and limitations of AI will be crucial for leveraging its potential in the workplace

The advent of AI is leading to a blurring of lines between various job functions, creating hybrid roles. For instance, marketers should now understand data analytics to personalise campaigns effectively, while HR professionals may use AI tools for talent acquisition and retention strategies. This convergence of skills requires professionals who are adaptable and willing to continuously learn and update their skill sets.

The blending of skills across traditional roles indicates a trend towards hybrid jobs that require a mix of technical, creative, and interpersonal skills (Harteis C, Goller M, 2014).

As AI handles more technical tasks, soft skills like communication, empathy, leadership, and adaptability become more crucial. Companies are looking for individuals who can lead teams, drive change, and foster innovation in an increasingly automated workplace.

AI takes over more technical and analytical tasks, and the labour market increasingly rewards social and emotional skills, with a premium on jobs that require human interaction and empathy (Deming, 2017).

In summary, creative AI automates tasks and significantly influences the types of jobs available and the skills required in the workforce. As companies adapt to these changes, there is a clear shift towards valuing creativity, strategic thinking, and soft skills, alongside a need for new specialisations that can navigate the complexities of an AI-driven world. This transformation calls for an adaptable workforce that is continuously learning and equipped with a blend of technical and soft skills to thrive in the future job market.

Christensen's disruptive innovation theory

The author understands that sustaining innovations occur when companies make improvements to their existing products and services to attract higher-paying customers. These innovations are typically incremental and aim to keep an organisation competitive, but they do not fundamentally change the market structure.

In contrast, disruptive innovations create a new market and value network, eventually displacing established market leaders and products.

Christensen's (Christensen C,1997) theory segments into two major disruption models, namely:

- **Low-end disruptions:** These target the least profitable customers of the incumbents, offering a simpler, cheaper alternative to an existing product or service. Over time, these innovations improve, attracting more price-sensitive customers from the mainstream market.
- **New-market disruptions:** These create entirely new markets by targeting non-consumption – offering products to those who previously lacked the means or skills to use the incumbents' products. As these innovations improve, they begin to appeal to more demanding customers.

In reviewing client feedback, the author understands that AI is not altogether new, as in 2023, with the arrival of ChatGPT3 and ChatGPT4. In the creative industry, pressure was applied to journalistic models and copywriting professionals. As opposed to new market disruption, this is *rather a low-end disruption* where OpenAI accelerated the ability to write basic statements from marketing copy to legal documents.

Trajectory of ChatGPT and its potential similarities with creative generative AI

As an AI, ChatGPT was yielded as the game-changing leading technology, yet downstream disruption, according to Christensen's theory, would not happen as quickly as it has.

Armstrong's (Armstrong, B, 2024) diagram on the performance of LLM AI Systems reviewed Owens' (2023) 'Extrapolating performance in language performance benchmarks' and diagrammatically shows how ChatGPT4, using massive multitask language understanding (MMLU) nearly reached optimum efficacy.

The idea is to extrapolate performance in language benchmarks. However, extrapolation involves predicting future performance levels of language processing systems based on current and historical benchmark results. This extrapolation can be crucial for understanding how language models like GPT, Bidirectional Encoder

Representations from Transformers (BERT), or others might evolve in terms of understanding, generating, and interacting with human languages.

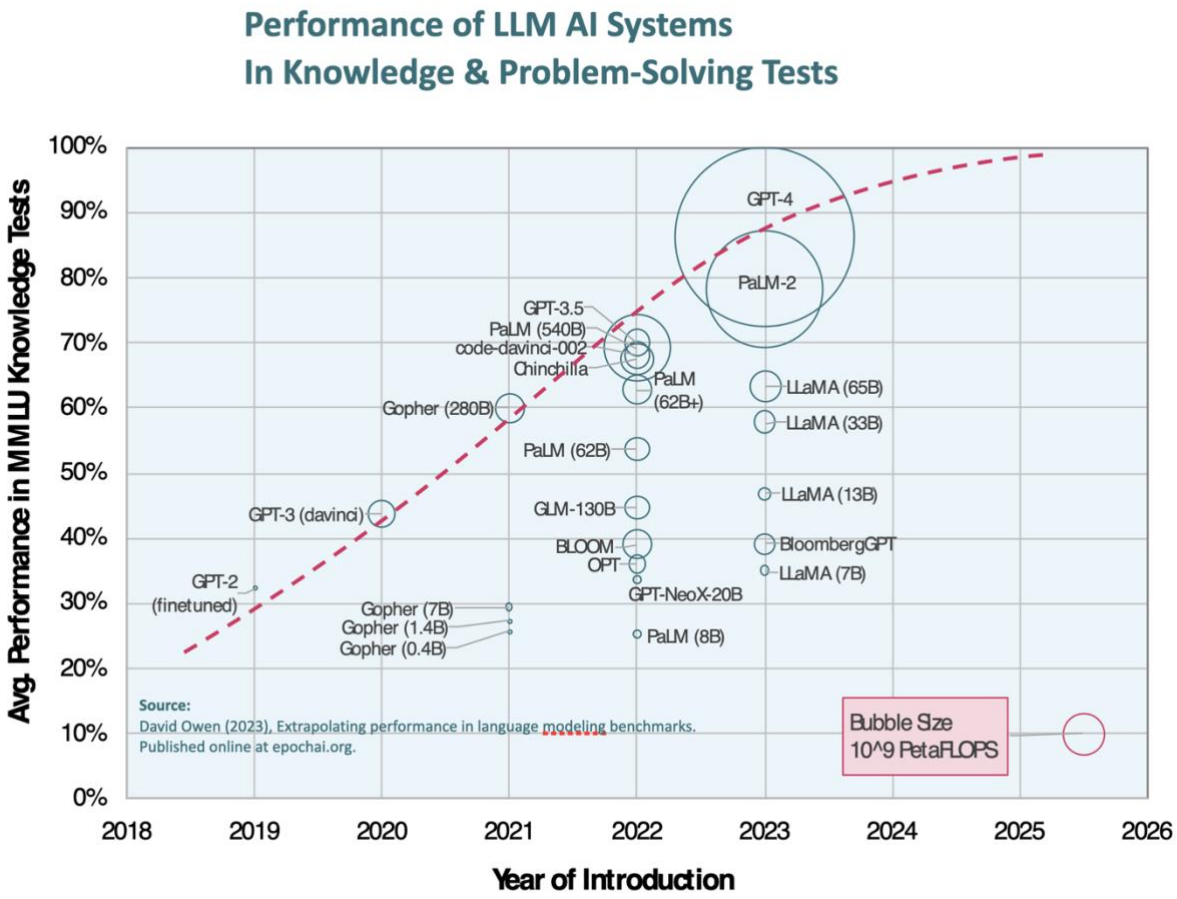


Figure 0.6: Brian Armstrong's (Armstrong B. , 2024) visualisation of ChatGPT AI growth

In the context of machine learning and natural language processing (NLP), *performance benchmarks are standardised datasets and tasks used to evaluate and compare the capabilities of various models. Extrapolating performance will involve analysing trends in these benchmarks to forecast improvements in areas such as*:

- **Language understanding:** Evaluating a model's ability to comprehend text through tasks like reading comprehension, sentiment analysis, and entity recognition.
- **Language generation:** Assessing how well a model can produce coherent, relevant, and contextually appropriate text.

- **Translation:** Measuring the quality of machine-generated translations between languages.
- **Task-specific performance:** Looking at specialised applications, such as legal document analysis, medical report generation, or code synthesis, and predicting advancements in these domains.

Such extrapolations can be based on various factors, including improvements in model architectures, training data size and quality, computational efficiency, and algorithmic innovations.

Outcome: AI performance is exponential and is reaching coherent levels of understanding to generate copy content, and shortly, it will create content that is not static video.

Christensen's (Christensen CM, 2004) theory looks at one of two ways that disruption can happen, namely through price disruption or through differentiation. Creative generative AI has been seen to be a differentiation, a new technology that will disrupt a current industry and have a significant impact on downstream disruption.

The process of disruption typically follows a distinct pattern:

- **Emergence in niche markets:** Disruptive products or services initially find traction in small, often ignored segments of the market. These offerings are usually simpler, more convenient, or more affordable than existing solutions, but they may not appeal to mainstream customers due to their lower performance on traditional metrics.
- **Gradual improvement:** Over time, the disruptors enhance their products or services, improving quality and adding features while maintaining their cost advantages and simplicity. This gradual improvement allows them to move upmarket.
- **Mainstream market penetration**: As the disruptive products improve, they start to meet the needs of more demanding customers. By the time the incumbents notice the threat and attempt to respond, the disruptors have already established a strong foothold in the market.

- **Market transformation:** Eventually, disruptive innovations can lead to the transformation of entire industries, displacing established players and redefining market boundaries.

Exponential curve of creative generative AI and its rapid adoption in the market

In the interviews, it is not so much the creative intelligence that will be the disruption but rather the operational efficiencies it offers. With AI, there is a rebuilding of the factory, yet it remains the same in terms of its output and its input:

Quality creative instruction

+

Creative generative AI technology

=

Faster generated content of the same quality

Figure 5.7 indicates that ChatGPT, as a disruption benchmark, has moved from theory to technology at a fast yet not unprecedented rate of technological growth. The exponential jump is seen in its transition to companies and rapid adoption in agencies, where, according to this study's interviewed candidates, value was generated almost instantaneously by the adoption of the tools and components from OpenAI. However, as yet, there is no significant effect on the 'products and value networks.

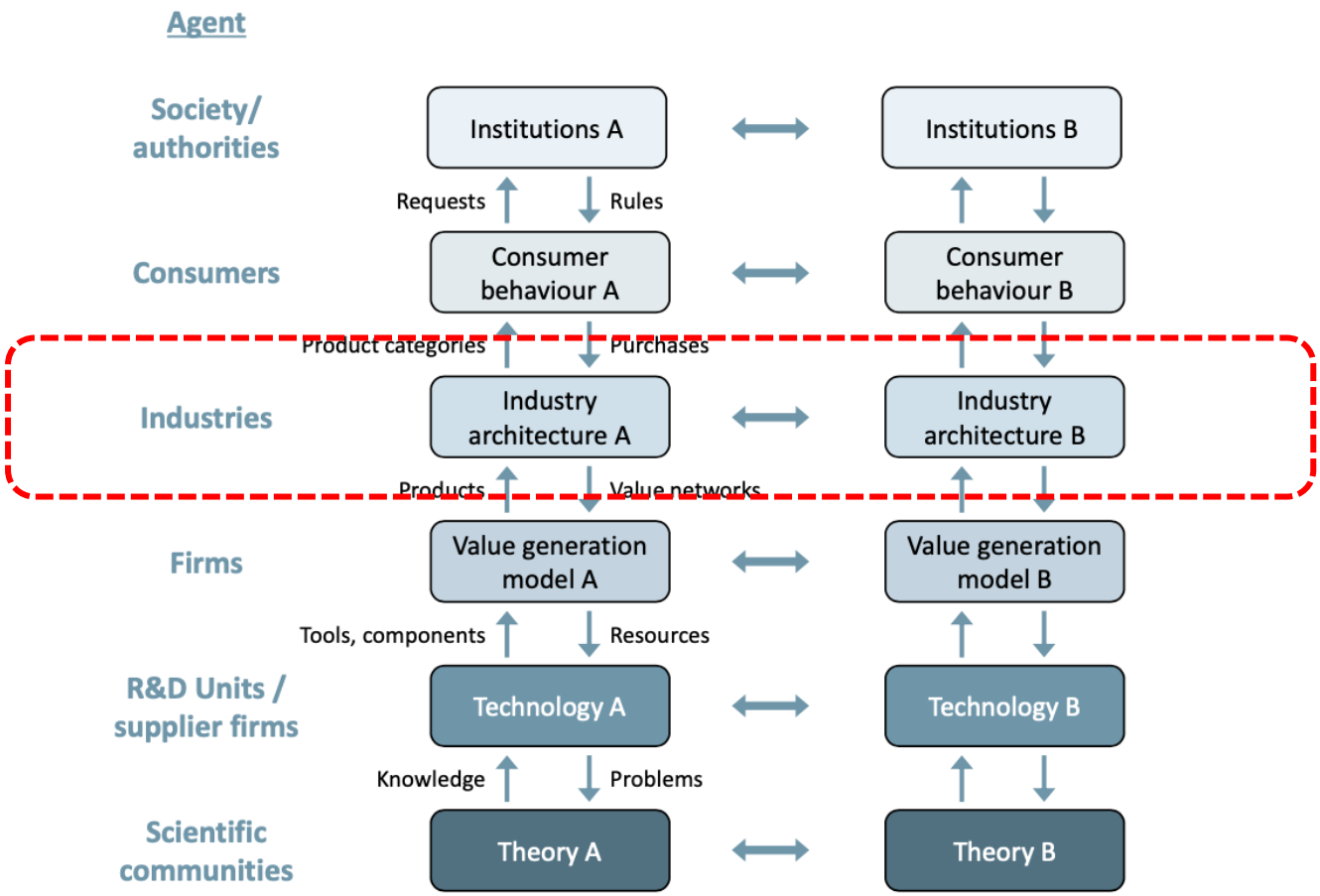


Figure 0.7: Layered structure to illustrate interactions in disruptive processes (Armstrong, B. & Lee, G.J., 2023)

In *Digital Business : Strategy for the Digital Era (3rd Ed.),* Armstrong and Lee (Armstrong, B. & Lee, G.J., 2023) show an exponential rise of ChatGPT as a functional AI in the marketing industry, and this is a trend that can theoretically be applied to newer creative generative AI technology to create a proposed trendline.

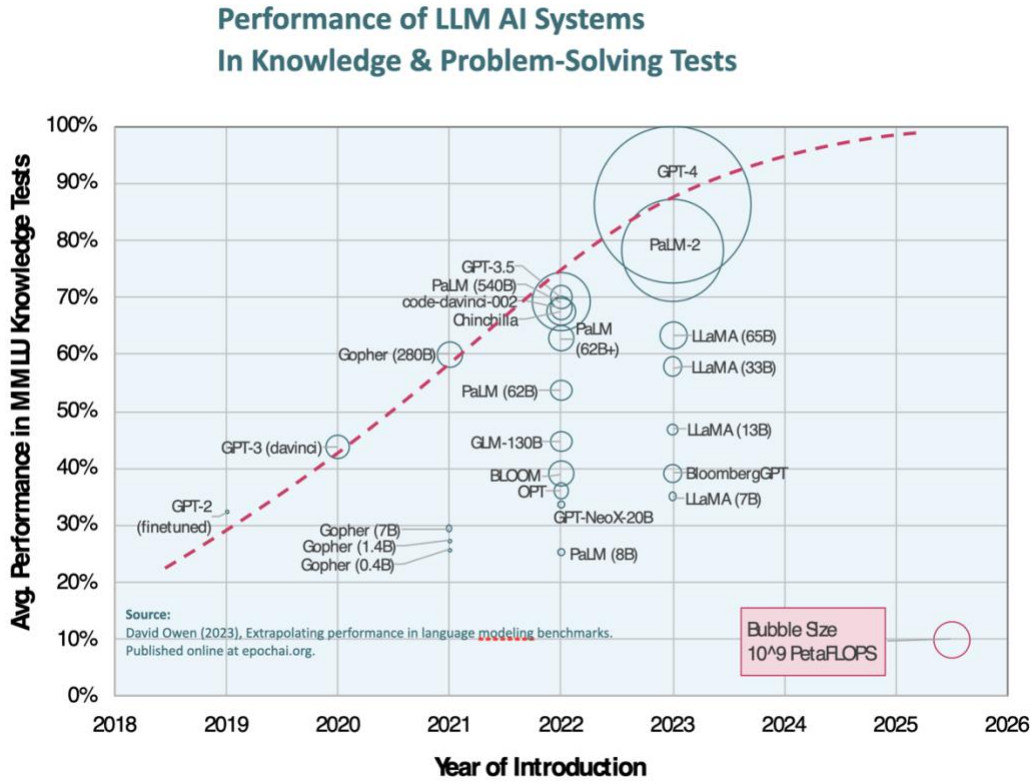


Figure 0.8: Brian Armstrong's visualisation of ChatGPT AI growth (Armstrong B. , 2024)

Understanding the future: Exponential disruption in creative video – (Product) Stable Diffusion vs SORA (OpenAI)

In the beginning, to assess the efficacy of creative generative AI, the author used Armstrong's (Armstrong B. , 2024) visual diagram on the performance of LLM AI systems, stating that current generative technologies are reaching efficacy quickly. In the next two paragraphs, the author reviews Stable Diffusion, a creative generative video AI that was considered the cutting-edge technology in November 2023, and compares it with open AI's latest release in February 2024 called SORA.

In November 2023, video experts were astonished at the capability of Stable Diffusion to assess and interpret future predictions as a generative video AI is required to do and build a scene of currently filmed visuals to create a fully-fledged television commercial. However, in February 2024, SORA was introduced by OpenAI, a generative video intelligence. At the beginning of 2024, an AI that could create ten seconds of stable video was considered the benchmark. However, SORA generated stable video footage for up to one minute.

This AI technology capacity increases by 400% in two months.

Understanding the future: Stable Diffusion generative video AI

Stable Diffusion is a creative AI model known for its ability to generate high-quality images from textual descriptions. This capability marks a significant advancement in the field of AI, providing creators with a powerful tool for generating visual content that is both diverse and aligned with specific creative visions. Its emergence is emblematic of the broader trend toward leveraging deep learning to facilitate creative processes, allowing for the rapid prototyping of visual ideas and the generation of content that would be time-consuming or difficult to produce manually. Stable Diffusion operates by understanding and translating textual prompts into complex visual outputs, showcasing the model's nuanced grasp of language and imagery. This technology democratises access to high-quality visual content creation and opens new possibilities for personalised and scalable content production.

In the marketing industry, Stable Diffusion's impact was poised to be transformative. Marketers can harness this AI to create customised and compelling imagery that resonates with their target audiences, significantly reducing the time and cost associated with traditional content creation methods. This level of customisation and efficiency can enhance advertising campaigns, social media content, and promotional materials, enabling brands to stand out in a competitive digital landscape. Furthermore, Stable Diffusion allows for the rapid iteration of creative concepts, empowering marketing teams to test and refine their visual strategies with unprecedented agility. The potential for generating a wide range of styles and themes from simple text prompts opens a realm of creative possibilities, making it easier for brands to tailor their messaging and aesthetics to various market segments and cultural contexts.

While Stable Diffusion primarily focuses on image generation, its underlying technology and principles hint at significant implications for video design and production in the marketing industry. The ability to generate cohesive and visually appealing content from textual descriptions suggests a pathway toward similar advancements in video generation. As AI models become more sophisticated, it is

conceivable that technologies akin to Stable Diffusion will emerge for video, enabling marketers to produce high-quality video content with the same ease and flexibility.

This evolution could disrupt traditional video production processes, offering a more cost-effective and scalable solution for creating engaging video content. Such advancements would further empower marketers, providing them with the tools to create immersive and narrative-driven video content that captures audience attention and drives engagement. The integration of AI in video design promises to enhance creative possibilities and also challenges the industry to reimagine the content creation process in the digital age.

Notably, while Stable Diffusion's current capabilities are primarily in image generation, the discussion on its potential application in video design is speculative and based on the trajectory of AI developments in creative fields. For the latest and most accurate information on Stable Diffusion and its applications, direct sources from the developers or academic research on the subject should be consulted.

Understanding the future: SORA – tracking creative video generative AI and its exponential growth

OpenAI's SORA video generation technology represents a significant leap forward in the field of AI and creative content generation. Similar to how ChatGPT4 revolutionised text-based interactions by providing highly contextual, nuanced, and even creative responses, SORA aims to transform the video content landscape. SORA uses advanced machine learning algorithms to understand and generate video content that is visually compelling and also contextually relevant to specific prompts or content requirements (Brooks, 2024).

SORA is a technology that can create videos from scratch, edit existing footage, or combine elements from multiple sources to produce entirely new content. Its potential impact on the creative marketing industry is immense. It offers marketers the ability to produce highly customised and engaging video content at scale, significantly reducing production times and costs while increasing the potential for creativity and personalisation in campaigns.

Comparing SORA to ChatGPT4, both technologies share the common goal of automating and enhancing creative processes through AI. ChatGPT4, with its ability to understand and generate text, has already demonstrated how AI can be used to streamline content creation, from writing articles to generating creative writing pieces. SORA extends this capability to the realm of video, potentially following a similar pattern of adoption and impact in its respective domain. Just as ChatGPT4 has become an indispensable tool for content creators, marketers, and educators, SORA could become equally pivotal for video producers, advertisers, and digital marketers. (Nield, 2024)

The key to its success will lie in its ability to maintain a high level of quality, creativity, and relevance in video production, mirroring the way ChatGPT4 has managed to produce text that often rivals human-written content. The disruptive potential of SORA lies in its capacity to democratise video production, making it more accessible to a wider range of creators and industries and, in doing so, reshaping the landscape of digital marketing and content creation.

This advancement could follow a disruptive innovation pattern similar to ChatGPT4, initially finding niche applications within creative marketing where its unique capabilities provide a competitive edge before eventually broadening its application scope as the technology matures and becomes more accessible. The transition of SORA from a niche innovation to a mainstream tool in creative marketing could mirror the path of disruptive technologies outlined by Christensen (Christensen CM, 2004), challenging established marketing paradigms and setting new standards for personalised and effective marketing strategies.

5.3.3 Key factors for success

- **Technology enablers:** Disruptive innovations often rely on technological advancements that enable new ways of serving customers. However, the technology itself is not the disruptor; rather, it is the novel business model or approach that leverages this technology to serve unmet or overlooked needs that drive disruption.
- **Business model innovation:** Successful disruptors often employ innovative business models that allow them to create and capture value in ways incumbents

cannot easily replicate. These may involve cost structures, revenue models, or distribution channels that are fundamentally different from those of existing players.

- **Incumbent response:** The theory also considers how incumbents respond to disruptive threats. Often, established companies are either unable or unwilling to tackle disruptive innovations head-on due to organisational inertia, existing commitments to customers and suppliers, or financial metrics that favour sustaining innovations.

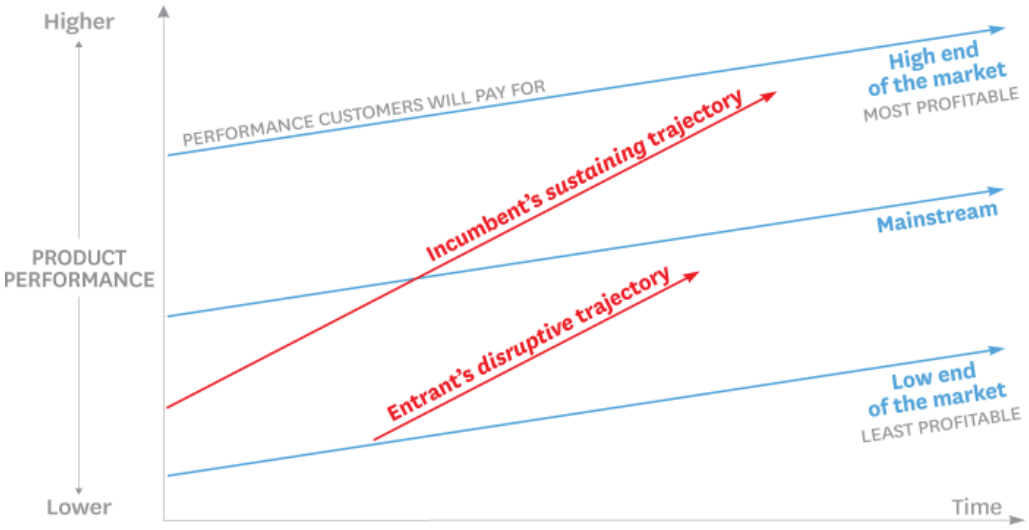


Figure 0.9: Christensen's theory of disruptive innovation (Christensen C.M. , 1997)

Technological skills

As the digital landscape continues to evolve at a rapid pace, Christensen's theory will initially be viewed from the company level (see Figure 1.2: Layered structure to illustrate interactions in disruptive processes*)* as marketing agencies increasingly recognise the importance of integrating advanced technologies, especially AIqaqq, into their strategies and operations. The primary reason for hiring technologically inclined professionals is to manage the complexities of AI applications that are becoming central to marketing efforts.

Comparative findings discussed : Question 43: - Do you think there will be a shift towards hiring more technologically inclined marketing professionals?

The response highlighted that three sentiment areas were prominent:

- Concern (60%)
- Efficiency (80%)
- Positive outlook (70%)

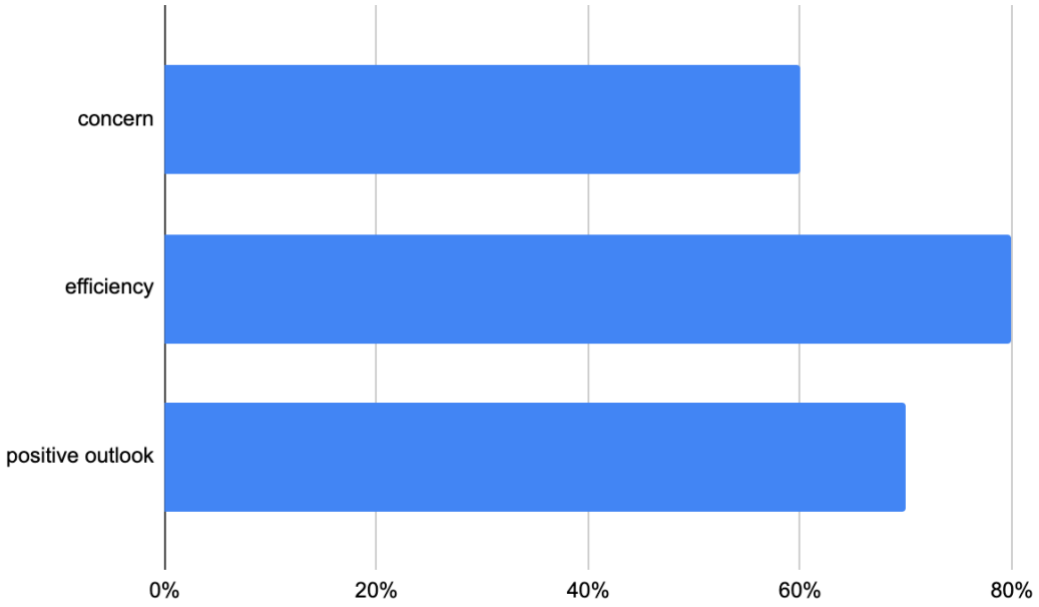


Figure 0.10: Key trending topics from the qualitative questionnaire

Key answers included:

> "Agencies will need to adjust their staff to meet the needs of their clients, this will not be as prominent within corporate roles" (Respondent WB4405, corporate brand director).
>
> "We as agencies will adjust our requirements to ensure that we find the 'new breed' of AI-empowered staff or suffer the consequences. As our clients will rely on us, so we will rely on them" (Respondent GD4407, medium agency owner).

5.3.4 Conclusions related to Proposition 3

These professionals possess the necessary technical expertise to implement, manage, and optimise AI tools and algorithms that can analyse vast amounts of data, predict consumer behaviour, personalise marketing messages, and automate tasks. Their skills enable agencies to leverage AI to enhance customer experiences, improve

campaign effectiveness and increase operational efficiency. Moreover, technologically savvy individuals are essential for staying ahead of emerging trends and innovations in AI that can provide a competitive advantage (Kaplan A.M, 2020; Huang M, 2018).

Furthermore, the integration of AI in marketing requires technical skills and an understanding of ethical considerations, data privacy regulations, and the potential impact on consumer perceptions. Technologically inclined professionals play a crucial role in navigating these complexities, ensuring that AI applications are used responsibly and in compliance with legal standards.

The AI applications help marketing agencies build trust with their clients and the public by implementing transparent, ethical AI practices. This multidisciplinary expertise is crucial for developing AI-driven marketing solutions that are effective, ethical, and sustainable in the long term. As AI technologies continue to advance, the demand for professionals who can bridge the gap between technical capabilities and strategic marketing objectives will only grow, underscoring the vital role they play in the future of marketing (West D.M., 2019; Wirtz J., 2019).

5.4 Conclusion

In speaking with corporate executives and marketing leaders, there is a feeling that there will always be the need for human intervention to prompt and control a creative generative AI. However, it is on the ground level with project managers and freelancers that the true story is playing out.

Freelancers are saying up to a 60% reduction in opportunities for work, and account managers see together with the project managers that work is now being housed more than contractually, creating opportunities for third-party specialist suppliers. This indicates that there is a lack of tangible knowledge and awareness of the lower rungs required within the supply chain to create the content, and a rather dictatorial point-and-request approach is met with a lack of knowledge as to how those requests are met.

> “Workflows continue to change, and we are seeing that it is often one highly experienced individual who will control multiple levels of creation comment, making other positions and third-party opportunities obsolete within the

organisation. This is not a future idea but rather a current reality” (Respondent AC4408, account manager medium agency),

Industry-wide, with the simple arrival of SORA in February 2024 OpenAI's response to video-to-text creative generation AI, major studios are pausing large investments in the industry. Due to the nature of the technology and the relatively later release in the year, official documentation is scarce (Mollman, 2024).

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

In order to truly understand the level of technological disruption that will be applied in the near future in the marketing and advertising industry, the author reviewed the application of Armstrong and Lee's (Armstrong, B. & Lee, G.J., 2023) modes of disruption theory to the industry stakeholders and reviewed what level of disruption will occur based on the findings of the research and interviews.



Figure 0.1: Armstrong and Lee's (Armstrong, B. & Lee, G.J., 2023) modes of disruption theory

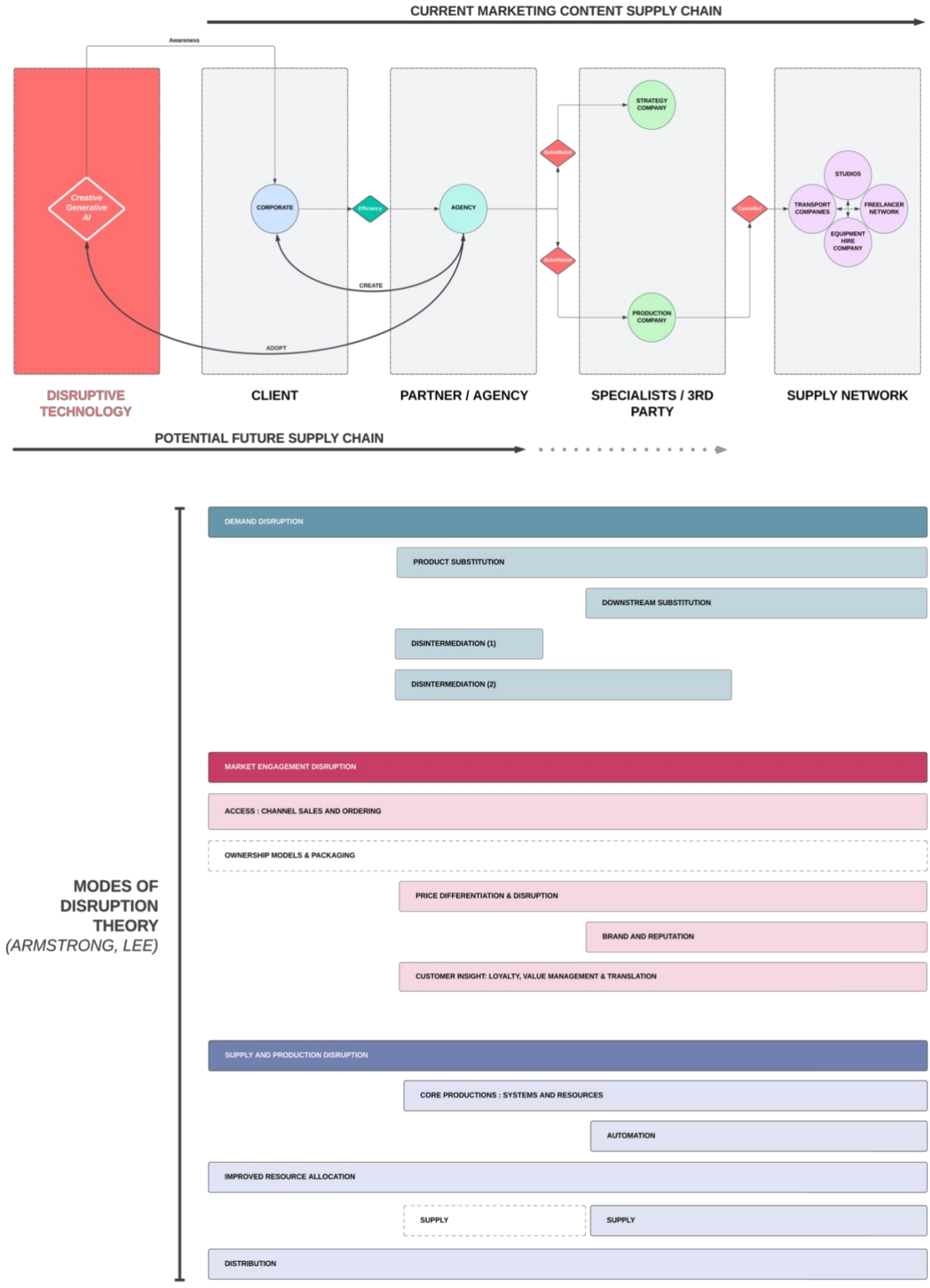
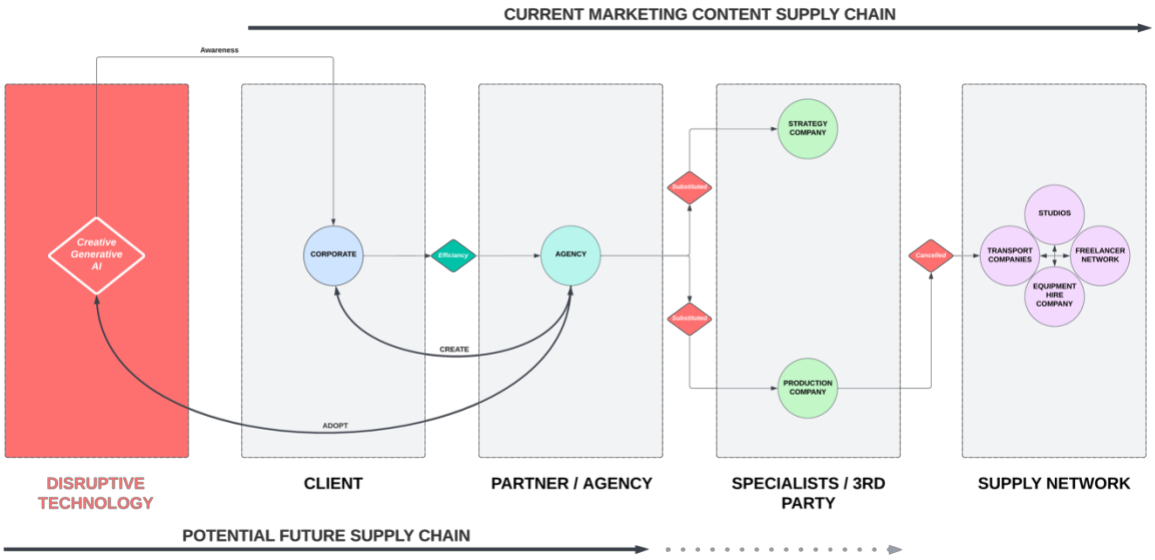


Figure 0.2: Application of Armstrong and Lee's (Armstrong, B. & Lee, G.J., 2023) modes of disruption theory

6.2 Current supply chain vs the future supply chain



Extract from Figure 6.2 – Supply chain process

The extract from *figure 6.2* above depicts the current supply chain shown in grey segments. A client would brief a partner or agency on a piece of content or a particular category campaign that is required, at which point the partner agency will draft a strategy and brief specialists and third-party providers to complement both content and strategy adaptations to create a cutting-edge content proposal.

On confirmation of the brief and acceptance of the updated proposal, the client would give the agency approval, who in turn will give the specialists approval and will, in turn, appoint the supply network to create the content.

With the advance of creative generative AI, disruptive technology is replacing the downstream providers, namely the supply network of specialists. This validates the disruptive nature of creative generative AI as it is replacing a segment of the industry and hereby adjusting the current supply chain.

It can be noted that despite the disruption in the supply chain, the disruptive technology will potentially replace:

- One of three (supply network)
- Two of three (supply network, specialists)

And potentially, although seemingly unlikely:

- Three of three positions within the supply chain (supply network > specialists > partner/agency).

6.2.1 Assessing the potential disruption based on each mode of disruption showcased in Armstrong and Lee's (Armstrong, B. & Lee, G.J., 2023) theory modes of technological disruption

Demand disruption

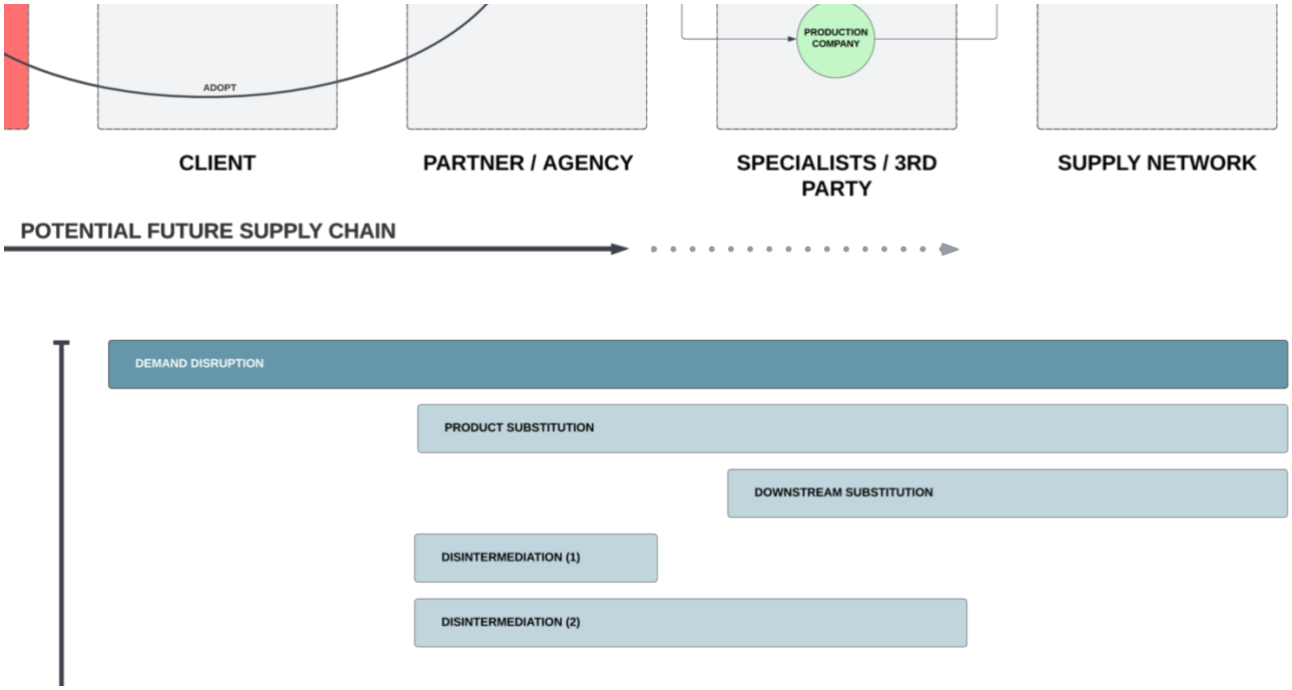


Figure 0.3: Application of Armstrong and Lee's (Armstrong, B. & Lee, G.J., 2023) modes of disruption theory

Product substitution

Depending on the size of the organisation or client, the disruptive technology can disrupt the partner agency level. In the research interviews, it was noted that all the large corporate clients had internal strategic teams that would develop briefs for the agencies and partners. This gives validity to the possibility that disruptive technology could disrupt an entire industry, allowing clients to create content internally and bypassing the partner agencies, specialists, third-party specialists, and the entire supply network.

In reviewing the sentiment of the interviewed clients to use the technology and standalone to their sole benefit, clients would rather lean on the knowledge of their agency partners to ensure that they remain at the cutting edge of this technology. There was an inclination towards the onus remaining on the agency partners to adopt the technology on behalf of the client.

A "fear of falling behind" (RESPONDENT DP4413/SD4415) due to the potential lack of understanding of these particular resources is what the author believes will keep partner agencies undisrupted to a degree.

Downstream substitution

In the review of the respondents and relation to the theory of the modes of technological disruption, it is noted that Christensen's theory of disruptive innovation speaks to two main areas, namely differentiation and price optimisation.

Armstrong and Lee's (Armstrong, B. & Lee, G.J., 2023) theory delves deeper into the potential modes of disruption. In this exploration, downstream substitution is largely the most significant impact that will happen within this industry on a multibillion-dollar network of specialist equipment providers and content creators. This technology can recreate and will continue to recreate the abilities of film and production professionals, together with design and production houses' capabilities.

A visual assessment of the proposed vs actual rate of disruption (Chui, 2023) is presented in Figure 6.4.

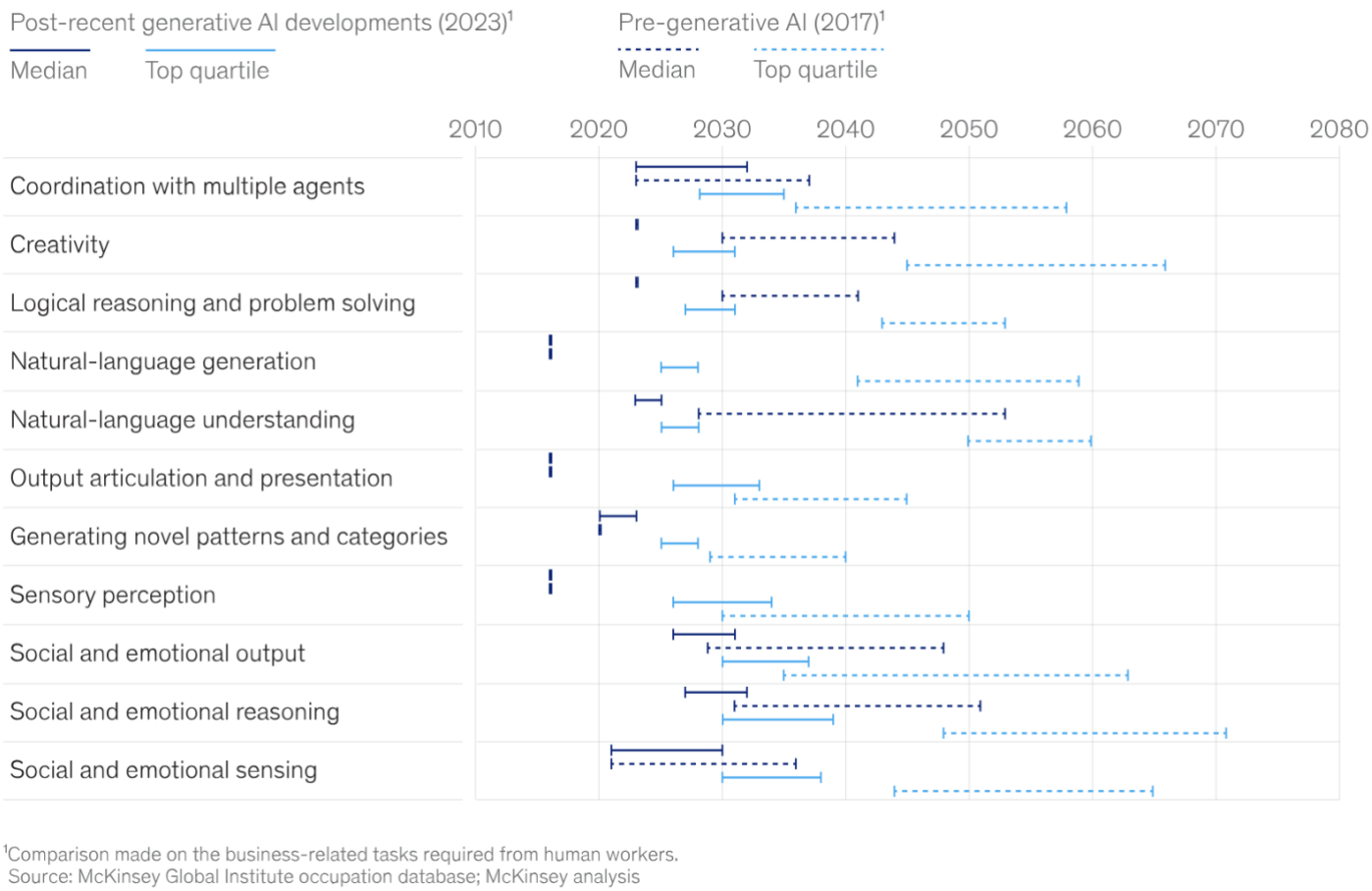


Figure 0.4 – McKinsey's rate of disruption (Chui, 2023)

> "For most of the technical capabilities shown in this chart, gen AI will perform at a median level of human performance by the end of this decade. It's performance will compete with the top 25% of people completing any and all of these tasks before 2040. In some cases, that's 40 years faster than experts previously thought" (Chui, 2023).

Disintermediation

It should be noted that one respondent indicated that there is the potential to disrupt both the marketing agency, as well as the specialist and that the corporation would be able to engage directly with the specialist network providers to create the content that they want by using the disruptive generative AI to create the concepts that the agency and the specialist partners usually complete. However, this was a 7.5% indication, whereas 92.5% of the respondents indicated that the agency would still be the controller of these technological and creative outcomes.

Another potential disintermediation would be the removal of the agency and the appointment of the specialist to still control the supply network, and according to the responses from the interviews, this was a 16% indication against 84%, again making it unlikely.

6.2.2 Market engagement disruption

Like any AI, the true value is in bringing the ability of the function to the fingertips of the user.

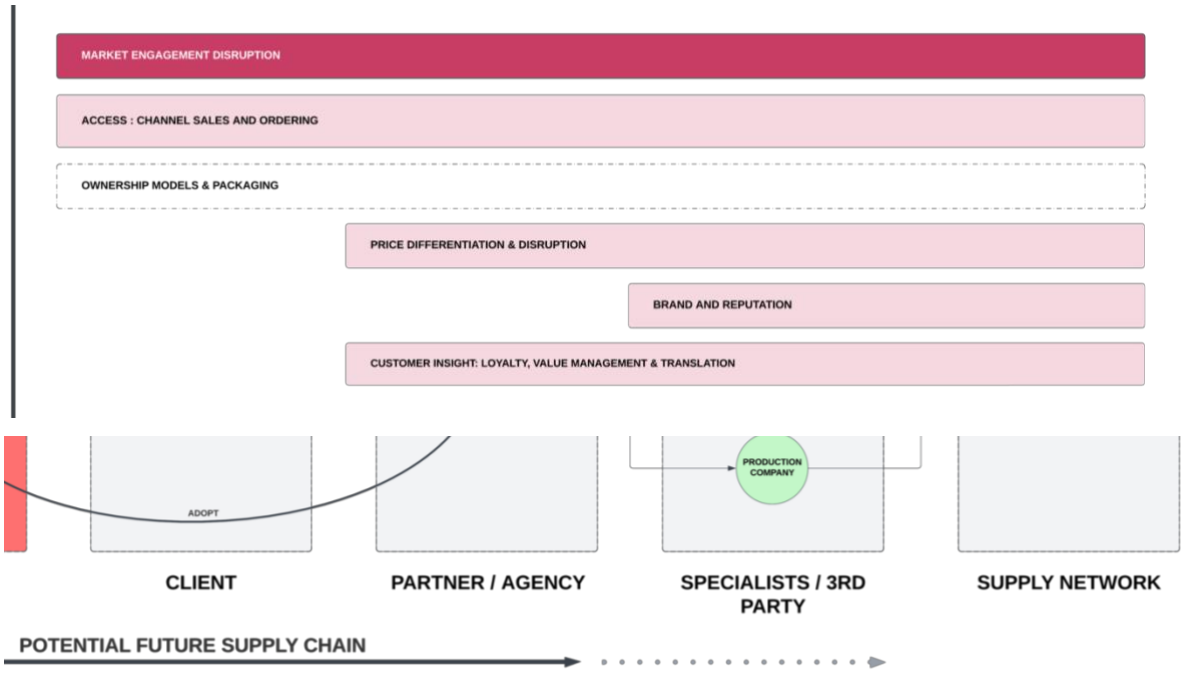


Figure 0.5: Application of Armstrong and Lee's (Armstrong, B. & Lee, G.J., 2023) modes of disruption theory

Access: Channel sales and ordering

There are no verticals within the industry that will not be untouched, as this can affect jobs within the internal marketing department in the corporate clients and downstream through the agencies, the specialists, and the supply network.

Price differentiation and disruption

Creative content design is the bread and butter of marketing agencies around the world. It is in the ability of the agency to contextualise the need, strategise the

campaign, and finally deliver the executed content in a unique way that gives the industry its unique selling point. With the adoption of adaptive generative AI, the value of the outcome becomes less valuable and, therefore, billing and price structures are disrupted.

(Figure 6.8), based on the interviews, shows that the current benefit of creative generative AI is efficiency. Although there is currently ambiguity around whether the budgets will decrease or stay the same, there is uniformity in thought that the cost of content creation will be reduced and thereby disrupted.

Brand and reputation

For the specialists and the supply network, there is a disruption in their brand and reputation, as they are no longer seen as the experts and unique service providers that they have been in the past due to AI is rapid disruption of their craft.

Many articles show that AI companies will be subject to high levels of scrutiny and trademark plagiarism lawsuits. If the AI is seemingly adopting patterns from human work, this is where the sticking point will appear.

Customer insight: Loyalty, value management, and translation

Though this particular area of disruption does not conform to the framework provided by Armstrong and Lee (Armstrong, B. & Lee, G.J., 2023), due to the speed of AI, there is the ability to mass personalise, and mass customise content to test the market and get information responses fairly quickly through A&B testing that would normally take a human or an agency a long time.

Instead, the clients are able to create their own value management and information translation by using AI internally to test their markets robustly in-house rather than using the agency.

In reviewing the responses from the interviews, there is a 35% indication that corporate companies will do their own market investigation using content created by AI. Although 35% does not seem to be a high number, it represents over 100% of the corporate respondents' comments, as every corporate respondent indicated that this was the

route they would take. Furthermore, agency directors and account managers agree that this is the direction they believe it will go.

6.2.3 Supply and production disruption

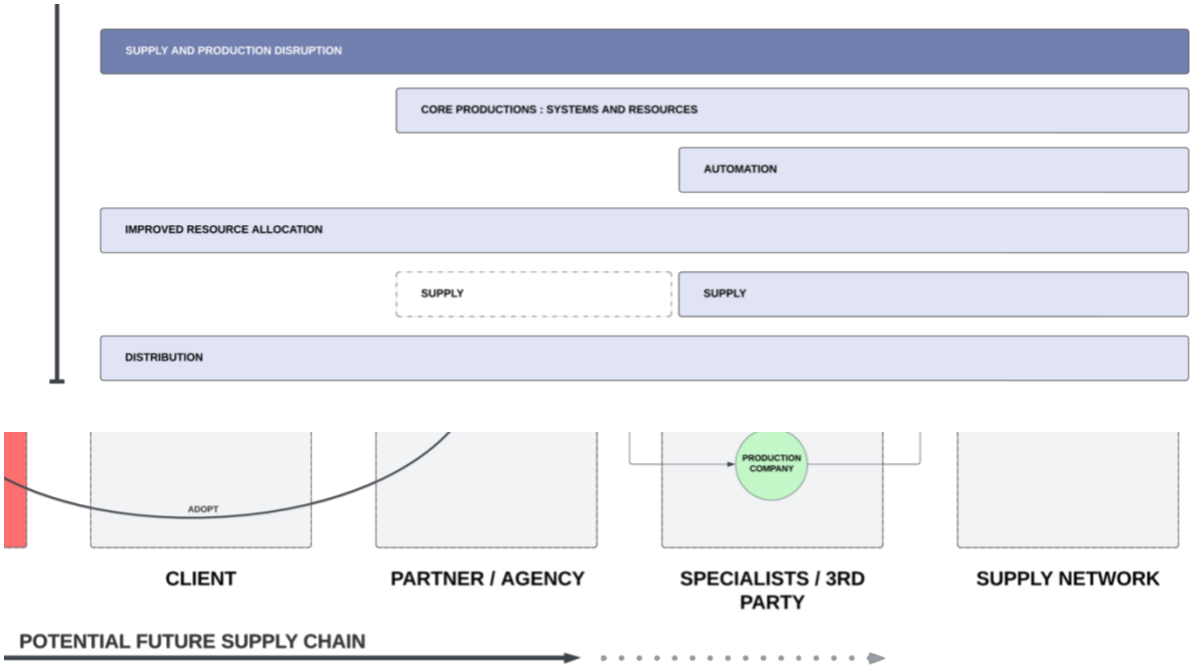


Figure 0.6: Application of Armstrong and Lee's (Armstrong, B. & Lee, G.J., 2023) modes of disruption theory

Core productions: Systems and resources

This particular section remains the largest disruption area of creative generative AI. The simple ability to create and produce a product at the touch of a button is the equivalent of the ability to paint a painting over three months or generate a painting in three seconds.

In terms of technological advancements, people have jumped 150 years in a matter of three years (Chui, 2023) and despite the inability of AI to create the necessary long-form content currently:

> "This is the worst that the AI will ever be/ […] The technology will only continue to get better and disrupt further" (Respondent WR4410).

Automation

Although not physical automation, generative AI forms the function of automating production in its entirety through the click of a button. One may assess that although it is not the physical act of filming, capturing, post-producing, editing, or compositing, the outcome remains the same.

Improved resource allocation

The word “efficiency” was the highest trending topic (80%) *(see Figure 5.10)* in the interviews.

The ability to create high-quality content without budgets or capability being a factor was indicated to be the most significant factor as it allowed for the focus on fiscal responsibility, strategic outcomes rather than content outcomes, and the ability to adapt quickly without budgetary implications.

However, the long-term implications of this improved efficiency are the potential demise of their multibillion-dollar network of specialist suppliers, content creators, and creative resources.

Supply

The supply component, although completely digital, also has an analogue impact. Creative and generative AI is the disintermediation of the supply network and specialists to create content for the client.

Distribution

In conclusion, there is a dematerialisation of the video and design industry. Content and creators will be subjected to AI where actors are not real, and scenes are not from a particular camera or camera and body point. Dematerialisation will remain the key sticking point of AI.

6.3 Conclusions regarding Proposition 1: Despite hyper-personalisation, a more generalised communication narrative will begin to emerge due to the aggregated sourcing of content

Despite the potential generalisation of a narrative coming through AI, at this point, the adoption of this technology and deployment of an AI-generated narrative is not sufficient to deliver an accurate set of results or outcomes.

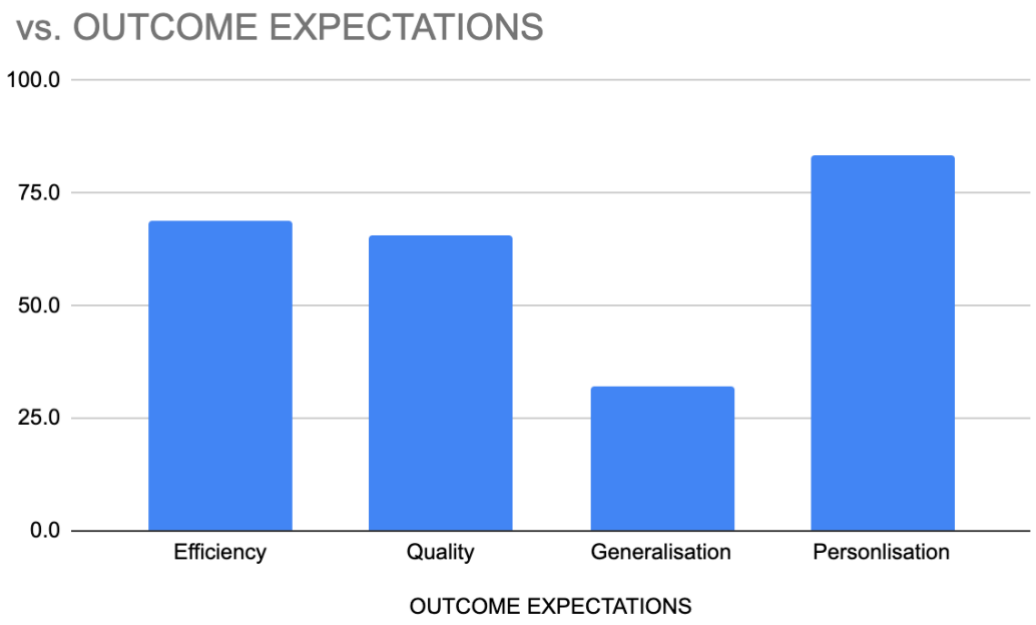


Figure 0.7: Outcome expectations from the questionnaire

In questions, the respondents have stated that the bulk of AI is used for storyboarding, junior-level tasks and framework information. The outcome must be personalised, unique, and cost effective.

AI has not yet yielded a significant reduction in the human resource elements, and therefore, humans continue to manage and run the technology.

Furthermore, it is the indication of corporations and agency leaders alike that a human will always have control of the technology (see Figure 6.7). Moreover, at this point, a more efficient execution of a basic creative task is evident, having removed the necessity to develop a base narrative or create one from scratch.

In time, as the technology is adopted, people will begin to build trends and see where the human resource element is affected and where the bulk of the content is aggregated. This author believes that a base generalisation will not easily be seen because it is human nature to copy ideas from competitors and alternative parties. In this way, AI is no different from the human element in agencies and corporations. While a human is in control, people will reach higher personalisation owing to the need by the corporation for a dedicated, personalised message to consumers.

Currently, AI remains a human-controlled technology.

6.4 Conclusions regarding Proposition 2: Although creative, the disruption in the next two years will be largely operational

Since the outbreak of COVID-19, the world economy has encountered many challenges, leading to a profound impact on global economic structures and growth trends. The pandemic triggered the most severe economic recession since World War II, as governments worldwide implemented lockdowns and restrictions to curb the spread of the virus, causing widespread disruptions to businesses, labour markets, and supply chains.

The World Bank (World Bank, 2023), report, Global Economic Prospects, found that global GDP contracted in 2020 by an estimated 3.5%, illustrating the extensive economic damage inflicted by the pandemic. The recovery process was uneven across various regions and sectors, influenced by factors such as vaccine availability, fiscal support measures, and the varying capacity of countries to adapt to the new normal.

The pandemic significantly accelerated the pace of technological disruption as businesses and consumers rapidly adopted digital technologies to navigate the constraints imposed by COVID-19. The shift towards remote work, e-commerce, online education, and telehealth changed the way people live and work and also spurred innovation and growth in the tech sector. For instance, the use of cloud computing and cybersecurity solutions surged as companies moved their operations online to maintain continuity.

A report by McKinsey and Company (La Berge, et al, 2020) highlights that the pandemic sped up the adoption of digital technologies for several years, with many of these changes expected to be permanent, reshaping industries and economic activities in the long term.

This digital acceleration is reshaping the global economy, creating both opportunities and challenges. On the one hand, technology has enabled businesses to remain operational and has opened new markets and possibilities for innovation and efficiency gains. On the other hand, it has also highlighted the digital divide between those with access to technology and those without, raising concerns about inequality and access to opportunities.

As noted by the International Monetary Fund (IMF) (2021) in its World Economic Outlook Report, the ongoing technological transformation, while offering a pathway to recovery and resilience, necessitates policy responses that ensure equitable access to technology, investment in digital infrastructure, and upskilling of the workforce to navigate the disruptions and harness the benefits of digitalisation. These developments underscore the crucial role of technology in driving economic recovery and shaping the future of the global economy post-pandemic.

The IMF noted that technological reformations and adaptations to the global technology frameworks have been made to drive efficiencies and reduce unnecessary time expenditure through automation and AI. The highest peaking trend (*see Figure 6.8*) from the interview sentiment ratings was efficiency, showing that driving a fiscal benefit out of these technologies is key.

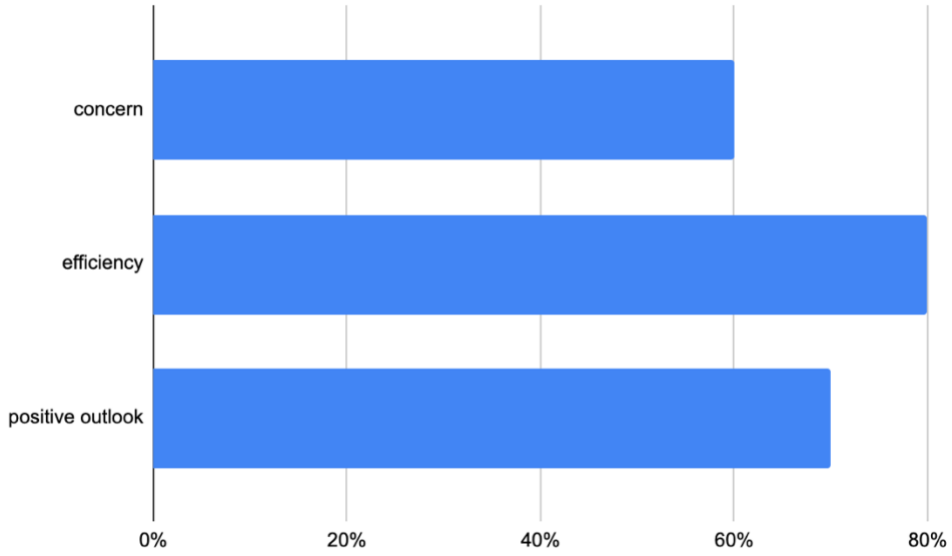


Figure 0.8: Key trending topics from the qualitative questionnaire

The author deduces a higher adoption rate than technologies aiming to make a particular return on investment from the use of AI due to the low-cost point of AI.

The essence of this study is to understand how creative generative AI will affect the supply chain process in the marketing industry. The study shows evidence that despite the generative AI being a severe disruptor, the need is still the same, as is the final product.

> “The need is the same, as is the final product. The true difference is in how we get there, it is in how the content is generated of which the leading factors are cost efficiency and time” (Respondent PK4416, agency director).

6.5 Conclusions regarding Proposition 3: Key stakeholders will make future human resource decisions according to technology competency, not only creative human skills

This proposition is based largely on sentiment and the experience of the respondents. Human resource decisions will always be made based on humans, as evidenced by all (100%) of the respondents stating that technology competency would take primacy when any creative human was interviewed.

There is no way to decompile, mentalise, or silo these two functions. In the end, a creative skill set will require technological competency in the same way that any professional is required to understand the basics of reading and writing.

Currently, a technology competency is required from a creative human skill, whether it is the Adobe package for those that are creating and designing still working on video, through to Microsoft Word, Grammarly, and other technologies for copywriters, commercial scripts, directors, and producers.

The competency for technology will be no different when assessing the understanding of AI, which, on review, according to the respondents, is the simpler technology to understand as it simply requires prompts.

The dividing line between those who will be chosen and those who will not lies in experience, the ability to interpret and empathise with human target audiences, and understanding clients' requirements, rather than a technological competency to prompt the best creative content from AI.

This study indicated that the two will go hand in hand, and it will not be a decision of either/or, but rather: "Do you have the foundational skills from which you can execute a creative outcome?"

6.6 Recommendations

Based on the feedback, the author understands that the main disruptive elements will be:

- Efficiency
- Time
- Quality

In order to remain relevant in the age of creative AI, companies should use and adopt the technology to offer more efficient outcomes and review their current value propositions and strategic business models to ensure that they weather disruption, finding new differentiators and offerings within the new technology and pivoting into opportunities created by this new disruption.

Opinions are divided on whether this technology will result in a negative or a positive outcome; however, enthusiasm ranks higher than scepticism, and the drive for knowledge outweighs the current concerns.

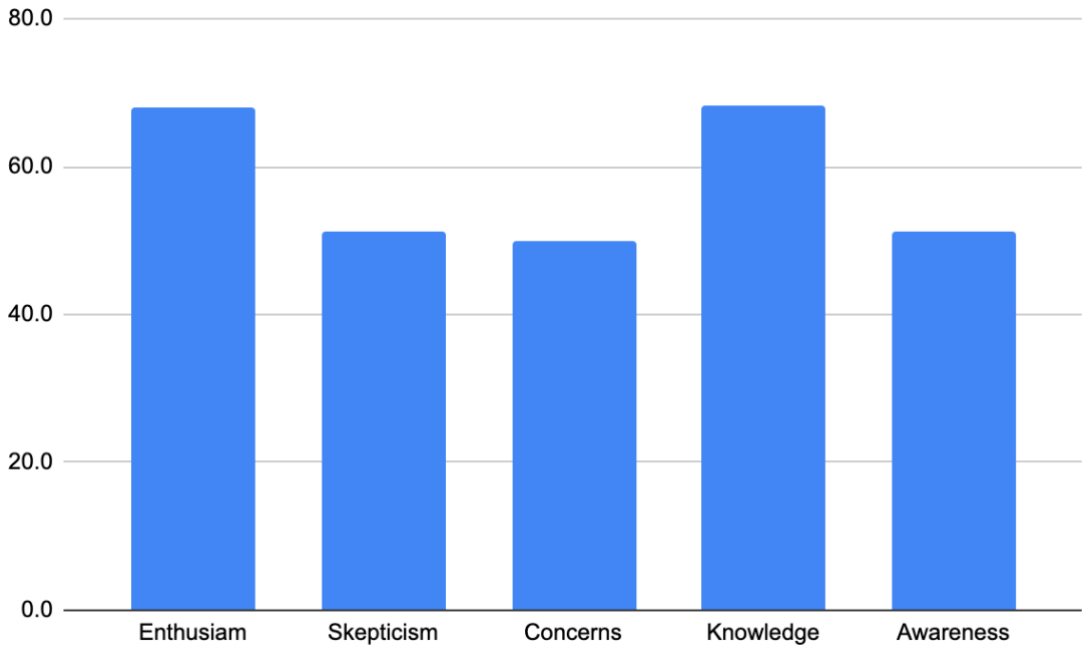


Figure 0.9: Sentiment poll

In this research, the author encountered an interesting creative metaphor to describe what creative AI will look like in the creative industry:

In *The Incredibles* by Pixar Studios, a superhero story, the antagonist would like to see all superheroes powers made obsolete, and he does this by creating superpower abilities using technology, a technology that any human can use. His final comment to the superhero protagonist is:

> "… because when everyone is a superhero, no one is".

AIs, namely SORA, Stable Diffusion, DALL-E, CHATGPT 4, and Midjourney, among others, have placed one of the largest and most creative industries at risk. What is clear is that AI struggles to empathise and understand human traits required for problem solving. Therefore, there will always be a place for people to be involved in the creative process. The question is *who will have a place, and who will not?*

6.7 Recommendations for further research

Understanding the human implications can only be fully studied and understood with time, metrics, and a deeper understanding of what the industry will do to pivot to meet these new technologies. Future research questions could include:

- How can empathy and understanding become part of an AI repertoire?
- What will be the adjacent unique service provisions, and how will companies that support the client respond to this threat and opportunity?
- How will a multibillion-dollar industry that is under threat of being made obsolete respond in the face of AI, and what will the outcomes be?

An additional study would be of great value for considering these new metrics and their implications for the future of the marketing and entertainment industry.

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ANNEXURE A: QUESTIONNAIRE

Demographics (Questions 1-5)

1. What is your current job title?
2. How many years have you been in the marketing industry?
3. What is the size of your organisation (number of employees)?
4. Which sector does your organisation primarily operate in?
5. What region (or country) do you primarily focus on in your role?

Current understanding and use of creative AI (Questions 6-15)

6. On a scale of 1-10, how would you rate your understanding of creative AI? (3)
7. Does your organisation currently use AI in its marketing efforts? (3)
8. If yes, in which areas? (e.g. content creation, data analytics, customer segmentation, etc.)
9. How satisfied are you with the results AI has delivered so far? (2)
10. What are the primary challenges you've faced with implementing AI in your marketing campaigns? (3)
11. Are you aware of any competitors or peers using creative AI? If so, how? (3)
12. How do you think the creative quality of AI-generated content compares to human-created content? (2)
13. Do you believe that creative AI tools can enhance human creativity rather than replace it? (2)
14. What types of creative tasks do you think AI is most effective for? (2)
15. Are there any ethical concerns you have regarding the use of AI in creative marketing? (2)

Forecasting and predictions (Questions 16-35)

16. Do you think the introduction of creative AI will revolutionise the marketing industry in the next 3 years?
17. Which marketing functions do you foresee AI having the most significant impact on?
18. How do you envision the role of human creativity changing with the proliferation of creative AI tools?

19. In your opinion, will there be marketing roles that become obsolete due to AI? Which ones?
20. Will new roles emerge as a result of creative AI? What might they be?
21. Do you foresee a decrease, increase, or no change in marketing budgets with the adoption of AI tools?
22. How will the client-agency relationship evolve with the integration of AI in creative processes?
23. What challenges do you anticipate the industry facing as it integrates more AI tools?
24. Do you think smaller marketing agencies will benefit or suffer from the rise of AI?
25. How do you anticipate the target audience's reception to AI-generated content?
26. Will AI lead to more personalised or more generalised marketing campaigns?
27. How might AI impact the storytelling aspect of marketing?
28. In what ways can creative AI drive innovation in the industry?
29. How will AI influence branding and brand identity?
30. How might AI change the metrics by which campaign success is measured?
31. Will AI lead to shorter or longer campaign cycles?
32. How do you think creative AI will change the competitive landscape of the marketing industry?
33. What will be the key differentiators for marketing agencies in an AI-driven world?
34. How will creative AI influence collaboration between departments (e.g., between marketing and IT)?
35. Do you believe there's a risk of over-reliance on AI in marketing?

Training and skill development (Questions 36-45)

36. Is your organisation investing in training its staff on AI tools and technologies?
37. What skills do you think will be vital for marketers in an AI-driven industry?
38. How do you perceive the learning curve for implementing and using creative AI in marketing?
39. Are there any institutions or platforms you recommend for AI-related training in marketing?

40. How important will it be for future marketing professionals to have AI literacy?
41. Will traditional marketing skills retain their significance?
42. How will AI change the recruitment and hiring landscape in marketing?
43. Do you think there will be a shift towards hiring more technologically inclined marketing professionals?
44. How can academic institutions better prepare students for an AI-infused marketing industry?
45. In what ways can organisations foster a culture of continuous learning in the age of AI?
46. When interviewing for a new creative technician, would you prefer a candidate to be particularly skillful in technical IT functions to manage a creative AI, or a creative specialist with a potentially low aptitude for technology?

Final thoughts (Questions 46-50)

47. What is the most exciting opportunity you see with the rise of creative AI in marketing?
48. What is your greatest fear concerning AI's impact on the industry?
49. Are there any specific AI tools or platforms that have caught your attention?
50. How do you stay updated with the rapid advancements in AI technology?
51. In one sentence, how would you describe the future of marketing with the advent of creative AI?

Annexure B

Consent Form for Participation in the MMDB Qualitative Questionnaire on Creative Generative AI

Consent Form

Dear Participant,

You are invited to participate in a research study conducted as part of my MBA program at the University of the Witwatersrand. The study aims to explore the perspectives and insights of marketing executives on the topic of creative generative AI. This form outlines the purpose of the study, what your participation involves, and your rights as a participant.

Purpose of the Study

The purpose of this study is to understand how marketing executives perceive the use of creative generative AI in their industry, including its potential benefits, challenges, and implications for marketing strategies.

Procedures

If you agree to participate, you will be asked to complete a qualitative questionnaire. This may involve answering open-ended questions regarding your experiences, opinions, and insights on creative generative AI. The questionnaire is expected to take approximately 30-45 minutes to complete.

Voluntary Participation

Your participation in this study is entirely voluntary. You may choose not to participate or to withdraw at any time without any consequences. Your decision to participate or not will not affect your current or future relationship with the researchers or the institution.

Confidentiality

All information provided will be kept confidential and will be used only for the purposes of this research. Your responses will be anonymized, and no identifying information will be disclosed in any publications or presentations resulting from this study.

Risks and Benefits

There are no foreseeable risks associated with participating in this study. While there may not be direct benefits to you, your participation will contribute to a greater understanding of the role of creative generative AI in marketing.

Compensation

There is no compensation for participating in this study.

Contact Information

If you have any questions or concerns about the study, you may contact me directly:

Researcher:
Justin Evertse
Email: justin@livedigit.al
Phone: +27 82 827 8447

Ethical Approval

This study has been reviewed and approved by the relevant ethics committee at the University of the Witwatersrand. The ethics clearance number for this study is **WBS/DB2622299/610.**

Consent

By signing below, you indicate that you have read and understood the information provided above, that you willingly agree to participate, and that you are at least 18 years of age.

Participant's Signature: _____

Date: _____

Researcher's Signature: _____

Date: _____

Thank you for your time and participation in this study.

Sincerely,

Justin Evertse

MBA Candidate, University of the Witwatersrand