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TOWARDS UNCOVERING THE HIDDEN
BARRIERS AND ENABLERS OF
COLLABORATIVE IDEA GENERATION

An exploration of process gains and losses as they pertain to
novel idea production in an organizational team context

by

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Table of Contents

Tables and Illustrated Materials	5
Acknowledgements	6
Declaration	7
Abstract	8
1. Introduction	9
2. Locating team-level Idea Generation within Creativity Research	12
2.1 Defining Creativity	19
2.2 Ideation as Part of Creativity Research	20
2.3 Types of Idea Generation	22
2.4 Creative Process as a Foundation for Collaborative Ideation	25
2.5 Creativity in Social and Cultural Context	27
3. Collaborative Idea Generation	30
3.1 The Potential of Idea-Generating Groups	30
3.2 Combinations of Contributions Framework	32
3.3 Process Gains and Losses Framework	34
3.3.1 Process Losses	35
3.3.2 Process Gains	39
3.4 Potential Underlying Causes of Gains and Losses	41
3.4.1 Process	41
3.4.2 Diversity	42
3.4.3 Team Size	43
3.4.4 Participative Safety	43
3.4.5 Attention	44
4. Methodology	47

4.1	Research Context	47
4.2	Mixed Methods Approach.....	50
4.3	Experimental Observation.....	53
4.3.1	Experiment Design	53
4.3.2	Recruiting Participants	58
4.3.3	Implementation	59
4.3.4	Data Analysis	61
4.3.5	Testing of the Hypotheses.....	64
4.4	Interviews	65
4.4.1	Research Design.....	66
4.4.2	Interviewee Selection	67
4.4.3	Reflections on the Role of the researcher.....	70
4.4.4	Inductive Thematic Analysis	72
5.	Model of Synergetic Factors	77
5.1	Method.....	79
5.1.1	Process Structure.....	80
5.1.2	Leadership in Service of the Team.....	86
5.1.3	Expectation Setting	89
5.2	Composition	91
5.2.1	Diversity.....	92
5.2.2	Team size.....	93
5.2.3	Team Fit	94
5.3	Dynamics	97
5.3.1	Participative Safety.....	97
5.3.2	Input Acceptance	99
5.3.3	The Value of Partnership	100
5.4	A Framework for Collaborative Idea Generation	102

6.	Policy Recommendations.....	105
6.1	Recommendation 1: Lessons on Leadership.....	106
6.2	Recommendation 2: Transparency on the Process	107
6.3	Recommendation 3: Building Respect.....	109
6.4	Recommendation 4: Eliminating Bad Apples	110
7.	Conclusions	112
7.1	The Contribution to Knowledge	112
7.2	Limitations and Future Directions for Research.....	115
8.	Bibliography.....	117

Tables and Illustrated Materials

Figure 3-1 Illustration of The Combination of Contributions framework after Paulus and Nijstad (2003).....	32
Figure 5-1 Model of the thematic analysis of the interview data.....	77
Figure 5-2 Visualisation of the Creative Process within Advertising Agencies as described by the interviewees.....	81
Figure 5-3 Framework for collaborative ideation as based on the combination of contributions framework.....	102

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Declaration

I declare that this thesis, presented for the degree of Doctor of Philosophy, has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree at this or any other university. Except where it states otherwise by reference or acknowledgement, the work presented is entirely my own.

Abstract

While creativity as a research field is comparatively young, the last seven decades have seen tremendous productivity and progress in its research. In recent years, especially the area of organisational creativity has seen a rapid influx in research.

In the context of organisational creativity, however, there still remain some dark corners that have not been fully illuminated yet. This thesis aims to look at a subsection of the team-level creative process within the advertising industry – collaborative idea generation.

The goal of investigating collaborative idea generation in an environment that requires frequent and high-quality idea production is to uncover the hidden barriers and more crucially enablers of shared ideation. Choosing an industry whose primary business model is the pursuit and production of new, unusual but also fit-for-purpose ideas has the purpose of uncovering what behavioural adaptations this pressure has produced. Uncovering these adaptations will give insights into the pitfalls and boosters of effective idea generation, which in turn can provide a valuable source of information for other organisations as to how to improve their innovation processes.

In this endeavour, this thesis builds specifically on theories that have come out of brainstorming research. While a significant proportion of brainstorming research has made the case that the very concept that it analyses is ineffective, a number of models that have come out of it are a valuable foundation for looking at idea generation outside of specific methodologies like brainstorming, design thinking or hackathons. Specifically, the process gains and losses framework is foundational to the research presented in this thesis.

Through qualitative expert interviews quantitative experimental observation, this thesis has identified three overarching elements that appear to boost the collaborative idea generation process in the advertising industry- the team composition, the method used to structure the process and the interpersonal relationships and dynamics within the team.

This thesis closes with specific policy suggestions as to how the learnings about the hidden barriers and boosters of idea generation can be applied to ensure a higher standard of organisational creativity and a better environment for idea creation.

1. Introduction

The importance of creativity for humanity can hardly be overstated. As Nijstad and Paulus (2003) write: “*The generation on novel ideas, especially ones that useful, is essential for our survival as a species*” (Nijstad & Paulus, 2003)).

Getting to new ideas effectively and quickly perhaps never has been more important than it is right now. As of the writing of this thesis, humanity is in the grip of a global pandemic with catastrophic consequences (Bayram et al., 2020; Li et al., 2020). Responding to this crisis has made fast innovation not only important but one of the essential components of a competent response (Chesbrough, 2020; Guest et al., 2020; Harris et al., 2020).

But it is not only global pandemic that showcases our need for effective innovation. There is significant evidence that “*climate change has potentially catastrophic consequences for human populations*”. (Raiser et al., 2017) In the realm of global warming and the climate emergency, innovation and new approaches are needed to mitigate multiple potential global disasters, as several scholars suggest (Fried, 2018; Su & Moaniba, 2017; Yii & Geetha, 2017). From finding ways to feed the planet (Aggarwal et al., 2019; Giddings et al., 2013; Hertel, 2015) to creating an equal education system (Mccarthy & Pittaway, 2014; Plaza et al., 2010), the need to innovate is omnipresent.

Having identified innovation as a necessity to alleviate human suffering and improving both individual organization’s performance as well as the economy (Amabile, 1988; Minor et al., 2017b, 2017b; Rothwell et al., 2018), the next step is to identify what qualities make innovation successful, and how they can be applied.

Reiter-Palmon and Harms (2018) write about the recent push for more research into innovation, that while “*organisations of all sectors have focussed on how to improve creativity and innovation (...) the focus of this research has typically been on individual creativity within a team context. Less attention has been paid to factors that influence what teams produce as opposed to individual-level data.*” (p.3) However, they go on to write, how the use of teams is increasingly an essential component of organisational innovation: “*no single individual possesses all the knowledge to solve these problems, and teams have been viewed as the solution to this limitation*” and that “*it has been suggested that teams*

provide additional performance benefits beyond those offered by individuals such as access to diverse information, diverse perspectives, and the ability to capitalise on the varied skills of the team members.” (p.4)

While the literature pertaining to team creativity and organisational innovation processes has received a significant boost over the last two decades (Chamakiotis et al, 2020; Gumusluoglu & Ilsev, 2009; P. B. Paulus & Nijstad, 2019; Reiter-Palmon & Harms, 2018), there are still some questions left to be answered. As Paulus and Kenworthy (2018) write: *“The paradoxical elements and complexity of the research literature on team creativity make it challenging to give simple recommendations to practitioners. However, this state of affairs also makes clear the need for researchers to continue discovering the nature of these processes”*(p. 29).

It is precisely this call to action that this thesis is responding to. As stated at the beginning of this chapter, there is an urgent need for innovation. Similarly, creativity researchers have made a strong case that teams are best equipped to respond to this (Hout & Davis, 2019; Paulus & Kenworthy, 2018; Paulus & Nijstad, 2019; Reiter-Palmon & Harms, 2018). However, despite an increasingly vast literature on team creativity, the insights won are difficult to translate into actionable insights for innovation and creativity practitioners. As Paulus and Kenworthy (2018) argue, this could be related to elements of the team creativity research being paradoxical, or too complex to sum up in policy recommendations.

While there is likely a multitude of valid approaches to researching team-level creativity specifically with the ability to make policy suggestion in mind, the one taken by this thesis has been characterised by a two-pronged strategy. First, to focus in on a singular aspect of team creativity and innovation. While there are several such factors worthy of being analysed in close detail, as this thesis has identified the need for novel and useful ideas specifically, the concept at the core of this thesis is collaborative idea generation process. Idea generation, often abbreviated to ideation, is one part of a more comprehensive team creative process. There is a variety of models that have identified different stages of the creative process (Ghiselin, 2005; Mansfield & Busse, 1980; Mumford et al, 1992; To et al., 2015; Turnbull & Wheeler, 2015; Runco & Chand, 1995). They have identified three main components of the creative process: (1) Problem Finding, (2) Ideation and (3) idea evaluation. These three components have all received significant academic attention both combined as well as on an individual basis (Basadur, 1995; Carmeli et al., 2013;

Csikszentmihalyi, 1996; Csikszentmihalyi & Getzels, 1976; Hao et al., 2016; Kilgour et al., 2020; Kohn et al., 2011; Reiter-Palmon & Murugavel, 2018; Titus, 2018)

This thesis aims to look in particular at the idea generation element of the team-level creative process, with the goal of identifying the underlying factors that lead to effective, collaborative idea generation. In order to achieve this, this thesis sets five tasks:

- 1) Giving the reader a clear overview of the theoretical foundations of team creativity research, with a focus on known enablers and blockers of team-based ideation.
- 2) Responding to the past notion, that, while team creativity overall might add value, idea generation should be left to individuals as process loss eclipses any benefit that might come from such collaboration (B. Nijstad & Paulus, 2003) by providing quantitative proof that team-based idea generation can result in more creative output.
- 3) Constructing a model of the particular interventions used in an environment that requires constant idea generation - the advertising industry - to facilitate the collaborative idea generation to get the highest returns possible from creative teams.
- 4) Using inductive reasoning to build a framework of the different components of the team-based creative idea generation process and the elements important for its effective conduction.
- 5) Distilling the insights of the model and the framework to create actionable policy recommendations for any organisation in need of increasing their innovation potential.

In order to accomplish these tasks, this thesis is guided by three research questions: (1) Is there quantifiable, added value in collaborative idea generation compared to individual idea generation? (2) What can we learn from environments with high ideation pressure about how to boost effective idea generation? And (3) What can be inferred about the underlying processes at play in collaborative idea generation from observing its blockers and enablers?

2. Locating team-level Idea Generation within Creativity Research

As Reiter-Palmon and Harms (2018, p. 4) write: *“There is currently consensus in the field that creativity is defined as an idea, product, or solution that is both novel (original) and useful (high quality, meaningful).”*

While some researchers use the terms creativity and innovation interchangeably, some distinguish between creativity being the production of ideas, whereas innovation then would describe either the implementation of these ideas (De Dreu et al., 2011; Reiter-Palmon & Harms, 2018) or the combined process of idea generation and implementation (West & Sacramento, 2012). Team creativity is then simply defined, as Reiter-Palmon and Harms write: *“In the case of team creativity and innovation, the focus is on team ideas, products, or solutions, and implementation by and for teams, as opposed to individuals.”* (Reiter-Palmon and Harms, 2018, p. 4)

Over the last ten years, research into creative collaboration has made significant progress (Bermudez & Jones, 2016; Burkus, 2014; Gertner, 2012; Harvey & Kou, 2017; Mumford, 2012; Oldham & Da Silva, 2015; Paulus & Nijstad, 2019; Reiter-Palmon, 2018; Reiter-Palmon et al., 2012; Sarooghi et al., 2015; Turnbull & Wheeler, 2015; West & Sacramento, 2012). This boom in research interest might be coming from a new-found appreciation of the importance of the creative team within the wider scope of organisational creativity (Mumford, 2012; Reiter-Palmon, 2018). Organisational creativity itself has become a more widely discussed phenomenon beyond strictly academic circles due to a number of popular non-fiction books in recent years, which resulted in an increasing interest in the inner workings of highly successful organisations, in particular, creative organisations (Catmull & Wallace, 2014; Coyle, 2018; Edmondson, 2019; Hill, 2014).

Of course, attention to the wider field collaborative creativity has not suddenly appeared in the 2010s, with numerous significant contributions to the field from the early 2000s and before, perhaps most notably Sawyer’s book *Group Genius*, as well as Nijstad and Paulus’ first volume on the topic (Nijstad & Paulus, 2003; Sawyer, 2008). Team creativity as a

whole has been explored for a similar amount of time than creativity itself, with the first major, although controversial contribution to the field being the idea of brainstorming, introduced by advertising executive Osborn in 1954. While he arguably was the first to delve into group processes and how to leverage and optimize them, the concept has been roundly criticised when analysed based on its actual merit by academics (Bouchard, 1972; Bouchard & Hare, 1970; Collaros & Anderson, 1969; Gallupe et al., 1992; Mullen et al., 1991; Pinsonneault et al., 1999; Ziegler et al., 2000).

There has been some early work on collaborative creativity in educational settings by Torrance (1972), noting one of the first instances the term has been used in a research context, where the focus was on the importance of group composition. Stein (1974) discussed some group factors in his volume on stimulating individual creativity, and group processes were given a not insignificant role in the theory of organisational creativity by Woodman, Sawyer, and Griffin (1993), although their focus rested more on the overarching organisational creativity than on the intricacies of team-level creativity. Sternberg's seminal handbook on creativity (Sternberg, 1999), while considered a milestone in creativity research (Mumford, 2003) and a valuable resource for any creativity researcher, does mention group brainstorming as ineffective, but does not further look at collaborative creativity (Sternberg, 1999).

There has been increasing acknowledgement of the importance of social and contextual factors for creativity, however. Amabile (1983, 1996) noted the role of a variety of social factors such as mentoring, social influences, and social reward contexts in the context of organisational creativity. She and her colleagues developed a model of creativity that emphasized the central role of intrinsic motivation and the impact of organisational contexts on this type of motivation (Amabile, Conti, Coon, Lazenby, & Herron, 1996). Similarly, Kasof (1995) highlighted the social factors important in the evaluation of creativity. Here a distinction has to be made between the social facilitation of creativity and team-level creativity. Team-level creativity is the product of a shared process, one to which each team member presumably contributes to about the same measure. The focus here is on the process that enables multiple people to develop a creative product together. Socially facilitated creativity, however, continues to focus on one individual, whose social environment, including talking to others and getting input from one's environment improves the level of individual creativity expressed by that one individual.

Since the mid-1990s, research into collaborative creativity has become more prominent (Agrell & Gustafson, 1996; Kayser, 1994; West, 2002). Nevertheless, although work teams have become the norm in organisational contexts (Nijstad & Paulus, 2003), the research basis for the efficacy of work teams in a creative context is still not fully formed (Paulus, 2000; Paulus & Paulus, 1997).

Research into organisational and social creativity has taken more and more shape over the last few decades: an edited volume by Purser and Montuori (1999) focused on various aspects of social creativity in organisations. Several books on creative individuals have recognized the importance of social factors in creative achievement (Gardner, 1993; John-Steiner, 2000; Csikszentmihalyi, 1997). As Paulus and Nijstad wrote in their edited volume on group creativity in 2003 (as before noted the first to bring the different aspects of collaborative creativity being discussed at the time together) even though there had been increasing awareness of the importance of social, cultural, contextual, and organisational factors in creativity, there has been no such focus on the group processes of creativity. They noted this to be a serious deficit, as creative achievements often require the collaboration of groups or teams (Dunbar, 1997; Kanigal, 1993; Snyder, 1989; West, 2002). There now have been several significant contributions relevant to an understanding of collaborative creativity, although there have not been many distinctions of different types of group, team and collaborative creativity, and much of this research has developed out of the testing of the dismissed method of brainstorming (Nijstad and Paulus, 2003; Paulus et al., 2012; Reiter-Palmon, 2018).

Researchers have approached collaborative creativity from different areas of study and disciplines. Academics specialised in the fields of cognitive psychology, social sciences, business studies, information technology, and organisational psychology all have taken an interest in collaborative creativity (Paulus & Nijstad, 2003). Cognitive Psychologists have examined the internal processes within each member of a group and how they relate to one another, while not fully diving into the team-level context (Diehl and Stroebe, 1987). Organisational researchers coming from both psychology and business studies have examined how to optimize organisational innovation and creativity (Amabile et al., 1996). This has often resulted in framing the team-level creativity as a function of the organisational systems. Information technology has also taken an interest in collaborative creativity, especially in relations to computer-supported brainstorming and virtual teams (Cooper et al., 1998).

One significant problem of collaborative creativity research appears to be that the different streams of research have developed largely in isolation from each other. An example of this is the terminology of some business scholars, especially in the area of entrepreneurship, referring to the phenomenon as the ‘fuzzy front end of innovation’, whereas, in the realm of psychology, the terminology is that of creativity and individual cognitive ability. While there are scholars that bridge the divide between these two specific disciplines in terms of broader creativity research, a deep dive into the literature does show that there are, as one might call them, “*academic bubbles*”; that do not interact with one another, for example, research into innovation from STEM fields never touches on the insights from brainstorming research or the other way around. Indeed, taking a meta-perspective in the writing of this, there was a substantial element of the discovery of research from other fields during the research and writing of this thesis.

In addition, the scholars working on this topic have taken distinct methodological and theoretical approaches, that would appear difficult to bring together. Much of the psychological research on groups and cognitive creativity is done in laboratory settings and focuses on detailed analyses of social and cognitive processes within very limited timeframes (Paulus & Nijstad, 2003), whereas innovation research often takes much more of a systems-view disregarding the cognitive aspects of creativity.

There is also significantly more research that focuses primarily on creativity in the broader context of individual creative achievements, such as careers of highly creative people or longitudinal studies (Boden, 1994; Ives, Csikszentmihalyi and Getzels, 1976). Researchers in organisational settings have examined innovation activities in groups and teams, and their impact on organisational learning and innovation (Amabile and Gryskiewicz, 1989; Amabile, 1996; Amabile, 1983), but have focussed primarily on organisational and individual creativity. Bringing these different approaches to the creative group together, as attempted here, requires a cross-disciplinary approach towards the existing research.

There is an astonishing variety in terms of creative collaboration, as the phenomenon merely describes that it took more than one person to achieve the creative outcome in question. (Csikszentmihalyi, 1997a), in his seminal study of highly creative individuals, writes: “*to understand creativity it is not enough to study the individuals who seem most*

responsible for a novel idea or a new thing. Their contribution, *while necessary and important, is only a link in a chain, a phase in a process*” (p.7).

A sharp increase in the interest in creativity and collaboration in the 21st century is noticeable. This is perhaps unsurprising, given the changing perception of creativity in the workforce. This interest and attention certainly go beyond academic research as well. An IBM survey of more than 1,500 Chief Executive Officers from 60 countries and 33 industries worldwide showed that even ten years ago, creativity was the quality identified as being the most important skill needed for future business. (*IBM 2010 Global CEO Study*, 2010).

Creativity and in this context, specifically team-level creativity is a rich subject for research, which has led to it being approached from various different disciplines. This is evidenced by the fact that some of the strands of research brought together in this thesis seem to have developed independently and without knowledge of one another (i.e. research into the fuzzy front end of innovation vs team ideation). It is notable that collaborative creativity has been approached from a number of perspectives already. This is evident in the variety of names for the primarily identical phenomenon used in different fields such as ‘the fuzzy front end of innovation’ (Chamakiotis et al., 2020; Frishammar et al., 2011a; Raphael, 2017), team flow (Csikszentmihalyi, 1997a; Hout & Davis, 2019; K. Sawyer, 2008), brainstorming (Collaros & Anderson, 1969; Diehl & Stroebe, 1987; Mullen et al., 1991; Osborn, 1953; D. W. Taylor et al., 1958), idea management (Clark, 1980; Connolly et al., 1990; Mikelsone & Liela, 2016), team innovation (Agrell & Gustafson, 1996; Alexander & van Knippenberg, 2014; Gumusluoglu & Ilsev, 2009; Hill, 2014; Hippel, 2006; Minor et al., 2017a) Social Creativity (Adarves-Yorno et al., 2008; Amabile, 1983; Brackfield et al., 1990; Elisondo, 2016; Hooker et al., 2003) Intrapreneurship (Gawke et al., 2019; Guven, 2020; Brigid & Alibegovic, 2019), Ideation (Bae et al., 2020; Basadur, 1995; Kurze et al., 2019; Lamm & Trommsdorff, 1973; P. Paulus & Brown, 2003), Electronic Brainstorming (A R. Dennis et al., 1999; A Dennis & Williams, 2003; Gallupe et al., 1992; Pinsonneault et al., 1999), Design thinking (Brown & Katz, 2009; Chang et al., 2019; Kelley & Littman, 2004; Mootee, 2013) Organisational creativity (Amabile, 1988; DeFillippi et al., 2007; Pratt & Amabile, 2016; West & Sacramento, 2012; Woodman et al., 1993), team-level creative process (Allen, 2019; Bennis & Biederman, 1997; Bermudez & Jones, 2016; John-Steiner, 2000; Luther & Bruckman, 2018; Michael

Schrage, 1995; R. K. Sawyer & DeZutter, 2009; Uzzi & Spiro, 2005; X. Wang et al., 2015) creative synergy (Amabile & Kurtzberg, 2001; Karpati et al., 2017; Taggar, 2001).

While this thesis is not the first work of academic research to observe that creativity is only one name for a phenomenon various disciplines have aimed to decipher (Sternberg & Lubart, 1999), bringing these various schools of thought on collaborative idea generation together to get more holistic image of this phenomenon has been the first step in the research process of this work of research. This merger of various approaches is not only notable in bringing together theories that have emphasised different elements as most crucial determinants for successful collaborative idea generation (or team flow, synergy, shared cognition, social ideation amongst others), but in bringing together both qualitative exploration (Braun & Clarke, 2006) as well as quantitative analysis (A. P. Field & Hole, 2003) of the topic.

It is currently the best of times to be doing research in the field of applied creativity as there is an active demand for it from organisations representing policy, education, and the wider economy in general. It also is the worst of times, as the complexities of team-level creativity research under all its names becomes increasingly difficult to navigate and bring together (Paulus & Kenworthy, 2018). The research put forth by this thesis began in 2016, before a significant portion of the research cited in this volume was published, which meant that the research approach and especially the theoretical foundation of the thesis had to change alongside a shifting research context (Bae et al., 2020; Chamakiotis et al., 2020; Gevers et al., 2020; Guven, 2020; Hout & Davis, 2019; Kilgour et al., 2020; Meinel et al., 2020; Paulus & Nijstad, 2019; Thompson & Schonthal, 2020; Yamaoka & Yukawa, 2020; Zhu et al., 2019). While the state of research about the team-level creativity appeared to be more limited at the beginning of this project, the contributions of others, while welcome and exciting – such as two major volumes dedicated to the topic (Paulus & Nijstad, 2019; Reiter-Palmon, 2018), have made a narrower research focus necessary than what was put forth in the initial research proposal.

However, this need for restraint and focus has made it easier as well zoom in on the elements of collaborative idea generation that have not been explored in detail as of yet. For this research, this has meant to focus on insights about collaborative idea generation, and how learning more about the inhibitors and boosters of this team-based ideation can give deeper insights into the process itself.

Although the recent boom in team-level creativity research suggests otherwise, the discussion about if teams are able to add value by cooperating beyond adding their individual expertise and talent together has not received a definitive answer. Research into brainstorming strongly suggested that the act of team-level creative collaboration did, in fact, diminish the potential of the individuals taken together (Diehl & Stroebe, 1987; Gallupe et al., 1991, 1992; Mullen et al., 1991; Paulus & Dzindolet, 1993; Pinsonneault et al., 1999; Taylor et al., 1958). More recent research into team-level creativity, however, has sidestepped that question (Paulus & Nijstad, 2019; Reiter-Palmon, 2018; Sawyer, 2008) and argued that simply the frequent use of teams in this context is enough to justify the research. While this is true, determining if teams are able to truly add value is necessary to strengthen the argument of why interventions into the process ultimately would be a sound investment for organizations, given the potential of higher creativity.

Beyond identifying if it is possible for the creative team to add value beyond this cumulative individual creativity called nominal creativity, this thesis specifically asks what factors are responsible for the creative team being able to surpass the nominal creativity of the team members. Nominal team creativity here is defined as the combined individual creativity of the team members (Dennis & Williams, 2003; Gallupe et al., 1991; Lamm & Trommsdorff, 1973; Ziegler et al., 2000). Nominal creativity has been used in brainstorming research to give a control group to the brainstorming exercise (De Dreu et al., 2011; Nijstad & Paulus, 2003; Paulus & Dzindolet, 1993; Wang et al., 2015). It is characterised by the individual contribution of all team members taken together, without any interaction between the team members however that could be described as a shared or collaborative process (Ziegler et al., 2000).

By looking at the factors that appear to offer added value on top of nominal creativity, this thesis attempts to reverse engineer the underlying components of team-level ideation.

Lastly and most significantly, this research uses the insights from qualitative research about the process gains possible in collaborative idea generation in the advertising industry to gain an in-depth understanding of the shared cognitive and social processes. This thesis aims to go beyond specific methods such as the aforementioned brainstorming or the currently popular design thinking (Bae et al., 2020; Chang et al., 2019; Meinel et al., 2020; Mierdel & Bogner, 2019; Rao et al., 2020b; Thompson & Schonthal, 2020) to the deeper core of what elements govern the effectiveness of team-level idea generation.

Several authors have noted the paradoxical nature of creativity (DeFillippi et al., 2007; Sternberg & Lubart, 1999), and the same goes for team-level creativity (Paulus & Nijstad, 2019). By providing a clear framework of the specific processes, this thesis aims to answer why the results of team creativity, even when using the same methods, can be so different, as has been reported by professionals in the creative space (Kaminska, 2019; Schwab et al., 2018).

By seeing collaborative idea generation as part of both the entire team-level creative process as well as the overall organizational creativity (Dennis & Williams, 2003; Diehl & Stroebe, 1987; Mullen et al., 1991), this thesis acknowledges that team-level idea generation does not exist in a vacuum. However, this research does focus on the factors impacting the team directly, with many of the organizational factors likely to only impact the team-level indirectly (Mumford, 2011; Pratt & Amabile, 2016; Reiter-Palmon, 2017; Rothwell et al., 2018; Sarooghi et al., 2015; Wang et al., 2015).

2.1 Defining Creativity

Most definitions of creativity describe the phenomenon in accordance with two common criteria: The novelty of the product and the appropriateness to the task, often also called how 'new and useful' the creative contribution is (Amabile, 1983; Bilton & Cummings, 2014; Burkus, 2014; Guilford, 1950, 1967; Hargreaves & Boden, 1996; Hennessey & Amabile, 2010; Kaufman & Sternberg, 2005; Rhodes, 1961; Runco, 2014; R. K. Sawyer, 2006; Stein, 2014; C. W. Taylor, 1988; Williams & Fisher, 2004). It should be noted here that a novel and useful contribution to the human experience or our environment can take a number of shapes and is not limited to a product or service or the improvement of either.

However, popular the definition of creativity based on these two criteria, definitions of the phenomenon have been and continue to be controversial and discussed heavily. One interesting view of creativity sees the phenomenon as an evolutionary search process across a combinatorial space (Campbell, 1960; Jang et al., 2015; Simonton, 1999; Singh & Fleming, 2010; Weitzman, 1996). In the first phase of this evolutionary search, typically called the "variation" phase, people generate new ideas through combinatorial thought trials followed by a "selection" phase, in which the best ideas are selected. This distinction

is interesting, as here not only the production of ideas is considered to be part of creativity, but the specific decision making as to the quality of these ideas is as well. Further, this view of creativity allows for applying the definition to map onto shared creative processes, as Singh and Fleming (2010) have suggested. They stipulate that having a team-level on which variation and selection are being conducted as well as an individual level, will result in more high-level creativity overall.

The thought of creativity being a combination process has surfaced repeatedly. According to Basalla (1988), given a thorough historical search, novel technologies can almost always be traced to combinations of prior technologies. Looking at the neuroscience of creativity (Beaty et al., 2018), there appears to be support for creativity being a combinational process as well. Beaty and his cohorts used functional magnetic resonance imaging to review the areas of the brain involved in creative problem solving, with the intention of identifying whether extraordinary creativity is linked to a specific observable area of the brain. The research concluded that neural circuits which would normally work in opposition, are activated at the same time in creative problem-solving. This insight into the inner workings of the brain during creative exercise does suggest that there is something to the idea of creativity being a novel combination of existing information, a 'connecting the dots' to oversimplify this complex process. Extending the amount of information, the individuals have access to in their combinatorial search through adding team-level processing could theoretically increase the processing power of the assembled individuals exponentially.

2.2 Ideation as Part of Creativity Research

There is a plethora of names that were given by various fields to the study of the same phenomenon, in this thesis referred to as collaborative idea generation or team-based ideation (Bae et al., 2020; Kurze et al., 2019; Titus, 2018)

Most ideation research functions as a subset of creativity research, which today is often by itself interdisciplinary, with scholars of the subject primarily based in Business Schools and Psychology departments (Amabile and Kurtzberg, 2001; Paulus, 2000; Reiter-Palmon, 2018). Despite the interdisciplinary nature of creativity research, the existence of

several publications dealing specifically with creativity, such as the *Creativity Research Journal* and the *Journal of Creative Behaviour*, point towards creativity research being, or at the very least becoming a discipline in its own right.

Endeavouring to identify the factors responsible for effective team creativity, one has to begin with understanding what is already known and theorized about the phenomenon. What becomes immediately apparent when diving into creative group research is the eclectic nature of the sources, with a wide variety of fields (Cultural Studies, Psychology, Sociology, Economics, Business Studies, Cognitive Science) having a vested interest in the intersection of Creativity and Teams (Bilton & Cummings, 2014; Chechurin & Collan, 2019; Hennessey & Amabile, 2010; M. R. Lee & Chen, 2015; Mumford, 2011).

As creativity is becoming more central to economic growth and prosperity (Chinneck, 2016; Howkins, 2002; Lucas Jr., 1988; Mikelsone & Liela, 2016), research into the subject is springing up in disparate academic fields. While the terminology is often different – such as the terms ‘idea management’ or the ‘fuzzy front end of innovation’ in STEM-subject related research (Chamakiotis et al., 2020; Frishammar et al., 2011a; Raphael, 2017), whereas in the social science context the same phenomenon is more typically referred to as organisational creativity or creative idea generation (Amabile, 1988; Mumford, 2012; Valacich et al., 1994).

In the technology and computer science sector, however, it would appear that these two approaches have found the largest overlap, with a boom of research on computer-aided brainstorming in the 1990s, then most commonly referred to as electronic brainstorming (Cooper et al., 1998; Dennis et al., 1999; Dennis & Williams, 2003; Gallupe et al., 1992; Pinsonneault et al., 1999). While the term of electronic brainstorming has gone the way of the term ‘cyberspace’ and is no longer part of the vocabulary used today, there is a surprising breadth of research on creativity published to this day in the realm of computer science, especially regarding the complexities and potential of human-machine interactions that might aid in the creative process (Chung et al., 2015; M. R. Lee & Chen, 2015; Oldham & Da Silva, 2015; X. Wang et al., 2015).

While there is an immense variety in the approaches and terminology of creativity research which this research does cite and refer to, fundamentally, this research is interested with the cognitive and social phenomenon of collaborative idea generation, that most commonly has also been described in the context of creative synergy (Amabile & Kurtzberg, 2001;

Karpati et al., 2017; Taggar, 2001) or team flow (Csikszentmihalyi, 1997, 2008; Hout & Davis, 2019; Sawyer, 2008; Sawyer & DeZutter, 2009).

The goal of this chapter is to give a basic understanding of the creativity theories that lay the base for this research. Defining how our contemporary understanding of creativity is shaped and how creativity researchers so far have approached the subject is essential in order to successfully design and conduct research that builds upon the previous efforts of researchers.

2.3 Types of Idea Generation

Taking a birds eyes view, there are many types of creative collaboration that occur in various domains of society – planning a wedding, for example, could be considered a type of creative collaboration, as could a communal garden or even a wall of graffiti from different street artists. While these types of collaboration are worthy of research on their own merits, these examples mainly serve to illustrate how simply referring to the subject of study in this thesis as creative collaboration is too broad of a term.

As most research about creative teams today, this thesis situates itself under the umbrella of organisational creativity (Pratt & Amabile, 2016; Reiter-Palmon, 2018; Reiter-Palmon et al., 2012; West & Sacramento, 2012), in itself being situated in organisational psychology. The context of organisational creativity for the research of creative collaboration narrows down the types of potential collaboration somewhat, but there are still various potential types of collaboration that can occur.

Within the field of organisational creativity, there has been some distinction between various types of collaboration, although this has been limited. While leadership has been cited in relation to creative collaboration frequently, especially from business-school-based research (Bai et al., 2016; Dong et al., 2017; Gumusluoglu & Ilsev, 2009; Lee et al., 2015; Marion, 2012; To et al., 2015; Yoshida et al., 2014), these texts then speak of the specific challenges of leading particular types of creative teams – for example the specific challenges of managing digital teams (Lee et al., 2015; Luther & Bruckman, 2018; Yoshida et al., 2014). This distinction is complicated by the fact that there are several

leading organisational creativity researchers that do qualify the leadership as an organisational marker, not as a factor related directly to the team-level of creativity (Mumford, 2012; Woodman et al., 1993), therefore calling into question whether making a distinction between types of team-level creative collaboration based on the type of leadership is applicable.

While there has not been an attempt to classify the different types of creative collaborations, there has been some acknowledgement of the necessity of this -(Mumford et al., 2018) note that it has been a significant limitation in the evaluation of their research data that they “have not drawn strong distinctions between (...) teams working on different types of creative projects - radical versus incremental or product versus process” (p.153) which, according to their own analysis, would have been necessary in order for them to draw more specific and useful conclusions in their research. Indeed, they note, *“these factors could have a significant impact on their research results on creative leadership”*.

If this is true for their research context, one could argue that this is likely true for modelling the team behaviour and processes overall. The bottom line is that most research into collaborative creativity does not make a specific distinction between types of collaboration (Mumford et al., 2018; Reiter-Palmon, 2017; Reiter-Palmon et al., 2012), be that signified by acknowledging distinctions in types of teams, types of projects or types of industry. This lack of distinguishing these different forms of creative collaboration might be linked to descriptions of our knowledge about teams being ‘paradoxical’ (Paulus & Kenworthy, 2018), as some insights won through research might only apply to a specific type of creative collaboration (Mumford et al., 2018).

Based on the above-cited admission by Mumford et al. who refer to some examples of how different types of collaboration could be distinguished from one another, it appears clear that approaching team-led idea generation without looking at their varying defining traits is bound to cause problems. As each team has different goals, personality combinations, structures, sizes, etc., making generalised statements about collaborative idea generation is perhaps impossible. As there are many factors that distinguish between different types of teams and collaborations, this thesis will briefly review common types to distinguish the specific type of collaborative idea generation that is looked at in this thesis.

One element that distinguishes different types of collaborative idea generation as part of the creative process is the ultimate goal of said collaboration. While the ‘problem finding’ aspect of the creative process proceeds the idea generation (Lubart, 2001), there is idea generation that responds to a specific problem – problem-solving creativity (Carmeli et al., 2013; Hargadon & Bechky, 2006; Runco, 1994) and creativity that has a less clear-cut goal, sometimes called the ‘fuzzy front end’ of innovation (Chamakiotis et al., 2020; Raphael, 2017), or open creativity.

Another distinction between different types of collaboration is the very fundamental question of ‘who’ is collaborating. The type of collaborators impacts the way the group will operate, and therefore this should be a factor when categorizing the collaborative idea generation (Chechurin & Collan, 2019; Collaros & Anderson, 1969; Jiang et al., 2015). Similarly, the size of the collaboration or number of collaborators likely makes a distinctive difference in terms of what the creative process looks like (Verbeke et al., 2008). Advertising famously has two-person partnerships, so-called dyads, that form the building blocks of larger teams (Horsky, 2006; Moriarty & VandenBergh, 1984; Turnbull & Wheeler, 2015). Other projects, such as the making of a film might require the collaboration of more than a hundred people – an undertaking and type of collaboration significantly different from a dyad in advertising. While it will likely not fundamentally change the modus operandi of a team of five to grow to a team of six, there is significant evidence that the size of the team requires other changes in the team-level processes to remain effective (Hülshager et al., 2009; Mumford, 2011; Peltokorpi & Hasu, 2014).

There also has to be a distinction of how close collaboration is. There are famous examples of a very loose type of collaboration – such as artist collectives (Hargadon and Bechky, 2006), laboratories such as the famous Bell labs (Gertner, 2012), the homebrew computer club, whose members intense interest in the beginnings of computing produced both Apple and Pixar (Elizabeth Petrick, 2018; Levy, 2010) or literary circles (Brauer, 2013; Liti, 2015). While this loose collaboration is only distantly related to the type of collaboration in an organizational team, it is notable how such collectives and individuals within them have profited from this type of creative collaboration.

Going back to the organisational context, however, there is also digital collaboration (Chung et al., 2015; M. R. Lee & Chen, 2015; Oldham & Da Silva, 2015), which, during the recent Pandemic, became essential and will, therefore, require more academic interest

going forward (Bayram et al., 2020; Chesbrough, 2020; Guest et al., 2020; Harris et al., 2020).

While every type of collaborative idea generation when researched, will likely offer essential knowledge and insights, this research is specifically setting its research focus within an organisational context, in-person collaboration, set within a specific, short-term timeframe, as is the case in the advertising industry in the Western world (Horsky, 2006; Karen L. Mallia, 2009; Kilgour et al., 2020; Turnbull & Wheeler, 2015; Verbeke et al., 2008).

2.4 Creative Process as a Foundation for Collaborative Ideation

As noted before, creative ideation is one element of the overarching creative process. While the creative process is one of the elements of creativity that we know to have been researched for the longest time (Wallas, 1926), its definition as one of the central pillars of creativity research only came several decades later. In 1961, Mel Rhodes had collected over forty academic definitions of creativity. While the subject had become more popular, there was a limited consensus at the time as to what creativity was, and even some backlash against creativity research, as Rhodes (1961) cites in his analysis, mostly stemming from a misunderstanding of the term creativity and mischaracterizing it as a pseudoscience. Convinced that creativity warranted academic interest and not suspicion, Rhodes distilled the breadth of creativity research of the time and organised the different components into four dimensions, which he called the “4Ps” of creativity, namely person, process, and product.

At the time, there was little consideration of collaborations, with the focus quite strictly on the individual. Although there had been some early research into the practice-led method of stimulating creative groups (Taylor et al., 1958) through a process called brainstorming (Osborn, 1953), this did not inform Rhodes' approach on classifying the pillars of creativity research. However, the elements defined as the keystones of creativity research strongly inform the thesis at hand, as idea generation, as an aspect of the creative process needs the creative person – or persons in this case, the environment of advertising agencies is

crucial to the specifics of the process and the evaluation of the ultimate creative product – the ideation outcome – is the metric that measures the success of the ideation. In order to see Ideation within its full context, the four dimensions of creativity, as defined by Rhodes, will be discussed briefly.

The first P, person, Rhodes argued, would encompass the research into the creative person, with the examples given by him being: personality, intellect, temperament, physique, traits, habits, attitudes, self-concept, value systems, defence mechanisms, and behaviours. With much of the early research into creativity focusing on the fabled creative genius, this has traditionally been one of the most researched areas of creativity (Howe, 2001; Koestler, 1990; Nahn, 1956; Ochse, 1993; Simonton, 1988; Vinacke & Eindhoven, 1952; Wood et al., 1991), and arguably the one that initiated interest in creativity research in the first place (Guilford, 1950).

The second P Rhodes identifies as the creative process. He describes the term as applying to: ‘motivation, perception, learning, thinking, and communicating. Rhodes cites the four stages of the creative process by Wallas (1926), which are *Preparation*, *Incubation*, *Inspiration* and *Verification* as an example. Rhodes was of the firm opinion that the creative process could be taught and learned. The view on the creative process today is more nuanced, having had almost sixty additional years of research into the field, which have introduced new ideas of the creative process and how it applies to teams (Nijstad & Paulus, 2003).

Press, the third P in this model, refers to the relationship between the creatives and their environment. Press, for Rhodes, has two components: the climate of the specific environment and the reaction of a person to this environment. This particular factor could be linked with Organisational Creativity, a stream of research born out of Amabile’s (1983, 1996) research into the social psychology of creativity and how creative organisations shape creativity.

The fourth pillar, identified as the creative Product, Rhodes distinguishes from the pure idea as he puts it: ‘the word idea refers to a thought which has been communicated to other people in the form of words or other material. When we speak of an original idea, we imply a degree of newness in the concept. When an idea becomes embodied in the tangible form, it is called a product.

Much research in the decades following Rhodes' categorization of creativity research has focused on the person (Koestler, 1964; Sternberg, 1999; Boden, 1992). The 'lone genius,' with little recognition of the social and group factors that influence the creative process, was long considered the norm of creativity (Nijstad & Paulus, 2003). However, this myth of the lone inventor has been mostly dismissed at this point in time (Fleming & Lee, 2010). There have been a number of studies into the many disadvantages of limiting the creative process to an individual effort (Sutton and Hargadon 1996, Paulus and Nijstad 2003, Perry-Smith and Shalley 2003, McFadyen and Cannella 2004).

The first two Ps especially clearly show the importance of psychology in creativity research, while press already foreshadows the interest of organisational studies in creativity and its optimisation. While creativity research first developed out of psychology, the last few decades have seen the field taking a more interdisciplinary approach, with researchers such as Csikszentmihalyi (1988), Sawyer (2003), and Wolff (1993) opening creativity research up for sociological theories and Amabile (1983) taking a business-centric approach to the research of organisational creativity.

2.5 Creativity in Social and Cultural Context

As this research looks at idea generation in the context of the creative industries, there needs to be a specific understanding of the system within it exists. Csikszentmihalyi (1988) introduced the systems model of creativity as a means to understand the interaction between the individual and the social and cultural factors involved in the creative process (Hooker, Nakamura & Csikszentmihalyi, 2003). While they specified the individual level, it is easily extrapolated to the relationship between the creative team, their output, and the environment in which they function. Feldman, Csikszentmihalyi, and Gardner (1994; Csikszentmihalyi, 1996, 1999) further elaborated on this idea. The systems model understands creativity not as the product of an isolated individual's aptitude or ability, but as an interaction between a talented individual, a domain or area of related knowledge or practice, and a field of experts (Csikszentmihalyi 1988, 1996, 1999; Feldman et al., 1994).

At the heart of the systems model of creativity is the individual intent on changing the current state of their domain. To accomplish something creative, the individual must first master the existing body of knowledge, develop skills and abilities, and internalize the standards of the domain of quality, values, and beliefs. Having sufficiently mastered the rules, symbols, skills, values, and practices of a domain, the individual can then transform the domain, but may only be labelled creative if the field of experts evaluates it as such (Hooker, Nakamura & Csikszentmihalyi, 2003). Gardner (1993) has calculated that across various domains, the process of learning, internalization, and incubation which precedes the individual's creative contribution to a domain generally takes a person about ten years (Hooker, Nakamura & Csikszentmihalyi, 2003, Howe, 2001).

The first step for an individual intent on making a creative contribution to the domain is mastering the domain. The domain is defined by Csikszentmihalyi (1988) as an already existing set of objects, rules, representations, or notations. The domain is by necessity, included as a component of the creative process as creativity does not exist in a vacuum (Csikszentmihalyi, 1999) but in relation to what has come before. Simply creating something novel is not synonymous with an act of creativity. An idea without implementation cannot be considered a 'creative' product. According to Csikszentmihalyi (1988), the new idea must be endorsed by the field. In the systems model, the field is defined as a group of experts entitled through their own accomplishments to monitor and decide the contents of the domain. This forms a twofold foundation for the methodology employed by this research, as both the evaluation of the quantitative data has been done by aiming to replicate the role of the field in the shape of external evaluators as well as in the context of work in the creative industries, where the social standing and reputation in the field are essential for the success of a business. The research of creativity from Guilford onwards was primarily rooted in the field of psychology – and has sought to primarily understand the factors responsible for creative people and activities from this perspective (Paulus & Nijstad, 2003). This resulted in a focus on personality, developmental experiences, culture, motivation, and cognitive skills (Mumford & Gustafson, 1988; Sternberg & Lubart, 1999).

In the context of this research, the systems view of creativity is essential to determine how creativity is evaluated (Csikszentmihalyi, 2014; Hooker et al., 2003). There are two elements to the importance of the theory: The evaluation of the creative output in the quantitative experiment cannot be done by the researcher, as they are not part of the

hypothetical system in which the process takes place (Field & Hole, 2003). In the design of the experiment, which will be elaborated on later, the role of the field thereby will be filled by experts who decide on the level of creativity exhibited (Koslow et al., 2003). In terms of the qualitative data analysis of the expert interviews, the systems view of creativity is also essential, as it provides a framework of how the system ‘reproduces’ itself, with a new intake of creatives, which in turn become creative directors and evaluate the creativity of others through specific systems, such as industry award ceremonies. (Altstiel et al., 2020; Candy, 2013; Lee et al., 2014; Turnbull & Wheeler, 2015)

While early creativity research was primarily interested in the individual cognitive ability of creativity, especially that of the extraordinary ‘genius’ (Csikszentmihalyi, 1997; Howe, 2001; Kanigel, 1993; Ochse, 1993; Simonton, 1988), this view has been somewhat abandoned in academic circles in recent years, both with a number of authors dismantling the concept of the creative genius (Burkus, 2014; Howe, 2001; Satell, 2016; Singh & Fleming, 2010; Weisberg, 1993) and with an increasing focus on collaboration as a source for greater creativity (Amabile, 1988; Bennis & Biederman, 1997; Mumford, 2012; Pratt & Amabile, 2016; Sawyer, 2008; Woodman et al., 1993)

Notably, the team-level creative process alongside collaborative idea generation has become an integral part of creativity research fairly recently. Kurtzberg and Amabile wrote in 2000, to ‘*take creativity research to the next level, researchers must now accept the challenge of dissecting team-level creativity and understanding the components of creativity as they occur with multiple individuals*’ (p. 292).

While there has been a significant increase of research that touches upon the team-level creative process and collaborative idea generation in the last twenty years (Bae et al., 2020; Coyle, 2018; Edmondson, 2019; Hout & Davis, 2019; Paulus & Nijstad, 2019; Reiter-Palmon, 2018), the three research questions at the core of this thesis, ‘*Can collaborative idea generation surpass ‘nominal brainstorming’ when process gains and losses are controlled for? What are the barriers and enablers of effective team idea generation in teams? What can we learn from environments with high creative pressure about how to boost enablers and break through the barriers to increase the likelihood of effective idea generation?*’ “will nevertheless make a novel contribution to the field.

3. Collaborative Idea Generation

Having laid the groundwork so to speak in the previous chapter giving a brief overview of some foundational definitions and situating the research in the field, this chapter is intended to fully scope out the existing research relating to collaborative idea generation. This is done by first reviewing some models of the team-level ideation process, with later going into detail about what is known about the aforementioned potential inhibitors and boosters of team-level idea generation.

3.1 The Potential of Idea-Generating Groups

One issue, when confronted with team-level idea generation processes, is how to distil such a complex process into its most basic components. One attempt as such proposes an equation of team-level creativity in general, although it certainly can be applied solely for idea generation as well. Ivan Steiner (1972), in his seminal work on group productivity, introduced the following formula: Actual Group Productivity = Potential Group Productivity – Process Loss.

According to Steiner, potential group productivity is determined by the group's resources (e.g., knowledge, skills, time) and the demands of the group task. If the resources possessed by group members are sufficient for adequate task performance, potential productivity is high. If the group does not possess the necessary resources, potential productivity is low, and the group will be unable to perform well. However, even if the necessary resources are available to group members, performance may still fall below optimal. The reason is that many group processes do not foster high performance. Group members may be unmotivated to contribute to the group product (motivation loss), or coordination between group members may be suboptimal (coordination loss). In both cases, groups will fail to realize their full potential due to this process loss.

Nijstad and Paulus (2003, p. 328) propose that Steiner's formula could be easily be adapted to group creativity, with the equation changed to Actual Group Creativity = Potential Group Creativity – Process Loss.

It has to be noted here that the use of 'potential team creativity' is misleading, as the phenomenon referred to could be interpreted as the combined nominal creativity of all team members. Nevertheless, Nijstad and Paulus go on to write: *"In some cases, productivity gains may even be achieved (i.e. the group is more creative than its separate members)"* (Nijstad and Paulus, 2003, p. 329). This thesis, therefore, proposes two changes to this equation to describe the phenomenon of team-level idea generation more accurately:

Team Idea Generating Potential = Combined Nominal Creativity – Process Losses + Process Gains

While Nijstad and Paulus (2003) write about these potential process gains: *"Even though groups have the potential for stimulated creativity, the promise of high performance often will not be fully realized."*; going on later to say *"much of brainstorming research shows that groups often perform more poorly than individuals when it comes to idea generation due to various group processes."*(p. 329)

3.2 Combinations of Contributions Framework

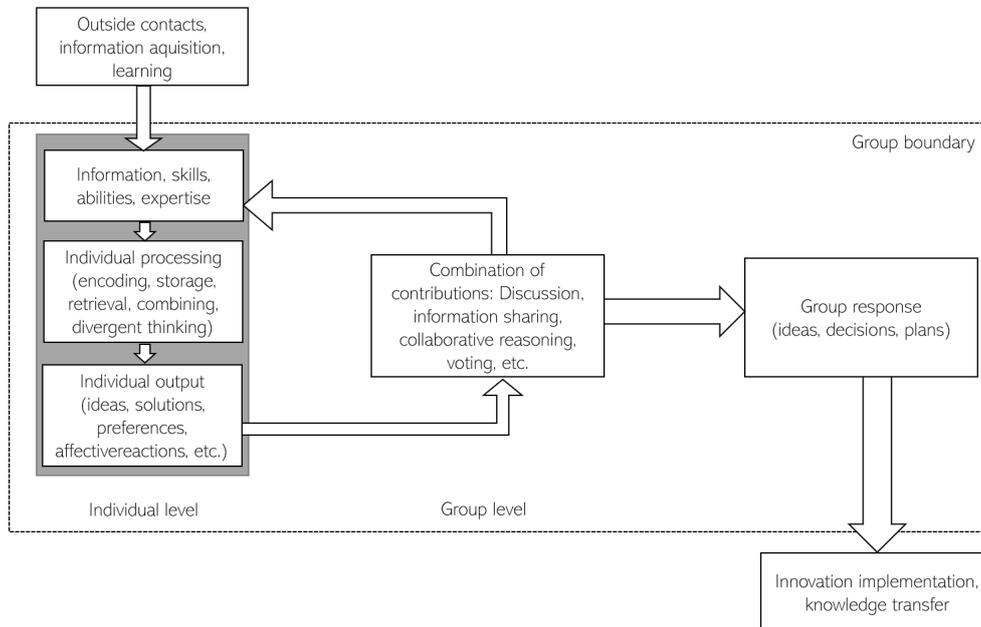


Figure 3-1 Illustration of The Combination of Contributions framework after Paulus and Nijstad (2003)

Paulus and Nijstad (2003) propose, that any group phenomenon, including group creativity, can be understood through a combination of contributions framework of group functioning and performance. The combination of contributions framework identifies three aspects of group functioning: group members, group processes, and group context.

Group members bring resources to the group, and these resources determine the group's creative potential or what the group is able to accomplish (Group creative potential = creative potential person A + creative potential person B + ...). The contributions of group members need to be combined with as little process loss and as much process gain as possible.

Most important are the ways in which individual members' contributions are combined and enhance each other, which constitutes the relevant group processes. It is the process, that is central, not individual members. Context largely determines which group processes will occur and how individual contributions are combined. Eventually, this determines the quality and creativity of the group response. The more effective the process in which individual contributions are combined, the more likely it is, that the group, in fact, reaches its potential.

The figure below illustrates this framework. At the left is the individual group member. Individuals have resources (knowledge, skills, abilities, etc.) available to them, but are also influenced by forces outside of the group boundary. The individual member's resources are used to develop ideas, solutions, preferences, estimates, questions, and so on. The centre of the figure can be conceptualized as the group information-processing space, in which the contributions of group members are combined (Hinsz et al., 1997).

Individuals contribute information, preferences, ideas, arguments, questions, and proposals, goals, and evaluative statements towards the group process. Once contributed, the information in principle is available to the other group members. Provided that members pay attention to the contributions of others, the information is added to the individual's knowledge base and can subsequently be processed and can lead to a shift in preferences, new ideas, or a new argument (Paulus & Nijstad, 2003) - this process describes synergy. While this new knowledge has been called information, it might take many shapes, such as merely new information, but also inspiration, guidance, a new way of looking at the task at hand.

The information that is shared during group discussion (and was held in common prior to the discussion) and the way the different contributions are combined will affect the group response. The contributions of individuals need to be combined to produce a coherent, feasible, sensible, and creative group response. This response can then be implemented, transfer to other groups, and affect others outside the team (Paulus & Nijstad, 2003).

Outside and environmental influences are easily recognizable as what Rhodes (1961) has called 'Press'. The Person, experiencing Press from outside forces, is the beginning point of the group ideation process. The person first goes through an individual process of idea-generation, before being able to contribute their individual idea or 'individual Product' towards the 'Group Process'. In turn, the group process will result in a group creative product, which then, in turn, be implemented, reminiscent of Wallas four stages model. Indeed, Wallas (1926) four stages are found to a degree in the model still, with the incubation and therefore illumination process happening between group and individual, which in turn is described by creative synergy. This incubates ideas together, and one 'illumination' or idea, results in another. Divergent and convergent thinking (Bachelor & Michael, 1990; Khandwalla, 1993; Titus, 2018) is again present in the group process, as the process utilizes both divergent thinking (creating a number of ideas) and convergent

thinking (selecting a group idea as the group product, which in turn will be implemented outside of the group) - thereby reaching the field and being evaluated by the domain - which both in turn are part of the press on person and group.

3.3 Process Gains and Losses Framework

A significant portion of team-creativity research has been guided by the process gains and losses framework (Hill, 1982; Steiner, 1972; Diehl & Stroebe, 1987; Mullen et al., 1991; Stroebe & Diehl, 1994). Simply put, the interactions and relationships between group members introduce new factors into the team-level process that act to improve performance (process gains) and factors that act to impair performance (process losses) relative to individuals who work separately without communicating but who later pool ideas (Paulus, 2000; Paulus et al., 2012; Paulus & Dzindolet, 1993). In such nominal groups, neither process gains, nor losses occur. Research of the brainstorming specifically has zeroed in on how these processes lower the actual team creativity below the nominal creativity of the cumulative team members (Collaros & Anderson, 1969; Cooper et al., 1998; Dennis & Williams, 2003; Dugosh et al., 2000; Lamm & Trommsdorff, 1973; Larey & Paulus, 1999; Taylor et al., 1958).

Several dozen plausible sources of process losses and gains in group ideation have been proposed (see Camacho & Paulus, 1995; Mullen et al., 1991; Pinsonneault et al., 1999). For this analysis, the focus is on how to boost creativity, which also necessitates an exploration of process losses, such as groupthink, production blocking, social loafing, evaluation apprehension, cognitive interference, and communication speed) as these have received the most research (Dennis & Valacich, 1999; Diehl & Stroebe, 1987; Pinsonneault et al., 1999).

Even though the focus of this particular research is to improve the collaborative ideation process, it is essential and fundamental to also understand common factors in process losses. In general, process losses are better researched than process gains, as researchers have thought to explain why group ideation in academic research has proven to be less effective than nominal ideation (Gallupe et al., 1991). There have been significant gains, as to how to eliminate or contain process losses, for example through electronic ideation,

but the prevalence of process losses, especially in ‘unchecked’ group ideation, continues to give brainstorming a bad reputation (Cooper et al., 1998; Dennis et al., 1999; Dennis & Valacich, 1999; Gallupe et al., 1992; Pinsonneault et al., 1999, 1999).

3.3.1 Process Losses

Process Losses, in general, are all phenomena, stemming from the individual, team-level, and organisational traits that decrease the team’s ability to conduct an effective creative process to lower than the nominal creativity of the assembled team members (Mullen et al., 1991; Stroebe & Diehl, 1994).

(1) Groupthink

One possible explanation for the suboptimal performance of groups is that people strongly desire consensus, as argued by Janis (1982), who coined the term groupthink. Factors that are often named as to cause groupthink are homogenous groups, strong and directed leadership, group isolation, and high cohesion (Amabile & Kurtzberg, 2000-2001). When a group is made up of similar, close-knit people, isolated from dissenting views and led by a strong leader who expresses a clear preference, groups focus on consensus around the seemingly preferred position, instead of finding the best possible solution (Esser & Lindoerfer, 1989; D. W. Taylor et al., 1958). In such a situation, individuals are reluctant to voice dissent, neglect to examine the negative aspects of the preferred position, fail to consider alternatives, and do not develop contingency plans. The reluctance to voice disagreement, even when an individual would harbour such thoughts, is a result not only of self-censorship but also from pressures to conform to the group (Dennis & Williams, 2003). Team members feel like dissent would be an obstacle to achieving a shared goal. The possibly even unconscious pressure to “get on board” (Janis, 1982; Esser & Lindoerfer, 1989; Moorhead, Ference, & Neck, 1991) stifles creativity. There is also considerable evidence from social psychology experiments that discussion among like-minded people can not only lead to premature consensus but under the right conditions, their shared view ‘congeals’, which could enhance their confidence in a suboptimal idea (Moscovici & Zavalloni, 1969).

(2) Production blocking

Production blocking refers to the interruption of the ideation flow of an individual, caused by the need to take turns speaking in verbal discussions, such as brainstorming (Diehl & Stroebe, 1987). When participants are unable to voice an idea when they first conceive of it, they may forget or suppress it because the idea might later seem less relevant or original. If they try to retain the idea in their mind while waiting their turn, they must focus on remembering their initial idea, which prevents them from generating new ideas or attending to the ideas of others, as such preventing synergy from occurring (Diehl & Stroebe, 1991). Production blocking has been called the single most important source of process loss in verbal brainstorming groups (Diehl & Stroebe, 1987; Gallupe, Cooper, Grise, & Bastianutti, 1994; Valacich et al., 1994). Production blocking logically increases as the size of the group increases as a larger number of participants means more time being taken up by others speaking, relative to each member (Dennis & Valacich, 1993; Gallupe et al., 1992; Valacich et al., 1994). Production blocking, similar to Synergy, is non-existent in nominal groups because group members do not communicate while generating ideas. Production blocking is also reduced in electronic ideation, as participants can contribute ideas and comment on others simultaneously (Dennis & Valacich, 1993; Pinsonneault et al., 1999; Valacich et al., 1994).

(3) Communication speed

Communication speed is another potential process loss, influenced by the need to type or write rather than speak. For most people, speaking is faster than typing or writing (Williams & Karau, 1991), so the need to type may inhibit idea generation by slowing down communication. While Dennis & Williams note that no studies have examined this potential process loss in detail (Dennis & Williams, 2003), it appears negligible in practice, where idea generation is less compressed than within a laboratory experiment that does not account for preparation time, as an example.

Woodman, Sawyer, and Griffin (1993) discussed the benefits of peer interaction in creative efforts in detail. When looking at business practices, this is clearly evident as well (Catmull & Wallace, 2014) - in a time where making processes as lean and effective as possible is a dominant business practice, teamwork still remains as one of the most important organisational structures

(4) Cognitive Interference or cognitive inertia

Cognitive interference has been called the inverse of synergy (Dennis & Williams, 2003). Cognitive interference occurs when the ideas generated by other participants interfere with an individual's own idea-generation activities (Pinsonneault & Barki, 1999; Straus, 1996). Cognitive interference may be due to the need to attend to ideas presented by others as they appear or ideas from others could stimulate cognitive activity in one area while limiting the flexibility of idea production (Nijstad, Diehl, & Stroebe, 2003; Ziegler, Diehl, & Zijlstra, 2000).

The productivity of group ideation may suffer from cognitive inertia by focusing idea generation on only one idea instead of trying to come up with a multitude of creative ideas (Dennis & Valacich, 1993; Pinsonneault & Barki, 1999). The effect of cognitive inertia is strengthened by social influence processes and social convergence (Festinger, 1954; Larey & Paulus, 1999). As group members compare behaviour across the group, they tend to converge at a similar level. When there is not a strong performance incentive, they tend to converge at the level of the least productive members (Camacho & Paulus, 1995; Larey & Paulus, 1995; Paulus & Dzindolet, 1993).

Process losses in verbal brainstorming groups due to cognitive interference should increase with group size because more people are contributing more ideas, which increases potential interference. Electronic ideation makes cognitive interference less likely because it eliminates the time-sensitivity of attending to ideas (Dennis & Williams, 2003). Instead, participants can generate ideas at their own time and interrupt their individual process, if they, for example, desire the stimulation from others' ideas.

While an electronic form of group ideation might still induce cognitive inertia, the possibility to have multiple simultaneous dialogues about various ideas means that it is less likely for groups to focus on one narrow set of ideas (Dennis et al., 1997; Dennis, Valacich, Connolly, & Wynne, 1996). Some research also indicates a positive relationship between multiple simultaneous dialogues and performance in ideation groups (Valacich & Schwenk, 1994). However, this may again induce cognitive interference as participants might experience an overload of stimuli from attempting to follow simultaneous dialogues (Pinsonneault & Barki, 1999; Pinsonneault et al., 1999). Several studies suggest that the ability of an electronic ideation system to mitigate the effects of cognitive inertia and cognitive interference may be important (Dennis, Aronson, Heninger, & Walker, 1999).

(5) Evaluation apprehension

Evaluation apprehension (Diehl & Stroebe, 1987), perhaps better understood as evaluation anxiety, may cause participants in verbal brainstorming to withhold ideas because they fear a negative reaction from other participants (Diehl & Stroebe, 1987; Lamm & Trommsdorff, 1973). Osborn's (1953) advice to withhold criticism already tried to reduce evaluation apprehension. Evaluation apprehension should be minimal in nominal groups because participants do not share ideas, and when ideas are pooled, it is usually done anonymously. Evaluation apprehension in verbal brainstorming, similarly to production blocking, should increase as group size increases as there would be more participants who might criticize an idea (Gallupe et al., 1992). If there is a way for participants to contribute ideas anonymously, this has proven to reduce or eliminate evaluation apprehension (Cooper, Gallupe, Pollard, & Cadsby, 1998; Dennis & Valacich, 1993). Frequently, anonymity is seen to produce behaviour that would not otherwise be produced (Diener, 1979). This phenomenon would make it more likely for group participants to share ideas that might otherwise be withheld due to evaluative apprehension. There is some empirical evidence that participants in anonymous conditions contribute to more controversial and nonredundant ideas than those in non-anonymous conditions (Cooper et al., 1998).

(6) Social loafing

Social loafing also often called free riding is the tendency for individuals to expend less effort when working in a group than when working individually (Karau & Williams, 1993). Social loafing may arise as participants believe their contributions to be dispensable and not needed for group success or because responsibility for completing the task is diffused among many participants (Karau & Williams, 1993; Latane, Williams, & Harkins, 1979). Social loafing is reduced when participants believe they are being evaluated as individuals rather than collectively as a group (Karau & Williams, 1993). Therefore, differences in social loafing become more noticeable when members of nominal groups believe themselves to be working as individuals, not as members of groups. As with production blocking, social loafing can be expected to increase as group size increases because perceived dispensability and diffusion of responsibility increase as the number of participants increases. Social loafing is also made stronger when anonymity is provided (Karau & Williams, 1993).

3.3.2 Process Gains

While the process losses are defined as the factors that lower the results of a collaborative idea generation below that of a nominal creative process, process gains increase the team potential for creativity as higher than nominal ideation. In short, the collaborative idea generation gains are the primary reason why one would want to assemble a team for resolving a creative task in the first place and not just collect ideas from individuals.

(1) Synergy

Synergy is the ability of an idea from one participant to trigger a new idea in another participant, an idea that would otherwise not have been produced (Dennis & Williams, 2003). Synergy, or the “assembly bonus” (Collins & Guetzkow, 1964), is perhaps the most fundamental potential source of process gains. Osborn (1957) suggested that for brainstorming, it was fundamental to build on the ideas of others, which shows that the value of creative synergy was evident for group ideation very early on.

Given that creative synergy appears to be somewhat of a ‘saving grace’ for creative teams (Amabile & Kurtzberg, 2001; Cooper et al., 1998; De Dreu et al., 2011), it would appear surprising that not more research has been dedicated to this concept. By filtering the factors commonly linked to creative synergy in groups through the Rhodes (1961) famous four Ps of creativity, the parallels and differences of creative individual research and creative teams will be highlighted. The four Ps of creativity, Person, Process, Press and Product, established after about a decade of creativity research, do not take collaborative idea generation into account, yet they offer a new perspective when viewing creative synergy through this lens.

One of the factors that directly impact a group’s ability to achieve synergy is the mode of ideation (Chung, Lee, & Choi, 2015; Dennis & Valacich, 1993; Luther & Bruckman, 2018), which directly translates into one of the four Ps – Creative Process.

Research into how the process impacts creative synergy seems to primarily stem from studies of different variation on Osborn’s classic model of brainstorming (Lamm & Trommsdorff, 1973; Offner & Kramer, 1996; Paulus & Dzindolet, 1993; Snyder, 1989). Today, there are three main modes of group ideation: Nominal brainstorming, electronic brainstorming and face-to-face (the original) brainstorming. As there is countless variation

on this process, however (Bouchard & Hare, 1970; Camacho & Paulus, 1995; Collaros & Anderson, 1969; Cooper et al., 1998; Mullen, Johnson, & Salas, 1991; Taylor et al., 1958; Ziegler, Diehl, & Zijlstra, 2000), it should be noted that these are broad categories, that not all types of group ideation might fit, as some might be combinations or variations of these three.

Nominal ideation logically could not facilitate synergy, as the individuals have no access to other ideas than their own. In face-to-face ideation, synergy will be achieved by members building on previously mentioned ideas. However, the fact that only one idea can be discussed at any given point in time and documentation is difficult, means that synergy will not be maximised in face-to-face groups (Bouchard & Hare, 1970; Collaros & Anderson, 1969; Paulus & Dzindolet, 1993).

Electronic or more contemporarily, digital brainstorming, seems to offer high potential for optimizing synergy (Chung et al., 2015; Dennis & Williams, 2003; Gallupe et al., 1992; Oldham & Da Silva, 2015), as team members would be able to read the ideas of others, have time to contemplate them and build on them - it would be possible for them to comment on multiple ideas and give suggestions, without disrupting the flow of other team members. In summation, the process used to generate ideas appears to be crucial for achieving synergy in a collaborative creative team. However, there are limitations to how far the role of the process has been explored.

(2) Social Facilitation

Although research shows synergy to be the significant process gains factor, other factors are likely to contribute towards increased creative performance as well. Social facilitation, for example, is the ability of the presence of others to affect one's performance (Levine, Resnick, & Higgins, 1993). If individuals are experienced in performing a task or expect that they can perform the task well, working in the presence of others improves performance (Robinson-Staveley & Cooper, 1990; Sanna, 1992). However, if individuals have low expectations about their own performance, working in the presence of other impairs performance (Robinson-Staveley & Cooper, 1990; Sanna, 1992; Pinsonneault et al., 1999).

Notably, Social facilitation may even exist in nominal groups if participants work in the presence of their team members - even if they do not communicate. For this reason, social facilitation does not appear as a process gain that can be easily manipulated by changing

factors of the group composition, process or environment, and thus will not be examined more closely, contrary to synergy, which appears to react to such changes, as evidence by research (Dennis & Williams, 2003).

3.4 Potential Underlying Causes of Gains and Losses

Recognising the process losses and gains that occur during the creative process and especially during shared idea production is important to make attempts to limit losses and boost gains. However, such an approach would benefit perhaps even more from an understanding of the causes of gains or losses and how the effect size is determined. In the following, this thesis will discuss which characteristics of teams, organisations and individuals have previously been linked by academics to being potential root causes or contributing factors to creative process gains and losses.

3.4.1 Process

An important factor that directly impacts a group's ability to achieve synergy is the mode of ideation. This research stems mostly from studies into brainstorming, where scientist have distinguished between three main modes of group ideation: Nominal brainstorming, electronic brainstorming, and face-to-face brainstorming. As previously explained, nominal brainstorming is individual brainstorming, whose results will be accumulated after duplicate ideas have been eliminated. Such a 'group ideation' process logically could not lead to synergy, as the individuals have no access to other ideas than their own. In face-to-face ideation, synergy will be achieved by members building on previously mentioned ideas. However, the fact that only one idea can be discussed at any given point in time and documentation is difficult, means that synergy will not be maximised in face-to-face groups. Electronic brainstorming seems to offer high potential for optimizing synergy, as team members would be able to read the ideas of others, have time to contemplate them and build on them - it would be possible for them to comment on multiple ideas and give suggestions, without disrupting the flow of other team members. Documentation is

another advantage of electronic brainstorming as it relates to synergy. For this research project, this is of fundamental interest, as it asks the question of how a group can maximise their synergy - possibly by creating the ideal digital ideation tool, that maximises the potential of synergy, or by merging nominal, electronic and group methods into a multi-step process, designed to achieve maximal group creativity.

However, while the wrong ideation technique could effectively make it impossible for synergy to occur in a group ideation process, there are factors that can affect the scale of synergy in group creativity. Two major factors that have been mentioned frequently in this relation to synergy are diversity, attention and more controversially, group size (Amabile & Kurtzberg, 2000-2001; Dennis & Williams, 2003).

A well-structured team process certainly is related to the process loss factors of groupthink, production blocking and cognitive interference. Ideally, such a process would cancel out production blocking and cognitive interference, whereas groupthink might be a more complex issue. However, a well-designed process should do more than merely cancel out process losses and actively contribute to synergy. One could only speculate at this stage, but it does appear that the process is likely to be a true pro-synergy factor.

3.4.2 Diversity

From a logical vantage point, it is clear why, in theory, diversity should always contribute to team creativity. If creativity can be described as the creation of something new and useful, the 'new' in this definition has been controversial. While the notion that creativity is creating something out of nothing, simply by the laws of physics, this is not possible. The creation of something new always takes into account what came before. The act of creation, therefore, is the novel combination of existing 'data points'. This is clear when looking at neuroscientific insights into the workings of our minds. Scans show that during creative problem-solving tasks, areas of our brain are cooperating that never communicate under other circumstances (Beaty et al., 2018).

The role of diversity within teams has been a subject of great discussion and of a certain degree of controversy (Homan et al., 2015; D. S. Lee et al., 2015; Milliken et al., 2003; Nemeth & Nemeth-Brown, 2003; Wang et al., 2016; Watson et al., 1998). While the

overall diversity of team membership has been theorized to be generally positive for group creativity (Milliken, Bartel, & Kurtzberg, 2003; Amabile & Kurtzberg, 2000-2001), there appears to be a 'sweet spot' of which type and level of diversity contribute to overall performance, and at which point the differences between team members become too large to allow for effective communication and are prone to misunderstandings and give way to dysfunctional behaviour (Homan et al., 2015; Lee et al., 2015; Lee et al., 2018; Nemeth & Nemeth-Brown, 2003; Wang et al., 2016).

3.4.3 Team Size

Synergy appears to be directly proportional to the range of ideas initially created (Dennis and Williams, 2003; Dennis and Valacich, 1993; Gallupe et al., 1992; Valacich et al., 1994) or indeed the ideas shared with the group, which would appear logical: the more ideas there are to trigger another idea, the more likely this would be to occur. This means that synergy is likely to increase as the size of the group increases as a larger group size does increase the likelihood of an increased range of ideas, which then, in turn, have the potential to trigger new ideas (Dennis & Valacich, 1993; Gallupe et al., 1992; Valacich, Dennis, & Connolly, 1994). However, increased group size has been linked to increased process losses (Amabile & Kurtzberg, 2000-2001; Dennis & Williams, 2003). Gallupe et al., (1992) have conducted research that showed that while in an 'electronic brainstorm' an increase in participants had a positive effect on both the quality and quantity of ideas generated, the same was not true in a control group conducting a more traditional brainstorming session. While the team size thereby has to be mitigated by a process that allows the effective sharing of all ideas with the other team members, the number of people collaborating likely impacts the overall output of the team.

3.4.4 Participative Safety

The term participative safety is a cousin to the perhaps more widely known 'psychological safety' which allows the employees of an organization to feel at ease with one another,

allowing them to work together effectively (Schein & Bennis, 1965). Similarly, the term ‘participative safety (M. West, 1990) refers to this same principle on a team level. The inclusion of participative safety does not strictly follow the other elements of factors that have explicitly been linked before to creative synergy. However, the author has deemed its inclusion warranted based both on its inclusion in several models of team-level creativity (Ekvall, 1996; Fairchild & Hunter, 2014; Hülsheger et al., 2009; Hunter et al., 2005; Hunter et al., 2007; Hunter et al., 1997; West & Anderson, 1996) as well as its relationship with the process loss factor ‘evaluation apprehension’, which appears to be diametrically opposed to the idea of participative safety.

3.4.5 Attention

Another variable that is frequently mentioned to influence synergy is the attention team members pay to the ideas of others. Recent research indicates that even small virtual groups can experience process gains from synergy when participants receive instructions to focus their attention and memory on the ideas presented by others (Dugosh, Paulus, Roland, & Yang, 2000; Paulus & Yang, 2000). Attention warrants closer examination, especially in regard to how this can be maximised and seems to be related to motivation by group success. If a group member, for example, would primarily be interested in showcasing their own creativity and not elevating others or contributing to the best possible outcome of the group ideation, attention would automatically be low. Considering Motivation as the main variable for attention in a group process, it will be important to accurately assess how to increase group motivation and shared ownership of the process to ensure the necessary attention to achieve synergy.

Amabile proposed that *“Motivation is the component of individual creative performance that has been most neglected by creativity researchers [...]. Yet in some ways, this might be the most important component”* (Amabile, 1988), p.133). While Amabile refers to individual creativity, a careful review of group creativity literature shows a similar trend. While attention to the task (a concept for the purpose of this argument similar enough to motivation) is cited as a factor influencing creative synergy, the specifics of motivating creative teams have not benefitted from much academic attention.

This apparent disdain for any factors motivating creatives beyond the work itself is highly problematic for several reasons that could be linked to some of the problems facing the industry at the moment. In order to understand how to improve the work creative teams do, environmental factors such as incentive structures, culture, expectation setting, physical environment and leadership have yet to be examined, although their impact on motivation and attention, which appear to be crucial for creative synergy (Chatman, Polzer, Barsade, & Neale, 1998; Nemeth & Nemeth-Brown, 2003; B. Nijstad & Paulus, 2003), can be all but taken as a given

The environmental factors necessary to ideally stimulate individual creativity have been much explored, with Amabile's exploration of organisational creativity laying the foundation for how individuals are affected by the organisational, creative context. Amabile (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Amabile, 1988, 1993, 1996; Amabile & Gryskiewicz, 1989) noted the role of a variety of social factors such as mentoring, social influences, and social reward contexts. She and her colleagues developed a model of creativity that emphasized the central role of intrinsic motivation and the impact of organisational contexts on this type of motivation (Amabile et al., 1996). Research indicates that groups can experience synergy when participants receive instructions to focus their attention and memory on the ideas presented by others (Dugosh, Paulus, Roland, & Yang, 2000; Paulus & Yang, 2000). In practice, individual motivation towards group success has to be assumed as the main variable for attention. Finding the optimal approach to ensure group motivation and shared ownership of the process appears to be crucial to ensure the necessary attention to achieve synergy.

Indeed, some research suggests, that environmental factors affecting motivation (the press) could be one of the most important factors in building teams that cooperate well (Cable et al., 2012; Coyle, 2018; Denison and Mishra, 1995; Chatman et al., 1998; Kotter, 1992). Corporate culture, for example, has often been linked to improved creativity. While the effect of environmental factors on both team performance (Coyle, 2018) and individual creative performance (Amabile, 1988) has been well established, the impact of environmental forces on group creativity has received far less academic interest. Amabile proposed that *"Motivation is the component of individual creative performance that has been most neglected by creativity researchers [...]. Yet in some ways, this might be the most important component"* (Amabile, 1988), p.133). While Amabile refers to individual creativity, a careful review of group creativity literature shows a similar trend. While

attention to the task (motivation is perhaps the largest factor impacting attention) is cited as a factor influencing creative synergy, the specifics of motivating creative teams have not benefitted from much academic attention.

Part of the reason might be that the creative industries see themselves as highly individualistic and value intrinsic motivation above all else. Amabile (1988) describes intrinsic motivation using very positively connotated words: *“being self-driven, excited by the work itself, enthusiastic, attracted by the challenge of the problem, having a sense of working on something important, and a belief in or commitment to the idea”*(p133). Extrinsic factors, on the other hand, are described by her as having been cited by professionals as: *“being motivated primarily by money, recognition, or other factors aside from work itself, responding primarily to restrictions and goals set by others, being competitive and jealous of someone else’s success”*(p. 134).

4. Methodology

While the methodology used in this thesis has been introduced in the preface to a minor degree already, as this is the basis of the original contribution to knowledge this thesis makes the following three chapters are dedicated to introducing and elaborating on the specific methodology developed for this research. The initial methodology chapter will elaborate on the mixture of quantitative and qualitative data collection and evaluation, as well as other consideration that relate to the research as a whole, such as the specific creative industry chosen as a basis for both the experiment as well as the interviews. This chapter will explore the development of the hypotheses that guided the development and data evaluation of the research questions: Can collaborative idea generation surpass ‘nominal brainstorming’ when process gains and losses are controlled for? What are the barriers and enablers of effective team idea generation in teams? What can we learn from environments with high creative pressure about how to boost enablers and to break through the barriers to increase the likelihood of effective idea generation?

4.1 Research Context

In order to research the factors that lead to creative synergy, the context of the team creativity must be narrowed down, both as there is a multitude of different types of creativity – scientific, entrepreneurial, artistic as well as to make it easier to research.

As this research is interested in understanding organisational creativity, six main factors were considered before choosing the field for the research: 1) The creativity of the organisation would have to be directly responsible for their source of income, 2) The complexity of the subject matter the creativity in this industry deals with would have to be accessible to the researcher, 3) The relationship between the quality and novelty of ideas and income would have to be as direct as possible, 4) The production of ideas in the field had to be as often and frequently as possible, 5) The area had to frequently utilize

collaborative idea generation, and lastly 6) The field would need a shared and established method of evaluating the quality of ideas.

(1) The creativity of the organisation would have to be their source of income.

While innovation and thereby, creativity has been linked to better financial performance, most organisations do not directly link their performance to their ability to be creative. There is a segment of the market that does, however, the creative industries, subject of chapter six. Howkins (2001) in his definition of the creative industries includes the sectors of advertising, architecture, art, crafts, design, fashion, film, music, performing arts, publishing, R&D, software, toys and games, TV and radio, and video games (Howkins 2001, pp. 88–117).

(2) The complexity of the subject matter would have to be accessible to a layperson

While the products of the creative industries are universally consumed, the internal processes of each industry require an in-depth understanding of various subject matter (Bilton, 2007; Hesmondhalgh et al., 2013; Jones & Maoret, 2018; Morgan et al., 2013), not all of which could be accessible to a person who is not part of the field. Especially architecture, music, fashion, R&D, software, and video games require more advanced understanding than what would be practical for this research, which is why they were eliminated as possible areas of study.

(3) The relationship between the quality and novelty of ideas and income would have to be as direct as possible

While some of the creative industries rely heavily on the novelty of their ideas, others, such as crafts, toys and games are less directly linked to novelty (Coles, 2016; Florida, 2012; Howkins, 2002; Koslow et al., 2003), which is why they are eliminated from consideration.

(4) The production of ideas in the field had to be as often and frequent as possible

To aid in the understanding of the elements of the creative process in the sector, it is crucial that this process occurs as often as possible. While creativity is, of course, at play throughout the implementation of any creative project, it is the initial, collaborative idea generation that is of interest for this research. This eliminated the film industry, where it takes multiple years from an initial concept to the finished product (Coles, 2016; Howkins, 2002) as well as TV and radio, where this time span might be shorter, yet still considerable compared to other industries (Hesmondhalgh et al., 2013).

(5) The area had to frequently utilize collaborative idea generation

Whereas art, publishing and performing arts famously feature collaborations, it is of a different type than what this research is interested in. While the focus of this research is on idea generation, the collaboration in the performing arts is of a fundamentally different nature (Walsh et al., 1988; Wood et al., 1991), as each department has its own function, and the process of executing the original idea is at the forefront of the collaboration, not the ideation itself. Publishing is similar, and while the author will collaborate closely with advisers, agents and editors, the idea will, in most cases come from the author themselves (Csikszentmihalyi, 1997).

(6) The field would need a shared and established method of evaluating the quality of ideas

At this point, only design and advertising remain as sectors to place the research in. Indeed, design and advertising share many similarities in the idea generation process. Especially with the current trend of 'design thinking' (Bae et al., 2020; Meinel et al., 2020; Mierdel & Bogner, 2019; Thompson & Schonthal, 2020; Wattanasupachoke, 2012), this area could be of great interest for further research. However, advertising does offer some more clear-cut structures (Ford, 2020; Horsky, 2006; Jones & Maoret, 2018; Kilgour et al., 2020; Turnbull & Wheeler, 2015; Verbeke et al., 2008). Crucially, advertising is also a field the researcher has deep insights into, due to professional experience in the field.

Against these criteria, the advertising industry is the only one that checks all the boxes needed for this research. The advertising industry could certainly be considered to offer the most direct link between the quality of idea and income, as well as the high frequency of idea generation when compared to other commercial creative industries (Altstiel et al., 2020; Horsky, 2006; Tungate, 2007).

Advertising offered the additional benefit, that the original method for increasing team creativity – brainstorming - had come out of the advertising industry (Osborn, 1953). The industry is also arguably the most commercial of the creative industries (Howkins, 2002).

Advertising also offers the benefit of being very clearly organised into agencies, with clear and internationally recognized hierarchies and approval processes, both internally and externally (Tungate, 2007). The clear organisational context of creativity in the advertising industry is another bonus, as it makes the industry more similar to other commercial industries, offering the possibility for the conclusions about team creativity in advertising

to be more widely applicable than the processes used for example in filmmaking (Howkins, 2002).

4.2 Mixed Methods Approach

The goal of designing a methodology for this research is to answer the three central research questions:

- 1) Is there value in collaborative idea generation?
- 2) What are the barriers and enablers of effective team idea generation in teams?
- 3) What can we learn from idea generation processes in high 'creative pressure' environments?

In the design of the research method, it became clear that no singular research method could address all aspects of the first two research questions. While the first question, for example, can be (and has been) tested via laboratory experiments (Diehl & Stroebe, 1987; Gallupe et al., 1991), it would be nearly impossible to discover new factors impacting collaborative idea generation within a laboratory experiment where all variables are controlled for (Field & Hole, 2003). On the other hand, simply observing the state of collaboration within an organisation would not have the ability to answer the very first research question – *“Can collaborative idea generation surpass ‘nominal brainstorming’ when process gains and losses are controlled for?”*

Exploring what factors enable a team to exhibit creativity greater than the sum of their own creativity is by its nature a difficult endeavour. As multiple authors note (Cooper et al., 1998; Pinsonneault et al., 1999; Taylor et al., 1958), experimental observation of creativity hardly offers insights into how team creativity functions in practice as in the laboratory setting, the teams are ad-hoc, presented with unfamiliar technology, unfamiliar problems or briefs and find themselves in settings that differ substantially from what one would experience in the workplace. For one, the participants' career is not impacted by the experiment; there are no pre-established dynamics in the team, there are no hierarchies and no other tasks that could limit the focus of the participants. As such testing how, for example, anonymity (Connolly et al., 1990; Cooper et al., 1998; Pinsonneault & Heppel,

1997) impacts idea generation in teams with people who are not linked in a professional context and have little to no previous history will not show the effect anonymity could and would have in an established team – which could be positive when eliminating toxic dynamics or negative, when eliminating positive reinforcement between team members.

Many such dynamics are challenging to observe in an experimental context but relying exclusively on the insights of practitioners would not answer the central question if teams are, in fact, more or less effective than nominal idea generation. In many industries, team idea generation is the primary way in which ideas are created. As Pinsonneault et al (1999) showed, there seems to be a bias towards evaluation group creative exercises as more productive than nominal ideation, even though the results show that this is not necessarily the case. Interviewees would have no baseline comparison to the way ideation is done in their line of work.

Only relying on the statements practitioners, therefore, would leave it unanswered if team creativity could, in fact, be more effective than nominal ideation. While there could hypothetically be a scenario where all hypotheses could be tested within the same study, this would require access and means not available for this research.

The methodology devised for this thesis is purposely combining qualitative and quantitative methods (Braun & Clarke, 2006; Field & Hole, 2003), acknowledging that using either or the other exclusively would not be able to test all hypotheses, and would either result in a conclusion that would likely offer no insights into industry realities of team creativity or would not be able to prove the value of team creativity over nominal idea generation.

Jumping off on the long line on experiments done on brainstorming, this research takes inspiration from the research done throughout the 1990s that looked at the potential of digital brainstorming (Cooper et al., 1998; Dennis et al., 1999; Gallupe et al., 1992). Practical realities of what was then called ‘electronic brainstorming’ do not compare to what digital brainstorming could be today, as both digital literacy and tools for facilitating shared idea generation were in a less advanced stage. While there were some encouraging effects of electronic brainstorming, overall, the results appear to still not reach the levels of creativity offered by simple nominal idea generation (Cooper et al., 1998; Dennis & Williams, 2003; Gallupe et al., 1992; Pinsonneault et al., 1999). However, given the vastly different attitudes towards computers now, this could have changed over the past twenty years.

Using the template laid out by these early electronic creativity researchers, an experimental observation was composed, which enabled the manipulation of the variable of the creative process. By comparing the average quality of the resulting ideas, the data will allow determining if a process that has been manipulated as to produce fewer process losses does indeed allow for the team-level creative output to surpass the nominal creative output of the team. This will then allow them to make conclusions about the validity of team creativity and its perception.

In order to validate the hypotheses, three different types of creative processes will be compared, with the outcome of each being evaluated by 'experts in the field' in order to determine which process leads to the most creative outcome: Nominal idea generation, a 'modern-day' digital brainstorming and a traditional brainstorming will be compared. Notably, this means that the testing consists of two control groups and one test group.

Electronic brainstorming in the early 1990s was characterized by the technology not yet giving the opportunity to conduct the team-level process in real-time (Chang et al., 2019). Instead, the participants were shown the ideas that were generated beforehand (Cooper et al., 1998). Technology today does make it possible to create a digital space in which the participant can enter their ideas in real-time and can choose to see the ideas of others or focus on their own idea generation. Additionally, by using tools that are well-known across the population, there might be less hesitancy on behalf of the participants to enter their own ideas.

In terms of answering the second research question, a more explorative approach is necessary. This thesis makes use of qualitative interviews of advertising industry practitioners in order to identify the factors that impact the quality of team ideation in the industry through thematic analysis (Braun & Clarke, 2006). These qualitative interviews will illuminate the factors experimental observation is not able to test due to the restrictions of the method. While these might well be factors impacting collaborative idea generation, a semi-structured interview will allow for previously not considered factors to be examined, leading ideally towards a complete list of factors impacting creative synergy.

Combining two methods to identify the factors for effective team idea generation in the advertising industry might still run the risk of not identifying some factors, in the case of factors not being tested in the experiment and all interviewed practitioners lacking awareness of a factor, this methodology would not be able to identify such a 'blind spot

factor'. This research does aim to identify the most significant factors leading to a higher creative ideation performance. The aim of this research is to broaden the understanding of the multitude of factors that influence team creativity and identify the most significant forces. By using two research methods, this thesis hopes to achieve an effect much like seeing with two eyes – achieving perspective.

4.3 Experimental Observation

As mentioned briefly in the overview of the methodological design, it is the goal of the experimental observation to examine if manipulation of process loss and gains factors can lead to a team ideating to a higher level than individuals. In the following chapter, the specific design of this experiment will be explored, followed by details on the participant recruitment and the implementation of the experiment. Further, this chapter will break down the quantitative analysis of the experimental output through SPSS (Field, 2013; Field & Hole, 2003) and the resulting discussing of what that means for the research question.

4.3.1 Experiment Design

One of the primary ambitions of this thesis is to show the value that collaborative ideation can bring to the creative process. There is academic consensus that team creativity and ideation can be optimized (Cooper, Gallupe, Pollard, & Cadsby, 1998; Dennis & Williams, 2003; Gallupe et al, 1992), but while electronic brainstorming can have positive effects on idea generation, the overall ideas resulting from shared ideation were still 'less than' the ideas achieved in nominal ideation (Diehl & Stroebe, 1987).

The first step in examining the potential of team ideation in the creative industries for this thesis was to design an experimental observation of teams in different ideation contexts, which could then be followed by an exploration of current practice and views in the industry through expert interviews. For this, the researcher consulted both the previous research on idea generation and brainstorming as well as (Field & Hole, 2003) guide 'How to design and report experiments'.

The main hypothesis coming out of the literature review is that creative teamwork has the potential to be more effective than nominal ideation if synergy is achieved. The main hypothesis tested in the experiment can, therefore, be described as $H(0)$: 'It is possible for a team to surpass the nominal individual creativity of its members.'

In each session of the experiment, a team of five people would be tasked with three idea generation sessions, each using a different method of ideation and a different, but related creative task. The order of the creative tasks and the order of the type of idea generation were both randomised. Further, the type of ideation used for each task would not be the same across various sessions of the experiment. In total, seven sessions of the experiment took place, each generating three data sets of ideas.

Three different types of idea generation processes were selected to be tested, as a nominal process is necessary in order to control the results, and a higher number of different processes would have meant more time requirements for the participants which in turn could have had a negative effect of participation.

As the research looks specifically at advertising agencies, the in the experiment were designed to be connected by the same overarching project – the launch of a new undergraduate degree (Officially launched as of April 2019) titled 'Media and Creative Industries' at the Centre for Cultural Policy and Media Studies at the University of Warwick. Not only does a new degree approximate the launch of a new product, but in this case, it is also one that all participants at least can have some insights into, as all participants will have a degree of knowledge of the University of Warwick, which eliminated the need for customer research.

The different modes of ideation, while staying true to the traditional idea of brainstorming were also modelled after versions of idea generations that often occur within organisations, including a traditional brainstorming, which gave participants some time for nominal ideation beforehand in order to create a decrease in the process loss factors cognitive interference and production blocking. For the electronic brainstorming, a widely used programme (Microsoft Office 365 Excel shared with all participants) was utilized for the digital brainstorming in order to avoid the results being tinted by differing abilities to adapt to a fully new platform.

The design of an experiment that could test the Hypothesis and the implementation of said experiment were a complex process, spanning a period of 12 months from the first

experimental design over its approval, initial pre-testing, a first incarnation of the experiment with participants from the Centre for Cultural and Media Policy Studies, failed attempts to gain support through University systems in place to support students running empirical research through experiments, the retooling of the experiment to ensure enough participation, a complex ethical approval process by the University, a second incarnation of the experiment as a workshop with integrated elements of the experiment and finally the evaluation of the creativity shown by separate gatekeepers in the field and lastly the statistical analysis.

While educational, the difficulties and many setbacks of the experiment are merely mentioned here to lend a further understanding of the data collection process.

a) Identifying the independent variable

For the experimental testing of the hypothesis, two variables were identified as the most essential. The independent variable would be the intergroup variable 'Mode of ideation'. The primary purpose of the experiment was to manipulate the creative process, or more specifically, 'the mode of ideation' and analyse the effect this would have on the data – and if this effect would be statistically significant. The variable of a mode of ideation has a nominal scale, with the three different modes being a Nominal Ideation Process (N), an Online Shared Ideation Process (O) and a modified In-Person Shared Ideation (P).

The main dependent variable of interest is the quality of ideas generated in each session, in order to test the hypothesis that the mode of ideation has an impact on team creativity. The number of ideas, while having been used in the academic testing of brainstorming effectiveness, is less relevant to this analysis than the quality of the output, something the participants were briefed on.

A central ambition for the experiment was to create an environment that is as close to practice in the creative industries as possible, as a lack of this context could be criticised in other research studies referred to in the literature analysis (i.e. Gallupe, Bastianutti, & Cooper, 1991). This ambition influenced the experimental design in a number of ways including the structure of the creative tasks, which was modelled after a creative brief, industry professionals would receive when working for a client or a senior stakeholder within their organisation.

(1) Nominal Ideation. (N)

For the nominal ideation, students recorded their ideas in separate Excel documents in the first incarnation, in the second incarnation they noted them down on a distributed document by hand.

(2) Manipulated collaborative idea generation conducted online (O)

To make the digital collaboration as easy as possible it was decided not to use an application specialising in idea generation, as such tools would take time to get to know and learn to use, time that was not available in the session itself. Instead, a shared digital Excel file was created, with a column in which each student could record their ideas while observing the ideas of others if they wished. Students were instructed to feel free to have a look at the ideas of others, get inspiration from them and connect ideas into new ones.

(3) On-paper Brainstorming (P)

The classic brainstorming exercise was modelled less after Osborn's (1953) specific instructions for the process, but more an 'as it occurs naturally' process of ideation, without any additional instructions. For this task, they were given large flipchart paper and different coloured markers. While unintended, the use of different colours markers later allowed for the facilitator to see which ideas had been worked on or improved by other people, even though this cannot be translated into the evaluation process.

b) Measuring the dependent variable

Evaluating the quality of an idea before this idea has seen implementation will always require some subjective judgement. A criticism of much of the empirical research into brainstorming in the brief review of brainstorming research was the common reliance on the number of ideas as an indicator of the effectiveness of the ideation mode. As a result of another criticism of other studies, the experimental design here had the ambition to come as close to an idea generation as it would occur in a creative organisation as possible. In this case, the ideas were evaluated by subject matter experts that both bear a resemblance to a hypothetical client or senior manager within an organisation.

Most significantly, this ambition translated into a new approach to the evaluation of ideas generated in the experiments. Instead of evaluating the processes based on the numbers

or quality of individual ideas they yielded, the creativity score was given by gatekeepers of the field (Csikszentmihalyi, 1997a) – experts acting in a capacity approximating the position of a client or Creative Director within an Advertising Agency Context. As the ideas, all centre around a new Undergraduate degree at the CCMPS (Centre for Cultural and Media Policy Studies) in Warwick, two experts associated with the Centre agreed to evaluate the ideas generated in the experiment as to their perceived creativity on a ratio scale of 0-100.

The experimental design took into account that it might be more difficult to create ideas surrounding one of the tasks than the others by randomising which mode of ideation would be paired with which task each time. The voluntary questionnaire at the end also asked the participants which task, if any, they thought, was more challenging than the others, to account for this variable.

In accordance with Csikszentmihalyi's (2003) theory of the creative field and its gatekeepers, the experimental design foresaw to let the qualities of the ideas be evaluated separately by two experts in the field. This was done to counterbalance a fully subjective analysis of the ideas and make it slightly more democratic. The cumulative ideas for each task were awarded a Grade between 0 and 100 by each expert, with 100 representing the best possible idea.

While it would be the more obvious choice for the evaluators to simply rank the three modes of idea generation on an ordinal scale, the statistical evaluation of this would be less exact, as it would not account for more subtle differences between different modes of idea generation. This analysis allows to show more subtle differences and allows for a comparison of means through an independent t-test.

Evaluating every single idea would further be time-consuming and not constructive, as in some cases, the ideas bounce off each other or are variations of the same 'base'-idea. Alternatively, one really excellent idea could be cancelled out by a horrible one in a scenario where all ideas are evaluated together, while this would not be the case in a real-life scenario. A pitch meeting with one excellent idea and a number of terrible ideas would still be considered a success overall, as ideas do not cancel each other out in practice. Asking the evaluators to base their grade on the ideas together allows for an evaluation that is as close to practice as possible while enabling rigorous statistical analysis of the variables.

The evaluators received the ideas without knowing which block of ideas came out of which process of idea generation in order to avoid evaluator biases.

4.3.2 Recruiting Participants

As each session of the experiment required five participants, the seven sessions required a total of 35 participants. Each session produced three data sets, each corresponding to a different type of idea generation. This meant, that while it was still desirable to have teams that would be comparable in terms of diversity, age, and knowledge of creative work, what would be compared was not one group's performance versus the performance of the other, but how each group performed operating under the three types of idea generation.

In other words, the analysis did not compare group A to group B but compared the overall response of all groups to stimuli (N), (O) and (P). Even if groups would have varied widely from each other, what would be measured were the difference in their task performance. However, it is not inconceivable that, should one team for example been significantly larger in size, it would have done better on for example online ideation, and performed more poorly on the traditional brainstorming task.

To eliminate the potential of the group attributes impacting their performance in relation to the tasks, the researcher took several steps to ensure that groups could be compared based on the obvious metrics. While the size of the team was comparatively easy to control, factors such as diversity, age and experience were harder to control.

While the number of participants needed was not significant, the nature of the research meant that there could be no financial compensation for their time and travel. On the advice of faculty, the initial recruitment of participants, therefore, relied on the goodwill of Master students at the Centre for Cultural and Media Policy Studies. However, although the researcher herself tried several ways to recruit participants this way, from social media, email marketing and speaking at the beginning of lectures, not enough participant could be recruited this way. This meant that two sessions of the experiment were able to be conducted with students. For the other five sessions, the recruitment call was wider, targeting the whole university, including staff. For the five sessions with open recruitment

call, the personal network of the researcher came into play more, resulting in a more diverse group of participants. These 25 people broke up evenly in students and junior University staff, however skewering female overall, with only five male participants.

While these elements could be issues when aiming to generalise the findings onto a specific population, the goal of the experimental observation of various modes of idea generation was to showcase that collaborative ideation could surpass nominal ideation under some circumstances. While the mode of ideation would be the clear independent variable, it cannot be definitively be said that the makeup of the participant group, their specific levels of diversity and experience as well as their age, had an impact on their performance related to each mode of ideation.

4.3.3 Implementation

While the implementation of the experiment experienced some setbacks, this subchapter aims to give a good overview of the information participants received during the implementation of their individual experiment session. This is done by first explaining the information they received about the experiment itself, then about the Ideational Context and then about each individual task.

(1) Briefing about Experiment

At the beginning of each experiment session, there would be a brief explanation of the experiment as part of doctoral research into idea generation in teams. The participants were asked to sign a release form for their produced ideas to be used for analysis within this thesis. These documents remain in possession of the researcher. The interviewees were also briefed that they would participate in a total of three different idea generation sessions and that each session would have a time limit of 15 minutes. They were also told about the three modes of idea generation they would be participating in and the specific requirements of each – i.e. the laptops for the digital idea generation and the flipchart paper for the brainstorming exercise.

(2) Briefing about the Ideation Context

Due to the importance of making all idea generation tasks comparable, each of the tasks fell under the umbrella of creating an element of a potential advertising campaign for a new undergraduate degree. For this undergraduate degree, the participants only received a brief document, outlining the goals of the course:

“The course will cover Media, Cultural & Creative Industries – including media planning, media buying, project management, media policy work, Film and TV distribution, media tech start-ups, media marketing, media research, web development, user experience, social media business and analytics, audience development, global media and communication, festivals, events, PR, freelance creative or media production, NGO, corporate or government communications, museums, art galleries, (digital) archives, heritage commissioning art and cultural work.”

This was chosen for two reasons. Firstly, to make the ideas more comparable and to give a purpose to the idea generation and secondly to enable the evaluation of the creativity levels by the experts.

(3) Task Outlines

As mentioned about the introduction of the participants to the experiment, they were initially briefed that there would be ‘Three approaches to coming up with creative ideas’ tested during the experiment. They were told that there would be three different challenges, all related to the Ideation context of promoting a new undergraduate degree at the University of Warwick. At the beginning of each task, the challenge would be presented, potentially with material explaining the goal of the exercise.

Regarding the development of the themes, the aim was to find three elements of a potential advertising campaign for the Undergraduate degree that would be comparable in difficulty. Although the matching of task and mode of ideation would be randomized, the tasks should still be able to produce the same level of creative response.

The three tasks developed were:

1) A visual identity, i.e. for the cover of a brochure or the homepage of the course. For these tasks, brochures of other undergraduate programmes in the realm of creativity were provided to give an indication of what could be useful.

(2) A catchy slogan that would sum up the aim of the course. Here, some examples of organisational slogans and mottos were given, such as 'Think different'.

(3) A social media campaign to promote the course. While there were not materials given for this task, a number of social media networks (Snapchat, LinkedIn, and Facebook) were given to give the participants some guidance.

To test if these would be roughly comparable, a trial experiment was conducted with four young professionals, who were then interviewed on their perception of the difficulties of the task. This resulted in some minor changes made as to how the task was presented so that their challenge level would be comparable.

After introducing the participants to each exercise, they were given a chance to voice any concerns or questions they may have.

4.3.4 Data Analysis

As mentioned, the next step saw the ideas of each session compiled in an excel document, broken down by each idea generation session. This meant an individual sheet for each session with the three exercises and their corresponding ideas listed. However, which ideation method had been used was left out of the document sent to the evaluators, as to prevent any bias for one method over the other.

As mentioned before, the evaluators scored each idea generation session together. This was done as it was neither the number of ideas that were evaluated nor the average quality. As with how idea generations are evaluated in the industry, there is an understanding that there might be a large number of bad ideas in proportion to one great idea. For this reason, the potential of the block of ideas was evaluated together. In order to give a wide range of possible grades, the evaluators were asked to give each block of ideas, a score between 0 and 100.

After receiving the scored excel sheet back from both evaluators, the ideation method was matched back with the score. Seven Sessions of the Experiment were evaluated by two experts, resulting in 14 sets of data per the mode of ideation. While this number would ideally be higher, the resources for more sessions were not available. The data set was edited to be analysed in the analysis software SPSS, from which the following tables have been taken (Field, 2013; Field & Hole, 2003).

Group Statistics					
	Group	N	Mean of Creativity Score	Std. Deviation	Std. Error Mean
Score	N	14	40.93	25.611	6.845
	O	14	56.50	21.547	5.759
	P	14	40.36	19.097	5.104

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Score	42	12	90	45.93	22.981

The scores assigned ranged from 12 being the lowest to 90 being the highest score given. The mean of all ideas is 45.93, with a standard deviation of 22.981.

A descriptive statistical analysis of the data shows that while the mean of Nominal (N) and In-Person (P) Ideation is nearly indistinguishable (N= 40.93; P=40.36), the mean score given to the Online Ideation Output is considerably higher (O= 56.5), but a t-test will have to be done in order to prove if this difference is statistically significant. The standard deviation is highest for Nominal Ideation scores, which seems plausible, as here the individual's creativity is the predictive variable for the score. The standard deviation for In-Person idea generation is the lowest with an average score of 40.36 but also shows the lowest standard deviation – pointing towards the fact, that while the In-Person Ideation was minimally less successful than the Nominal Ideation, there were fewer outliers – both negative and positive.

Overall, Online Ideation has the highest mean by 15.57 points and has a standard deviation close to the overall average of all scores. While this descriptive statistical analysis cannot prove any Hypothesis, it collaborative idea generation does not offer some initial idea that there could be an added value through the collaborative idea generation. While the descriptive statistics show that Ideation Mode O has performed better than both Ideation Mode P and Ideation Mode N, it now has to be tested if this difference in score is statistically significant.

While the analysis is a comparison of three means, each group of participants contributed three data sets, so the more obvious method of analysis ANOVA could not be used (Field & Hole, 2003). As both Mode N – the nominal idea generation, and Mode P – the traditional brainstorming - act as a ‘control group’ for the third mode of ideation, the most logical approach is to utilize a t-test to compare the outcome of the manipulated mode of ideation (Mode O) with each of the two control variables.

(1) Comparing the Means of Brainstorming (P) and Manipulated Ideation (O)

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Score	P	14	40.36	19.097	5.104
	O	14	56.5	21.547	5.759

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Score	Equal variances assumed	0.348	0.56	-2.098	26	0.046	-16.143	7.695	-31.96	-0.326
	Equal variances not assumed			-2.098	25.63	0.046	-16.143	7.695	-31.971	-0.314

The Independent T-Test comparing the means of In-Person and Online Ideation shows a significant difference, with an alpha level of 95%.

(2) Comparing the Means of Nominal Ideation (N) and Manipulated Ideation (O)

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Score	N	14	40.93	25.611	6.845
	O	14	56.5	21.547	5.759

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Score	Equal variances assumed	0.215	0.647	-1.741	26	0.094	-15.571	8.945	-33.958	2.815
	Equal variances not assumed			-1.741	25.261	0.094	-15.571	8.945	-33.984	2.842

The Independent T-Test comparing the means of Nominal and Online Ideation shows a significant difference, with an alpha level of 90%.

4.3.5 Testing of the Hypotheses

While the significance levels are low, the data supports the hypothesis (H0) that a collaborative idea generation has indeed the potential to surpass a nominal creative process in terms of the output quality. While indeed the significance level is not pronounced, the goal here was merely to establish that there is potential to be unlocked by understanding the elements that boost and block shared idea generation.

Beyond proving the hypothesis, the results show that Online ideation had statistically higher creativity scores than Nominal and In-Person Idea Generation. This cements the creative process as a factor impacting group creativity and negates the often-made assumption (Agrell and Gustafson, 1996; Collaros and Anderson, 1969; Hiltz et al., 1986; Janis, 1972; West, 2002) that Nominal Ideation is always superior to group creativity. Although other research has shown before that Online Idea Generation can be as effective as Nominal Idea Generation (Cooper et al., 1998; Dennis et al., 1999; Dennis & Williams, 2003; Gallupe et al., 1992; Pinsonneault et al., 1999; Valacich et al., 1994), this research shows that Digital Ideation has the potential to be more effective than Nominal Ideation. One reason for this could be that much of the research on electronic brainstorming has been conducted before the ascendancy of the internet. Arguably, the respondents at the time were less familiar with the technology, which could have led to process loss factors.

In Gallupe et al., 1992, for example, digital idea generation was tested with a different type of program, that would randomly show the ideas of other participants on screen, other than in this experiment, where the participants could self-determine if they wanted to look at the ideas of others or prioritize noting down their ideas first. As no idea would disappear from the screen, there arguably was less pressure on the participants, which could have had an impact on the results. But there are other factors as well that might explain why digital idea generation seems to have led to better results than in the research conducted in the early days of research into electronic brainstorming.

Digital literacy has increased fundamentally with both computers and the internet being omnipresent in both the workplace as well as everyday life. The subjects participating in the study in 1992 and in the participants of the research inquiry presented here (conducted between 2018 and 2019) had vastly different relationships with expressing their ideas in a digital space and the program used was specifically chosen due to its familiarity as part of the Microsoft Office product family. It might be concluded that the reason digital brainstorming did not exceed Nominal brainstorming in the early days of research into this field could have been unaccounted process losses that since have been eradicated due to the ubiquity of the technology.

Further, it cannot be definitively be said that the makeup of the participant group, their specific levels of diversity and experience as well as their age, had an impact on their performance related to each mode of ideation. The results of the experiment, therefore, cannot be extrapolated onto any other population. The significance level merely shows, that under this specific circumstance, it was possible for collaborative idea generation to surpass nominal idea generation. Therefore, the proof has been generated that using collaborative idea generation is not under all circumstances doomed to be ineffective due to process loss, as Nijstad and Paulus (2003) asserted.

4.4 Interviews

The experiment provided a baseline understanding that if the collaborative idea generation process is shaped by specific factors, the resulting creativity is able to surpass nominal idea generation and be 'more than the sum of its parts'.

The current understanding of these factors is in large parts shaped by brainstorming research. The nature of the idea generation in these experiments, however, is notably different from what is being done in the industry (Kohn et al., 2011; P. B. Paulus & Nijstad, 2019; Rietzschel et al., 2014; Snyder, 1989). To avoid being limited by the existing research, the research design chosen was semi-structured qualitative interviews followed by an inductive thematic analysis of the collected data (Attride-Stirling, 2001; Braun & Clarke, 2006).

4.4.1 Research Design

While the interviews varied depending on the personal insights, time and experience of each interviewee, the data collection followed the same rough outline. Each interview began - after a general introduction – with the quite broad question: “What is necessary for creative teams to succeed?”, which could be followed by more specific questions about the overarching issue, such as “What support is needed for a team to have the best ideas?” or “When, in your experience, is a team able to come up to the best ideas?”, or, depending on the interviewee's response, follow up questions on their expressed viewpoints.

While the goal of the interviews was to explore elements of the process that perhaps have not been mentioned in research before, Some of the possible follow-up questions referred to existing theories, especially if the interviewee gave the expression to have nothing more to add to their current train of thought. This meant a continuation with other, open-ended questions, such as “How do you see diversity in relation to idea-generating potential?”. Such questions were intended to be used only sparingly, with the goal of a natural flowing interview, that would only have to be course-corrected should the focus wane from collaborative idea generation. Notably, this was the case for most interviews, with only one notable exception. In this case, the interviewee would answer with brief statements and only one or two sentences. This then required asking more specific questions, that then referred to insights gained from previous interviews.

4.4.2 Interviewee Selection

There was an initial snowball approach to finding interviewees. However, the snowball system resulted in interviewees at a vaguely similar stage in their careers and working for a similar type of agency. For this reason, the researcher made an effort to recruit interviewees beyond the snowball system who would be able to provide different viewpoints, specifically due to their own status in the industry and their identity. This meant reaching out specifically to both junior creatives and high-ranking directors. In this secondary search for interviewees, rounding out the cadre of interviewees to have a balanced representation of gender, age, and ethnicity was also a top priority. As the importance of the intersection of strategy and creative teams became clearer during the interviewing process, the researcher extended the specifications for interviewees and included experts in advertising strategy as well as advertising creative.

This was done to get as many different viewpoints of team level idea generation as possible. These recruiting efforts ultimately resulted in an interviewee pool of fifteen experts. Participants were recruited both via the University network of the researcher and through contacting experts in the field known to the researcher through research and industry events. By virtue of the selection process, only people comfortable speaking about the industry and their personal experience were interviewed, which might affect the data. While this is a regrettable circumstance, this could not be prevented while conducting ethical research.

Although nine of the interviewees worked in what should be considered well-known global agencies, such as Ogilvy, Saatchi & Saatchi, Publicis and McCann, the other six interviewees fall fairly evenly between working for more niche agencies (two interviewees), having recently transitioned to freelance work (two interviewees) or switched to the 'inhouse' side of the advertising world (two interviewees).

Of the nine interviewees who worked for large agencies, two would fall into the category of Agency Director or Senior Vice President. Three of the interviewees would be in junior roles, and the other four would best be characterised as senior mid-level management.

Six of the interviewees were female, two of which worked in junior positions in agencies, and two in senior mid-level management within agencies. The other two female

interviewees were one senior freelancer and one founder of her own boutique agency. While a parity between male and female interviewees would have been desirable, it is notable that the advertising industry remains male-dominated, specifically in leadership positions (Conor et al., 2015; Tumbull & Wheeler, 2015). While studies have shown there appears to be no significant difference in creative ability between genders (Proudfoot et al., 2015), there is a persistent myth associating ‘creative genius’ with a male identity (Burkus, 2014), which could be one possible explanation of this phenomenon. In terms of recruiting for the interviews, there was a specific effort to speak to women in various positions of seniority across the industry.

At the same time, while the role of gender in creative idea generation is certainly important and worthy of detailed research, this has not been the primary goal of this specific project. As the Observer reported about the Advertising industry in April 2019: “*Across the industry, 29% of staff are women, but they tend to rise only so far; they are more rarely in leadership roles, on the board, or partners – and it is this, in part, that skews the figures. More notably, they account for only 12% of creative directors, often among the most highly paid roles in an agency.*” (Cooke, 2019). While other academics have taken aim at the issues of equality in the industry, the interviews aimed to walk a tightrope of getting the valuable insights from female creatives and leaders in the industry, while also trying to get a clear picture of the current situation of idea generation in the industry.

Therefore, representing women in the interviewing sample as half or more of the interviewees might have, unfortunately, skewed the realities of day-to-day idea management in the industry. With women making up 40% of the interviewees, as well as the researcher identifying as female, the aim was to integrate female voices as much as possible, while still attempting to gain insights how collaborative idea generation is managed and perceived in the advertising industry today and what learnings can be extrapolated from that for organisational collaborative idea generation in general.

In terms of their nationality and ethnicity, five of the interviewees came from an Asian background, three of which specifically from India. One interviewee was Australian, one American, three were from other European countries, namely Russia, the Netherlands and Greece. It should be noted that all of the interviewees were at the time of the interview or before that working in either the United Kingdom or the US. The remaining interviewees

were white, British nationals. Of the women who were interviewed, two had Indian heritage, two came from continental Europe, and two were white and British.

It has to be noted, however, that these definitions are fluid, as the industry is characterised by precarious work. Most people did transition between full-time work and freelancing at least once, if not several times. It is notable, however, that the two very senior, although especially senior people had been with the same agency for several years, and some had worked 'inhouse' for larger organisations as well.

Five of the interviews were conducted via the meeting software skype, four the interviewees were based respectively in the US (two participants), Canada and Greece. One participant preferred to call instead of meeting in person. All other interviews were conducted in person, in various locations across England, with the researcher travelling to the locale of the interviewee.

The participants all received an in-depth briefing document well ahead of the interviews, outlining the purpose of the interview and how their data would be used and stored. Four of them requested to review the final transcript of their interview before releasing it for being published. In each case, the transcript was provided electronically and approved without edits. All but one of the interviews were recorded and transcribed. One interviewee preferred to not have the conversation recorded, which was substituted by in-depth notes on the interview, which underwent the same analysis as the other interviews. The transcription was done using the software program Trint, which stores the audio file along with the transcript in case of review. The transcribed interviews were then analysed as to the stated opinion or experience of the interviewee regarding the three main hypotheses, namely that Process, Composition, and interpersonal relations impact the likelihood of creative synergy, i.e. make creative teams more effective in practice. During the interviews, a number of factors started to emerge that were not noted during the literature analysis but were added to the analysis matrix nevertheless in order to identify the saturation of that factor amongst the interviewees.

Albeit serious efforts to balance the diversity of the interview participants, due to the snowball recruiting system, it was not possible to achieve ideal levels of representation. Six of the fifteen participants presented as female

A wider diversity and higher number of interviewees would be desirable and might offer more insights which were not uncovered during this research. However, it was notable that

as the number of interviews grew, less and fewer insights of the participants were truly novel, pointing towards the fact that primary factors were recurring in the experience of the interviewees. As with nearly all empirical research, we cannot be entirely sure to have discovered every and all factor that impacts creative synergy, but the experiment and the interviews do offer enough data in order to draw conclusions to a satisfying degree of certainty.

In the following, the most frequently named factors named by the experts, as well as the factors discovered by the experiment have been analysed and grouped together to aid in the understanding of what leads to greater team creativity.

4.4.3 Reflections on the Role of the researcher

The role of the researcher in qualitative research and evaluating the collected data is important for the reader to understand why specific conclusions were drawn. While there has to be an effort to be as impartial and to avoid bias confirmation, the researcher's experience and preconceived notions will have an impact on how the data is considered. As such, the researchers own identity has to be briefly discussed (Braun & Clarke, 2006).

As the researcher has worked herself in the creative industries for five years and in advertising specifically for 16 months, she came at the thematic with both previous knowledge of the industry as well as some preconceived notions about the internal processes and hierarchies. Specifically, having worked as a very junior employee, the previous impressions of the researchers of the industry were that of a very male-driven workplace that, while being dominated at the junior level by women, was not welcoming of female ambition.

In terms of idea generation processes, the attention paid at idea pitch-meetings to the ideas of various employees differed in the experience of the researcher highly and appeared to depend largely on the favour of the male creative directors as opposed to the competency or creativity of the employee. The experience of the researcher in advertising could be described as a negative one, as it appeared as a high-stress environment with little stakes. The demands of the job were high, with long hours and non-existing support. In the case of the researcher, who worked there between her undergraduate and first

postgraduate degree, the pay per hour was less than one Euro. This certainly has shaped the view of the researcher of the industry, as someone who wishes to enter the industry without the financial support of others, would certainly struggle to do so.

Nevertheless, the ability of the industry and individual agencies to continuously produce and implement novel ideas struck the researcher, as in comparison with other creative industries, the speed and novelty of idea production stood out. While other creative industries strive or at least perform striving for novel ideas, the practice of genuinely investing in new ideas and 'testing the limits' for which the advertising industry is often admired, was not observed by the researcher in other realms of the creative industries. The researcher is aware; however, that her insights are severely limited by her own experience and has striven throughout the research to step away from her own experience, as to not fall prey to confirmation bias.

It should further be noted that the previous experience of the researcher perhaps had a significant impact on the choice of the research topic and its approach. Having experienced idea generation in a number of creative positions, the way both brainstorming researchers and organisational creativity researchers approached the topic did mirror elements of her own experience and observations but did not include several elements that appeared to the researcher to be blockers and boosters to effective idea generation.

Especially the focus on laboratory experiments struck the researcher, as many of the obvious blockers and boosters in practice would not significantly impact a group tasked with brainstorming that had no expertise in the area in question, no pre-existing relationships and no stakes in the outcome.

Another element that struck the researcher was the reiterative nature of the idea production and later idea selection in the advertising industry. The time given for idea generation, learning more about the client and product, breaking down into smaller teams, initial selection, coming together again as a larger team, integrating inspiration from unrelated sources, such as street art or classical music, further development of ideas, building on ideas, integrating more information, refining and combining ideas, adjusting ideas and so forth were most often several weeks. While this process was certainly flawed to some degree, as mentioned before, it could not be compared to the setup used in most experiments on brainstorming.

The disconnect experienced by the researcher between her own observations of what appeared to impact the idea generation process in ‘real-life’ and the process gains and losses that were identified by the existing research on brainstorming, ultimately led the researcher to explore what is responsible for positive or negative outcomes of collaborative idea generation processes beyond process gains and losses.

4.4.4 Inductive Thematic Analysis

The goal of the interviews was to gain insights into industry realities of idea generation in the high-pressure environment of advertising. For this reason, a thematic analysis approach was chosen in order to specifically reflect on the insights of the interviewees and common themes experienced by them. Braun and Clarke (2006) have described the inductive thematic analysis as *“a process of coding the data without trying to fit it into a pre-existing coding frame, or the researcher’s analytic preconception.”*(p14).

Existing outside of pre-existing coding frames was especially useful for the analysis in this case, as the goal was to go beyond what had been observed before. This is in particular reference to the previously identified process gains and losses (Dennis & Valacich, 1999; Pinsonneault et al., 1999; Stroebe & Diehl, 1994; Ziegler et al., 2000) who have been largely observed in highly controlled environments during laboratory experiments. The qualitative data gathered from the interviews enables a step away from the framing of process gains and losses through specific terms and characteristics that can be observed in laboratory-based brainstorming exercises.

This type of analysis also offers benefits in terms of researcher bias, as preconceived notions about which elements of the idea generation process are important does not impact the thematic analysis as much as might be the case in other forms of analysis (Braun & Clarke, 2006). As it is a common criticism of thematic analysis that it is that often insufficient details are given relating to the reporting of the process, and the analysis (Attride-Stirling, 2001), the specifics of the inductive thematic analysis conducted for this thesis will be discussed in the following.

(1) Transcription and Initial two-step Coding

The interviews were recorded via audio file by the researcher and then transcribed. In the transcription process, the software Trint was used.

The interviews were first transcribed in full and then underwent an initial, two-pronged coding. In this initial coding, the transcripts were broken up in thematically valuable insights and text that had no relevancy towards the goal of the interview. There were two initial coding processes, one that removed 'pleasantries' and small talk from the transcripts, which was situated typically at the beginning and end of the interviews. The second step of the initial coding saw the removal of discussions of themes that were not relevant to collaborative idea generation. An example of such discussion was the often-lengthy discussions of the interviewee's individual career path. Any mention of specific campaigns and projects was also anonymised in this step for the benefit of the interviewees.

The text that had been coded as relevant were then saved to a new document that collected the 'relevant' parts of all interviews. The text was colour-coded to allow the researcher to later trace which interview a specific sentence or statement had come from. The full interviews were saved both as transcript and audio file on a secure server, to have the ability to consult them later.

(2) Initial Thematic Analysis for broad themes

Having ended up with a lengthy document, hereafter referred to as the 'Master document' of all relevant statements of the interviewees at the end of the initial coding stage, the next step was an initial thematic analysis.

This analysis had the goal of identifying broad themes that interviewees were frequently referencing. During this stage, quotes that appeared to reference something similar were grouped together. Within the initial thematic analysis, the distinction between factors impacting overall organisational creativity, individual abilities and factors actually relating to collaborative idea generation had to be made.

This resulted in the Master document being cut down significantly, to bring out the statements that directly related to the success of the team ideation process. Overall, three themes were identified that most quotes could be broadly categorized in: (1) The way the idea generation process was structured, (2) the general makeup of the team and (3) the way the team members related to each other. Every relevant quote of the interviews was then categorized into one of these categories. While these initial themes were a useful

step of the process, the categories at this stage were a temporary and fluid means to make broad categorizations to the qualitative data. Over the course of the recursive analysis, these categories often merged, changed, and were divided again. While the data that strictly referred to the structure of the process was easier to identify, the boundaries between team relationships, the impact of leadership and personalities were much less clear cut at first.

(3) Analysis for Higher level themes

While this initial grouping was highly useful in identifying the overall themes, merely identifying that the structure of idea generation appeared important was in itself not useful learning. The next step, therefore, had to be another grouping of the quotes into higher-order themes. For example, in relation to the process structure, this meant breaking the statements up into the elements that referred to the role of the leader, the creative brief and the time allotted for specific elements of the process.

The process of identifying the higher-level themes was one of the most time-consuming and iterative elements of the thesis, as the interviews often used very different vocabulary to describe similar elements. This was expected, however, as the thematic analysis is characterised not as a linear process, but recursive (Braun & Clarke, 2006; Ely et al., 1997). While here grouped together as the analysis for higher-level themes, it can be broken down into three stages – (1) further grouping of themes or searching for themes within the main three elements, (2) Reviewing these themes and groupings and (3) defining and naming of themes. This corresponds closely to the approach to thematic analysis proposed by Braun and Clarke (2006).

(4) Further Grouping of Themes

While an initial grouping of the quotes was more easily done in the area of process structure and to an extent the team makeup, this was not the case for the relationships within the team and how they impact the ideation and idea combination process.

The interviewees also often conflated, misused or misnomered different terms, most clearly evidenced in the use of the term 'culture'. Having a "good culture" was used to refer by various interviewees to refer to specific leadership challenges, open communication, transparency of internal processes, making room for the individual needs of team members and more.

Because of the sometimes-confusing terminology used by the interviewees as well as their vastly different levels of seniority and therefore perspectives, the analysis for higher-level themes was a continuous process that took several months.

(5) Reiterative Review of the themes

Reviewing the themes and groupings was a continuous process, that was revisited frequently to refine the categorisation of specific quotes. In order to find the themes in the team behaviours and relationships, the data had to be closely read in accordance with the specific worldview of the participants and their belief systems about the creative process. Their own experience of this process or if they merely observed it was also considered during this process.

(6) Defining and Naming the categories and subcategories

As with the reviewing of the themes, the defining and naming took. In the realm of team dynamics, in particular, it was difficult to separate out what the interviewees were referring to in their statements. Specifically, the use of dyadic sub-teams within larger teams in the industry posed some difficulties here. Interviewees nearly unanimously referenced the unique relationship in these dyads and their essential role in successful team-level idea generation. However, the reason for the creative partnerships within teams, a distinctive feature of the advertising industry, took a lot of close analysis of the interviewees' statements, in order to determine in what way these partnerships impact the idea generation process.

(7) Other considerations impacting the analysis process

While the ultimately identified higher themes were always backed up by multiple interviewees, there were also elements that, if they did not form part of an identifiable pattern named by multiple data sources, were discarded. For example, there was a clear pattern of interviewees talking about the toxic effects of creative directors not giving their team the room to create but insisting on their own ideas as the best. There were however quotes from one interviewee, notably a creative director, who did say that their ideas always were the best ideas with rare exceptions, and the job of the team was to implement these ideas. As this statement was in clear contradiction to the vast majority of the other interviewee's statements, this interviewee's insights into effectively shared idea generation did not fit into the overall categories and as were dropped from the Master document.

In other cases, such as the discussion of diversity, there was a much broader spectrum of views. As there was no clear consensus on which elements of diversity are valuable between the participants, a range of viewpoints on this is still represented in the final model.

Although the reiterative analysis of the interview data did show that many interviewees touched upon elements of the method, team structure and team relationships, rarely would someone make reference to all identified sub-categories.

Lastly, while the vast majority of interviewees did take some issue with the industry, two interviewees voiced opinions that gave little insight into how to do creative collaboration well. One example was a freelance interviewee talking about having worked with creative directors in the past: *“They are not there to foster creativity. They are there to straighten out those who will not work until 2 o’clock in the morning and kill themselves to be the most creative person.”* Another example was a midweight creative saying: *“The whole industry is just toxic. Toxicity everywhere. No one cares.”*

Quotes and opinions such as the ones cited above, which were not evaluated as to provide insights into the blockers or boosters of collaborative idea generation, were also taken off the Master document. This research seeks to neither glorify nor condemn industry practices, but to gain insights into what a well-managed idea generation looks like in the ‘pressure-cooker’ environment of the advertising industry. Not featuring these opinions is in no way intended as silencing of critics by the researcher.

5. Model of Synergetic Factors

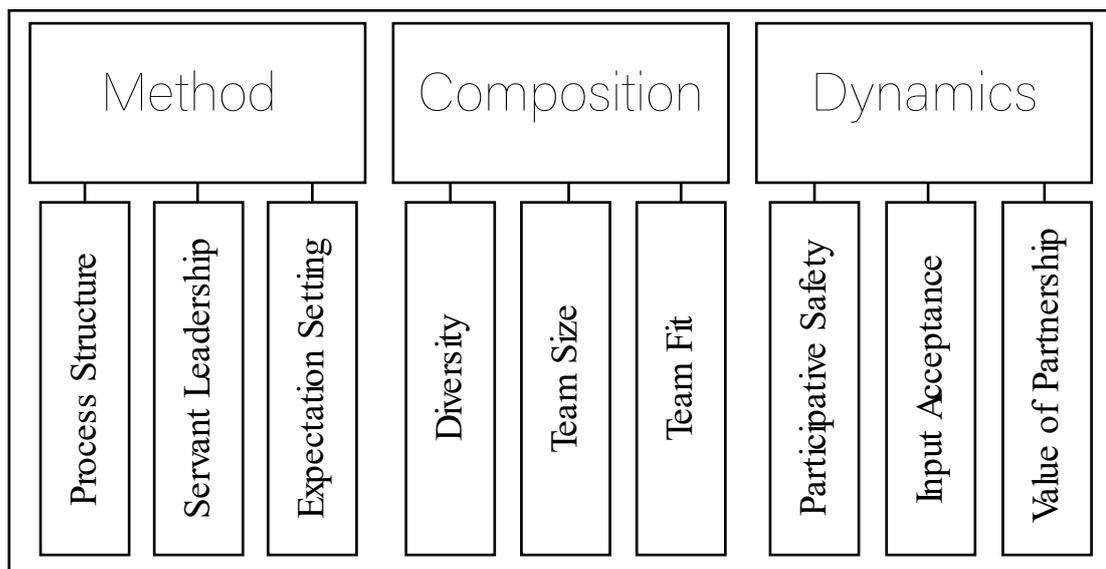


Figure 5-1 Model of the thematic analysis of the interview data

This chapter aims to answer the two remaining research questions: Which elements of collaborative idea generation are commonly and effectively manipulated in the advertising industry to increase the potential creativity of these ideas, and what can be extrapolated from these techniques to other types of organisations?

In the explanation of the thematic analysis, the interview data were transcribed, with the relevant insights then being compiled and analysed for overarching themes pertaining to the management of the ideation process in the advertising industry (Attride-Stirling, 2001; Braun & Clarke, 2006; Ely et al., 1997).

The underlying assumption being that industry as dependent on a constant flow of collaborative ideation will have developed more tools, processes, and behaviour chains than others to mitigate common blockers of ideation and to turn up the boosters of collaborative idea generation.

Three overarching themes have been identified, with each breaking down into several higher-level themes. While more such themes have been identified in the category of the method used, this does not represent this element being more impactful in the presentation of the interviewees. In fact, most interviewees referred to the interpersonal aspects as being the main driver of idea generation. However, the method used could be assumed to be easier to observe than the intricacies of interpersonal relationships and dynamics.

This chapter will first introduce each overarching theme, before breaking down into the higher-level themes that make up this pillar of the model. In the explanation of the higher themes, care has been taken to accurately reflect the voices of the interviewed experts as much as possible, and to draw conclusions and comparisons to existing literature thereafter. This means that in terms of the structure, each such subchapter begins with a selection of quotes. In the selection of these quotes, the goal was to present the full range of opinions on each theme. This means, that when several interviewees made a similar point, but some others had differing views, the data chosen was aimed to be as representative of this divide as possible while showcasing some consensus as well as the other views that were expressed. Here, once again, this thesis was guided by Braun and Clarke (2006).

As each chapter begins with the quotes that are presented without assessing or evaluating them, the next part consistently consists of a brief summary of the opinions expressed in accordance to this theme, before giving context to these insights by comparing them with the existing literature on team-level creativity (i.e. Bai et al., 2016; Brun et al., 2019; Dong et al., 2017; Fairchild and Hunter, 2014b, 2014a; Homan et al., 2015; Hughes et al., 2018; Lee et al., 2015, 2018; Meinel et al., 2020; Mumford, 2011; Mumford et al., 2018; Paulus and Kenworthy, 2018; Paulus and Nijstad, 2019; Reiter-Palmon, 2017; Reiter-Palmon and Harms, 2018; Reiter-Palmon and Murugavel, 2018; To et al., 2015; Wang et al., 2016) and idea generation (i.e. Brun et al., 2019; Chechurin and Collan, 2019; Chinneck, 2016; Hao et al., 2016; Morgan et al., 2013; Oldham and Da Silva, 2015; Rothwell et al., 2018; Titus, 2018; Wang et al., 2015; Zhu et al., 2019).

5.1 Method

That the manipulation of the creative process can impact the ultimate team creativity has been the central result of the experiment conducted for this study. The experiment provided an indication that manipulating the ‘method’ utilized for creative shared cognition does have the potential to elevate the teams creativity above nominal creativity.

It certainly is not a novel claim that changing the modus operandi of creative idea generation has an impact on the resulting creativity. Indeed, the foundation of this research lies in brainstorming research, where the original concept introduced by Osborn claimed his methodology could double the creativity of teams (Osborn, 1953).

From research into brainstorming (A Dennis & Williams, 2003; Kohn et al., 2011; P. B. Paulus & Nijstad, 2019; Ziegler et al., 2000) to design thinking (Brown and Katz, 2009, 2009; Chang et al., 2019; Meinel et al., 2020; Rao et al., 2020; Thompson and Schonthal, 2020; Wattanasupachoke, 2012), Hackathons (Chandrasekaran et al., 2018; Granados & Pareja-Eastaway, 2019; Pe-Than et al., 2019) and DeBono’s thinking hats (De Bono, 2000), the method has always had its spot in the spotlight.

The last few years have seen the emergence of a new term in association with new methods to manage idea generation; however, aptly titled ‘innovation theatre’ (Blank, 2019). Innovation theatre describes the engaging in processes that appear, look, and ‘feel’ novel and interesting, but where the resulting idea generation does not, in fact, result in greater creativity. It is perhaps noteworthy that this phenomenon is emerging at what could be described as the height of team creativity research (P. B. Paulus & Nijstad, 2019; Reiter-Palmon, 2017). However, as has been noted before by this thesis, Paulus and Kenworthy (2018) have identified that this research has not yet translated into policy suggestions, despite a clear demand for them.

It has been the approach of this research to sidestep the issue of ‘trendy’ innovation methods and to instead explore the way this process is managed successfully in a high-pressure environment demanding the constant production of ideas. The importance of specific elements of the method used became clear during the thematic analysis (Braun & Clarke, 2006)

As noted in the chapter dedicated to the design and evaluation of the experiment, the goal of proving the validity of the method manipulation was less in proving that the manipulation as it occurred in the experiment could be transferred to actual teams, and more in proving that a ‘pulling of the right levers’ could heighten a team’s creativity beyond what was previously thought possible within the brainstorming research area (i.e. Diehl and Stroebe, 1991; Mullen et al., 1991). Although the method utilized was well known to eliminate some process losses that would put the creativity achieved through digital ideation on par with nominal ideation, the results clearly show that the creativity exceeded that of the nominal creativity.

As mentioned in the introduction to the overall chapter of the model, it was already noted that the nomenclature for the model was not a straightforward issue, but one that required great care and analysis. The term ‘method’ for this component of creative synergy is a good example of this. The most obvious term, and indeed one that many scholars and creativity researcher use for this component of collaborative idea generation is that of ‘process’. This thesis has made a specific choice not to use this term. To avoid confusion for the reader, the third component of the model has been named as ‘method’.

While most of the identified themes break down into one additional level of themes below, the complexity of information of the method has made one additional level of analysis necessary to achieve a more accurately grouping of the qualitative data. As before stated, this does not mean there is less complexity in the other identified themes, merely that characteristics of the method are perhaps easier to observe than the intricacies of interpersonal behaviour,

5.1.1 Process Structure

There appears to be no ‘one’ way agencies approach the method. As interviewee described the differences in the structure of method between different agencies as a significant contributor to the quality of the work: *“Agencies work in different ways. You have agencies where you just work into the creative director. You also have agencies that are more collaborative (...). I really like the places where you just all work together, including strategists and creatives. The three of you or however, many you just all collaborate*

together to get to a great idea. But that is not always the case. A lot of places are still very old fashioned.”, continuing later: “You can have a very structured way of working in an agency. But because people are different, the process is different every time. “

This account of industry experience clearly backs up any theory that the structure of the method does have a significant impact on other aspects of the creative endeavour, specifically on how well a team can perform together. While the structure of the method could be considered the element of collaborative idea generation that has received the most academic attention - as this is where the infamous brainstorming would be situated – based on the accounts of the interviewees, the approach most agencies appear to take is more akin to ‘whatever works’. It is this mentality that makes researching advertising worthwhile, as the pressures of the environment have produces methods that are not necessarily based in theory or entrenched norms, but on what they observe to lead to the best results.

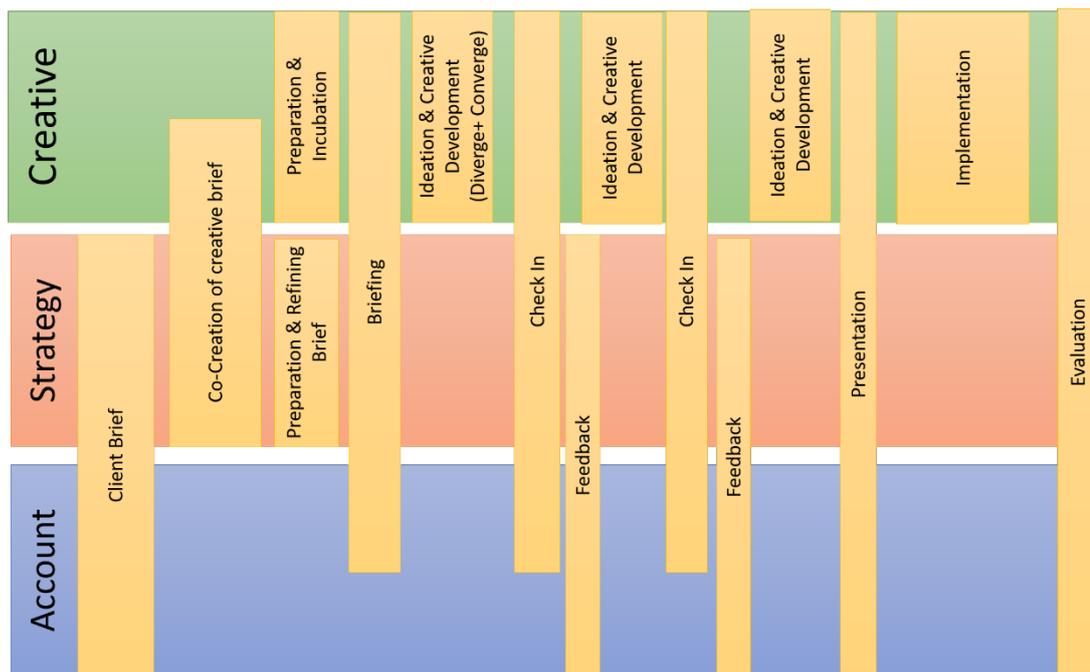


Figure 5-2 Visualisation of the Creative Process within Advertising Agencies as described by the interviewees.

Another interviewee also talked about the importance of the structure in detail: *“I think sometimes people go ‘let us all get in a room and brainstorm’ and sometimes that is not the best way to get good work. It is good to have that [energy], but you sometimes need*

to just leave teams of creatives with some time to think and focus and think a bit more deeply than a brainstorming would allow. It can't just be that brainstorming is the only way because you need to spend time crafting things."

From these quotes, it emerges quickly that how the collaborative idea generation is structured appears to impact the creative potential of the ideation. In the following, the specific elements mentioned by interviewees frequently as pertaining to this will be discussed.

(1) Creating and delivering the creative brief

While arguably the creative brief is part of 'problem definition' (Runco, 1994) it appears to be central to the idea generation process as well. Indeed, interviewees spoke at length about the integration between the brief and the creatives:

"Strategists already think of different routes in when they are coming up with ideas for the creative brief. Sometimes having creative help, them in that process will get more interesting ways of approaching the problem. I think working together here is really important."

"When you get into the briefing, there are the five guys you co-created the brief with, and they are already committed to the brief and had some initial ideas. I think the only way you can have a productive briefing is when you do not surprise them with the brief, but when you are creating the brief with them behind the scenes. As a strategist, you have to shift the energy in the room. If everyone is on the same page, there is a wave that happens, of the excitement of ideas. You do not get that if you have not done the groundwork beforehand."

"What I would do at the beginning of a project is, I would get all of those people together to talk about the project before we even started it. In an ideal world, that would be before we have even written the brief. I would probably talk about the outline of the brief and what the objectives are. Now everybody knows from the outset where the goalposts are. Then I would get input from the rest of the team. Find out what they wanted to know."

"It is always most successful if you invite people to bring an idea to the meeting, rather than have an idea in the moment. It is much more efficient as well because you are allowing people the time they need for thinking. Then in the meeting, they can be in the moment and interact, not think about ideas."

“What I have seen happening at the best agencies is that you get the information about the client, and then everyone is asked to come back the next day with a point of view on the problem. Then you go back, and you have one point of view that is over there and another one that is over there, and then three that are not quite coalescing, but more in the middle. But then you find a point of view that grows out of the middle but is informed by the two more extreme ones. That is idea orchestration at its best. If you would have just sat there and tried to come up with an idea, you would not have gotten the variety. People would not have felt like they had to listen to you.”

“If you do not do the preparation, I think then you often only have the obvious ideas. Fortune favours the prepared.”

“I just like to walk up to people and ask; do you have a few minutes? Have a chat. As soon as it becomes a meeting, everyone starts to play games and role-play. Then I would share some thoughts I have on the brief. Hope that I hear something back. Creating a brief is a dialogue with the creatives, not a monologue by the strategists.”

Although the statements made by the interviewees should not be overly generalised, the mentioned process of a ‘co-creation’ of the creative brief, although apparently not an entrenched industry practice (Altstiel et al., 2020; Horsky, 2006; Moriarty & VandenBergh, 1984; Turnbull & Wheeler, 2015) is highly notable. While idea generation and problem definition should be seen as two separate stages of the overall team-level creativity (Csikszentmihalyi, 1996; Lubart, 2001; Runco, 1994), the transition between these two stages in advertising is both formalised with the creative briefing as well as iterative, with both the strategy team developing the brief and the creative team then interpreting the brief, which could be a continuation of problem finding.

The data gathered from the interviews clearly supports the general importance of separating ideation and problem finding, (Reiter-Palmon & Robinson, 2009; Rietzschel et al., 2014) to the degree that different teams are responsible for each in the industry (Altstiel et al., 2020), where the strategy teams create the brief – representing the problem definition – and the creative team is responsible for the idea generation.

(2) Importance of Clear Timelines

“I think a very good process is when everything is very clear. In your first initial meeting together, you get account people and strategists and everyone in the room, you present the work like “This is where we were, that is where we have been, that is what we are going to do, where we are thinking of going. And then you just go from there, you get meetings in your diary, and it is three different meetings, three check-ins. And then you know what needs to be done when, and that is really important. However, some places do not do that, they just show up at your desk, and you have to say ‘well I do not have that ready now’ I think you get the best work when we are all on the same page.”

“Giving the team clear timelines is such a better way of collaborating. I think it shows respect from the outset. From the very start, you know that you are in it together and what your role and deliverable will be. It respects the fact that there are a lot of people are involved and that there has to be a transparency to that. Otherwise, you’re just going to have a disrupted team.”

While more interviewees referenced clear timelines less overtly, the above two quotes were chosen to fully illustrate the differences in approach across the industry. Generally, it could be inferred that interviewees who had made more transitions between different agencies in their careers noted this element to be important on a much higher rate. This, of course, would have to be expected, as creatives who only ever had used one process would be less aware of differences in this across different agencies and the impact of this element on the ideation process.

While the element of time has been touched upon by brainstorming research (Dennis et al., 1999; Gersick, 1988), the idea generation that has been observed during most brainstorming experiments has been a singular session of idea generation (Bouchard & Hare, 1970; Cooper et al., 1998; Gallupe et al., 1991), not the iterative process that agencies use to develop ideas (Altstiel et al., 2020).

Notably, the method of design thinking also uses an iterative idea generation process, with the ideation stage stretched out over multiple days or weeks (Brown and Katz, 2009; Meinel et al., 2020; Rao et al., 2020; Thompson and Schonthal, 2020; Wattanasupachoke, 2012).

While the next theme explored also relates to the time allotted for ideation, the data showed how helpful it was for creatives to have a clear timeline of the process before embarking on it. Knowing the structure of the process beforehand might be a surprising

factor in an industry that is marked as much by flexibility as advertising (Bilton & Cummings, 2014; Hesmondhalgh et al., 2013; Jones & Maoret, 2018; Morgan et al., 2013; Townley et al., 2009). However, one could theorise that this is precisely the reason why clear expectations on the timing are so appreciated by creatives. In an industry where a new project might come up at any given point, knowing when one's deadlines are might bring more peace of mind and a chance at better time-management.

(3) Giving Time and Space to Diverge and Converge

"I think sometimes people in the spirit of collaboration go: 'Let us all get into a room and brainstorm'. Sometimes that is just not the way to do the best work. It is good to have everyone involved, but sometimes you need to leave the creatives with some time to think and focus. "

"You have to have a mix of thinking deeply about the issue by yourself and brainstorming with others. It has to be a mix of both."

"If you sit in a room and do not go out and do not experience things, your ability to generate ideas and thoughts are quite limited. If you go out and you go have conversations with different people and get all those things sitting in your brains out the ideas will be adding up and come together." said one interviewee. Another noted the importance of giving the creatives enough time to think everything over: *"You can push all the information in, but when the connection happened, you cannot control that."*

"All ideas I think need to be nurtured and developed into making them work for the business objectives."

"You need to give space for the really initial ideas, where it is really all 'anything goes'. Then you need space for when you are putting things together and have legitimacy for that in-between-time. Functional creative processes are often like an accordion. There is an expansive phase, and then there is a reductive phase, then an expansive phase again, and so on."

"You send the problem around, give people a day to think about it, and they'll bring an idea to the table. Then there will be a bit of knocking around and synthesis. But that is when space comes in again where they say they need time to sort out their own thoughts."

As much as you need time stimulating, like talking to other people, seeing things etc. You need a balance between the two because that cannot happen in constant stimulation.”

While the concept of converging and diverging, used for the title of this element, might remind us of Guilford’s proposed Divergent and Convergent thinking Theory (Guilford, 1967; Khandwalla, 1993; Larey & Paulus, 1999), it does not refer to a specific individual thinking process. Instead, the idea of converging and diverging here belies the process of coming together as a team to share and process ideas and well as taking time on an individual basis to process one’s own thoughts and formulate ideas before sharing them with others.

While the goal of a team-based idea generation is, of course, to generate ideas together, there is some compelling evidence that overstimulation might be damaging to the process (bernard Nijstad et al., 2003). This element might be one of the most prominently tied to the well-known process losses explored in chapter three. It has been suggested that a separation of the individual creative process and the team-ideation process is needed (Diehl & Stroebe, 1991; Gallupe et al., 1991; Nijstad et al., 2003) in order to avoid cognitive interference, which is precisely what the interview data shows.

5.1.2 Leadership in Service of the Team

One component the interviewees kept coming back to was the importance of a highly specific kind of leadership that shares some characteristics with the servant leadership model, which has been linked to possibly increasing creative performance before (Yoshida et al., 2014). However, there are elements specific to advertising the interviewees mentioned, specifically the importance of emotional support from the leader as well as the role of the leader as facilitating and not participating in the idea generation process.

(1) Provide Emotional Support

“You have to have empathy and a real relationship with your team [as a leader]it makes everything easier.”

“You really have to be emotionally aware. You have to have the respect from the creative team, but you have to prioritize other people’s thinking.”

“You have to acknowledge and celebrate every member of the team. They have to all feel like their strengths are being valued and celebrated. Everyone needs to feel as though they are equally important.”

“Something I have noticed is that the creative directors who are the most diva-ish tend to lead the teams that perform the worst.”

“It does not take a lot to motivate creatives. It just takes some time to get to know them and know what makes them tick. But ultimately, everyone wants to be recognized for the quality of your intellectual thought and the richness of your contribution. People are motivated if someone invests in them. If someone listens, if someone says, ‘tell me more about that idea’

“It is your role to be the emotional support of your team. If someone makes a mistake, celebrate that! Celebrate that you learned something new. You learn nothing from doing everything right. You have to be the one telling your team; try again, fail better.”

“You need a lot of emotional intelligence [to facilitate creativity]. When you are having a discussion, you need someone who senses when it is getting a little too heated and can diffuse things at the right time.”

While the support a team receives during ideation has been explored before (Pinsonneault & Heppel, 1997), the emphasis the interviewees put in their statements on the role of the leader as that of an emotional support structure was nevertheless surprising. A theme that was mentioned several times was the heightened emotional state that resonant ideas require. While the link between mental illness and creative ability has been identified as a myth by some researchers (Burkus, 2014; Csikszentmihalyi, 1997) this continues to be debated (Gillam, 2018; Raab, 2009; Yamaoka & Yukawa, 2020). Throughout the interviews, several experts mentioned the importance of accepting the specific ‘neuroses’ and mental health issues of creatives.

The role of creative director appears to require an unusual amount of empathy and people skills, which appears worrisome if there is no training provided to aid in the transition from creative to creative director.

(2) Facilitate, do not participate

“Hierarchy just gets in the way of creativity. The way some ideas get approved is sometimes more about who had the idea than how good the idea is.”

*“A great creative director is like the editor of a magazine. He or she will have the ability to hire the right people to have ideas and then work with those people to make the ideas better. At the same time, they have to be ruthless and kill the ideas that are not going to make it. They also have to help with merging ideas that have genuine synergy and can be bigger and better together. Publishing is a good analogy because when you are an editor, your job is no longer to create but to orchestrate. You are responsible for the whole, but you need to coordinate different talents to create it. It is a very difficult transition from creative to creative director. Very often this editorial talent comes people who have no vested interest in a certain idea – nothing to prove, nothing to lose. Someone who will tell you if it is bulls*it or not. Everyone needs someone like that.”*

“With creative directors, it is like at university: You need people who are brilliant at research and people who are brilliant at teaching and supervision. And very often, the two are not the same. Someone might have been a great creative, but leading a team requires a fundamentally different skill set. “

“in an agency, you need servant leadership. They have to provide vision to their team but then provide everything for the team to achieve that vision. But crucially they do not do the work for them. That is not helping achieve the vision, and more crucially is undermining the productivity of the rest of the team.”

“You have to be able to let go of your own idea. You have to get comfortable with the idea that your team can take the seed of your idea and turn it into something different than what you would have done with it. Being a good creative leader means getting the car started, but not driving it. You have to enjoy letting go of your ideas.”

“Hierarchy is the real enemy of creativity. If you have a person that their ideas are the best, there is no opportunity for anyone else to make it better.”

“When people are worried about their position, that is when the organisation starts rotting from the head.”

*“It’s particularly creative directors who think ‘this is my idea, and it’s the best’ whereas it might actually be the worst. That is the type of w*cker that gets rejected fairly quickly here.”*

“It is really difficult to have six people involved in an equal way the whole time. You then really need someone who can run that group and coordinate that group. People quickly disappear into their own little specialisations otherwise.”

“If you are going to lead a project, it cannot be about you. You have to be responsible for the project. Part of that responsibility means that you have to prioritise the ideas of the group unless they are not going anywhere. Nothing is more annoying than working with a senior creative person who is working like this. “

“Who’s running the team [is important]. Sometimes the manager is super insecure, and they end up squashing somebody’s ideas. There is a lot of these dynamics that go on in teams and organisations which a lot of people are frustrated with.”

Based on the number of quotes related to this issue alone, it becomes clear how essential the separation of the leadership and the idea generation process is. Indeed, based on the data from the interviews, leadership appears to overall provide more losses than gains. This is especially interesting, as the portrayal of creative leadership in the literature tends more towards ascribing leadership mitigating or positive effects (Gumusluoglu & Ilsev, 2009; Hill, 2014; Qu et al., 2015; To et al., 2015; Wang et al., 2016; Yoshida et al., 2014)

Accepting leadership as being a potential blocker to team-level ideation potential is a novel learning from the data analysis. Dysfunctional relationships within the team or between team and leader generally have not received the level of research interest that their importance to the interviewees would suggest (Felps et al., 2006; Jaikumar & Mendonca, 2017)

5.1.3 Expectation Setting

“Something that has always struck me is how beneficial constraints are to creativity. If you have a box in which you have to create you end up with much better results than if you

start with a blank page". Another put it even simpler: "Once you have clearly defined goals that you need to achieve, it can actually make it a hell of a lot easier to come up with stuff."

"The quality of the outcome will depend on how good the brief is, to begin with. When you write a brief for a project, you have to know already where the hurdles and obstacles for the creatives are going to be. Then you have to make sure that those are avoided or clarified. Being able to write a brief like that takes a lot of experience. Because it is not only about getting the most creative idea. The client has to like it. If it is not right for the client, it is not a good idea.

"You never want to be in a position where someone has put a lot of time into a project, and it does not fit the client. You have to be incredibly specific about what you want the creatives to do before anything is created."

"You have to do the whole thing. Get examples of all the competitive work. Let them get a really good feel of the market sector we are operating in, what other people are saying, what competitive products or brands are saying about their services. Then you have to clearly identify the points of difference of whatever we are working with. Only then can you have discussions with the team about what they think is the strongest point of difference that we can creatively pursue as a message."

"If you are briefing people, you have to get them to experience the product. When we did campaigns for a pub chain, we would have the brief in the pub. You can give them the client's brief and the target audience data, but that kind of information is very intellectual and abstract. You have to see, feel, touch, experience. You need to be able to relate emotionally. It is the job of the brief to do that."

"A creative brief has to have some kind of loaded emotion. Some sort of revelation that haunts the people who have to work with it, which in most cases is a creative team. I think it has to have an element that is absurdist or unexpected, or you will not be able to make unexpected connections."

"If you do not have to go and ask a lawyer, it is probably not a good idea."

"I think a demand for exceptional risk is the defining trait that makes the work great"

“I think it starts with high and clear expectations. I do not think that is as common as we would like to think it is. Part of that is having a clear agency philosophy. You have to know what is good work, what does good work look like.”

“The first thing you have to ask a client is what do they think good work looks like. Most clients do not know. Client fit is essential. You have to know why a client is choosing your agency. If you got a client who does not really want that [boundary-pushing campaigns] and you put your best team on it, that can really burn your people out.

“We are probably one of the most self-flagellating agencies in the business. Every year we get together and show all the ads that we have made. Everybody in the room from the receptionist to the CEO then gets the chance to comment on how good or bad they thought it was and what could have been done better. We use it as an opportunity to be self-critical.”

While the idea of expectation setting is similar at first glance to the creative brief, it reflects a slightly different concept. While the creative brief explains the general problem that has to be solved (Altstiel et al., 2020; Kilgour et al., 2020), the expectation setting gives the creatives indication on *how* to solve an issue. There appears to be the issue of the ‘creative fit’ describing the creative style of the team in general and the creative style the client is looking for. This appears to be the source of much friction.

This issue perhaps goes back directly to the definition of creativity as a contribution that is both novel and fit for purpose (Amabile, 1996; Hennessey & Amabile, 2010; Pratt & Amabile, 2016; Taylor, 1988; Wallace, 1986). While the creation of novel ideas is the bread and butter of every creative, the fitness for purpose ultimately is not up for the creatives to claim (Candy, 2013; Hao et al., 2016; Lee et al., 2014; Rothwell et al., 2018)

5.2 Composition

The overarching theme of team composition was identified easily, as most interviewees spoke about the importance of ‘casting the team’ in one way or the other. However, while the learnings from the data analysis did reflect existing research on the role of diversity in the context of collaborative idea generation (Homan et al., 2015; Lee et al., 2015; Lee et

al., 2018; Nemeth & Nemeth-Brown, 2003; Wang et al., 2016) and researchers have spoken to the relevance of team size (Peltokorpi & Hasu, 2014; Verbeke et al., 2008), the thematic analysis identified a third component that fits into the category of team composition, here classified as ‘team fit’. While the other two elements are easily empirically observable, the characteristic of team fit appears somewhat vaguer based on the impressions from the interviewees, although the importance of this element to the team has become evident based on the experts’ insights.

5.2.1 Diversity

“There is a kind of industrial aristocracy to people in the industry. It becomes very inbred. We are trying to cast the net a bit wider, but it is still true that an average graduate at this agency will have a double-barrelled name, a horse and a place in the Cotswolds.”

“Increasingly, we are realizing that it is more about cognitive diversity. I am probably not convinced of the arguments for positive discrimination on gender or ethnicity, but I am keen on attracting people from different academic and life backgrounds.”

“I think age is also a big factor. Casting the team, you will want experience, but also some young blood. I think the way the industry is going right now, especially with respect to age, is that it is sometimes discriminatory – sometimes we look down on people who are in their late 40s and 50s, saying you do not know what is going on, but they have an interesting perspective too. They might have children of that age, or they see things in a different light.”

“The selection of the team depends on the brief. We choose talent very very carefully, to fit the needs of the clients and to fit the aspiration for the agency creatively.”

“There are blind spots people do not even know that they have. If you do not have diversity in the room, you do not know what you don’t know.”

“There are different types of creatives. There are strategic thinkers who care less about the execution and spend a lot of time thinking about how we can change perceptions. You have creatives who jump to execution quickly. By getting those different types of thinkers together, you end up with a deeper result.”

As mentioned in the review of factors linked to creative synergy in chapter three, diversity has continuously been linked to increased team performance (Homan et al., 2015; Lee et al., 2015; Lee et al., 2018; Reiter-Palmon, 2017; Wang et al., 2016). Similarly to differing views on this subject in academia, the data from the interviews did not show a clear picture in regards of an ideal approach to this subject, as opposed to other areas such as leadership, where there was a clear majority consensus between the interviewees.

Overall, there certainly was support for the importance of diversity. However, what the interviewees appeared to understand under the term diversity seemed to vary significantly. This is a trend we can see in the literature on the impact of diversity teams as well, where it might refer to gender (Conor et al., 2015; Gill, 2002; Lee et al., 2018; Mierdel & Bogner, 2019) educational background (Lee et al., 2018; Watson et al., 1998), nationalities (Homan et al., 2015; Milliken et al., 2003) or cognitive diversity (Wang et al., 2016), to just name a few.

Nearly all interviewees did mention that having a range of different experiences in the room was important but disagreed on how far an agency should go in order to achieve this. A correlation between the person's own background and their views on how to ensure hiring diverse people could sometimes be observed. However, the view that the knowledge each team member brings to the table is a crucial component of the creative potential of the team was shared across participants.

5.2.2 Team size

“So many projects I have worked on, there is like twenty people in the room. You have to kind of work out how to work together and combine all your input, and it's just a bit of a mess.”

“There have definitely been projects I have been on that failed primarily because there were too many cooks in the kitchen.”

“How many people are in that room really is not up to me. You have to make adjustments, though; you cannot have the same creative energy with 50 people in a room that you get

with 12. You just have to adapt. If you use video, for example, that can create an emotional response even if there are more people in the room.”

“I would say, ideally you have a creative director there, maybe two or three creative pairs, maybe someone who knows social media... If it gets more than that, people do not speak up as much anymore.”

“If we really have to crack a problem, I will get a team of maybe five or six people, and just go at it. If you are in a meeting, that is the maximum of people who can be involved in sharing and combining ideas at the same time.”

While team size is one of the most prominent team characteristics that have been highlighted by brainstorming research (Gallupe et al., 1992; Gilson et al., 2012; Hülsheger et al., 2009; Peltokorpi & Hasu, 2014; Verbeke et al., 2008), this element did not emerge as a major theme during the interviews. While one-third of the interviewees directly acknowledged that team size should be limited, the majority of the interviewees did not express a strong opinion on this topic.

While theorising on why that might be is pure speculation, the fact that team size for each project usually is not too variable, with a handful of creative partners being put on each brief, might make it difficult for professionals in the space to discern the importance of team size fully. Nevertheless, the statements made about team size by the interviewees were compelling. While not every practitioner might see the importance of team size as compared to other markers, there certainly was an understanding that when teams get too large, it inhibits creativity significantly.

5.2.3 Team Fit

“When casting your team, you have to be mindful who you put together. On an account I recently worked on you had a team of someone who had a lot of category experience - decades worth of experience in the client’s business, someone who headed up a similar business, but in a totally different category. And then you had a creature in the room who never worked in any of those categories, but who is an experienced creative. That

combination of the total experience, the direct experience and the analogous experience was very useful. “

“You really need to choose talent very very carefully for each brief. The people on the team really need to fit the needs of the clients, and they need to fit the aspirations of the agency creatively.

“I think what you have to do is not necessarily put the best people in the room, but the right people in the room. There are agencies who always put their best people in the room when they pitch. But that is not really the right solution. It is finding the people who have appropriate skills and temperaments and have a good combination of having already worked together and not worked together yet.”

“Counteracting destructive behaviour is down to coaching and also casting of the team. Do you have the right balance, or do you have someone with a massive ego who is shutting everyone else down? Even if he has some of the best ideas, it may not be the best thing for the team. Putting the right people together is essential.”

“We do this exercise called the strength finder and then tried to partner people who are complementary. Knowing what everyone is good at help figuring out how you can do the best work together. The casting has to have transparency in terms of skills. [But the industry moves at a high pace] and then some try to game the system in order to keep themselves relevant – and that is where the toxic behaviour comes from. Resolving that either takes a lot of time, they might need to spend time with people who can make them feel more secure, reassuring them to some extent. Some people are so far gone that you have to get rid of them. Some people, no matter what you do, their mindset is so negative that it is the only option.” Another senior manager echoed this, describing their strategy of weeding out toxic behaviour: *“We have an unofficial policy of ‘leave your ego at the door’. We are not rewarding people for how many times they come into (the senior managers’ office) and whisper in my ear. We are not rewarding being a snake.”*

*“We hire people on a two by two of good and nice. So, your typical person at this agency will be top, top quadrant on both. It is tough. It is teamwork. You do not want any a**holes on the team.”*

The element of team fit seems like a common-sense argument. While the importance of personality and the team ‘clicking’ has been explored by researchers (Brandstatter &

Farthofer, 1997; Nijstad & Stroebe, 2006; Walton et al., 2012), this often has been in the context of a team already existing, or there being no control over the composition of the team.

Here, the nature of the advertising industry might offer some new insights. As discussed before, as many creative industries (Bilton & Cummings, 2014; Eikhof & Warhurst, 2013; Hesmondhalgh et al., 2013; Jones & Maoret, 2018; Siebert & Wilson, 2013), advertising is purely project-based (Ford, 2020; Kilgour et al., 2020; Tungate, 2007; Turnbull & Wheeler, 2015; Verbeke et al., 2008). The nature of the industry, therefore, is a continuous reset on new team assembling and disassembling on new projects. Casting a team is then not a rarity, but something that is occurring on a regular basis. This allows for more conscious decision making on whom the team entails.

One element of casting the team that has stood out especially was the exclusion of bad apples from the team. There has been an acknowledgement that even the most creative person would not be worth keeping on a team if they do not 'play nice'. Felps et al. (2006), while acknowledging the importance of group-level factors, argue that "in some cases, a single, toxic team member can be the catalyst for group-level dysfunction" (p. 176). Reviewing dysfunctional teams, Keyton (1999) comes to a similar conclusion, stating that sometimes, "the source of the dysfunction is one individual" (p. 493).

Interestingly, as Felps et al. go on to say, "academic theory is almost totally silent about these issues." (p. 177). While arguably the act of 'social loafing' is one of the toxic behaviours outlined by them, this is the only individual behaviour that is noted amongst process losses in the majority of academic literature on the topic. The effect of these individuals, however, can be significant, as they go on to describe it: "*they offend us, reduce our enthusiasm, change our mood and may ultimately lead us to personally de-identify or leave the group, with a high likelihood that the group itself will perform poorly, fail, or disband.*" (Felps et al., 2006, p. 213). There are three distinctive negative behaviours according to Felps: the withholding of effort – arguably identically to free-riding and social loafing, the demonstration of negative affect and the violation of important personal norms. However, these toxic behaviours arguably apply to all groups, not only creative ones. This thesis proposes that in the context of creativity, toxic behaviour could also be one that prohibits other team members from contributing equally by dominating the creative process unduly. Similarly, to the other factors, this is likely to result in the withdrawal

from the team by other team members and ultimately decreases the potential nominal creativity of each member.

5.3 Dynamics

While the method and to some extent, the casting of the team were expected components, the importance of the interpersonal dynamics that the thematic analysis showed could be described as surprising. While there has been some research on the role of interpersonal relationships (Aron & Melinat, 1997) and especially on participative safety (Fairchild & Hunter, 2014; Peltokorpi & Hasu, 2014), other elements appear highly specific to the advertising industry, such as the role creative partnerships appear to play as it pertains to the team-level ideation process.

5.3.1 Participative Safety

“To put nine bad ideas out there and get that one [a good idea], you have to be comfortable with saying something stupid in front of people.”

“We very often sit and talk about each other’s personal lives, so we got to know each other very well. That builds an environment where you can have a good idea and build on it together.”

“You have to have naturally curious people, but you also have to have a culture of vulnerability – the ability to just have ideas, to say things, and to be judged on it.”

“Make it possible for people to talk about what they have done wrong, which is as important as talking about what they have done right. Ideally, you would reward them done that”.

“It depends on your relationship with the other creatives. There are certain creatives that I would not want to be judged by. And then you are limiting yourself in what you say, and that is not a truly creative process.”

“Psychological safety in the creative realm is absolutely something we have to be sensitive to. I have seen people turn around completely coming from a highly competitive space to somewhere they can feel safe. There are people who were in a dark space on now beautifully collaborate with others because they got the extra help.”

“There has to be a tolerance for the neuroses and the unstable personalities who do creative work”; “It starts (...) within the team when you pull people together. You are creating an environment of collaboration, where people are very healthily, and happily and comfortably and securely able to build ideas off one another—having that safe space where no idea is a bad idea. Everything can be put on the table and can fuel sparks of creativity in other people who end up having a completely different idea. In an environment where ego is involved where creatives feel unsafe for whatever reason, silence becomes the enemy. Creating that sense of collaborative spirit is extremely important. “

“I think the biggest secret of highly creative places is the ability to manage conflict positively. If you are looking for consensus over and above, you are not taking steps forward. We want people who can disagree with wit, not with a sledgehammer.

Participative safety, a concept related to psychological safety similarly has been linked into increased team performance in general (Edmondson, 2019; Kahn, 1990) and team creativity specifically (Fairchild & Hunter, 2014b; H. W. Lee et al., 2018; Peltokorpi & Hasu, 2014).

The concepts the interviewees have brought up reflect many of the same components that are often cited by researchers in regard to psychological safety. The ability to be vulnerable and to ‘bring your whole self to work’ without judgement was especially prominently covered in the qualitative data. As mentioned, the term participative safety is a cousin to the perhaps more widely known ‘psychological safety’ which allows the employees of an organisation to feel at ease with one another, allowing them to work together effectively (Schein & Bennis, 1965). Similarly, the term “participative safety (West, 1990) refers to this same principle on a team level.

Participative safety has been directly linked or featured in several models of team-level creativity (Ekvall, 1996; Fairchild & Hunter, 2014; Hülshager et al., 2009; Hunter et al., 2005; Hunter et al., 2007; Hunter et al., 1997; West & Anderson, 1996). A level of safety might also be especially interesting in relation to the process loss factor ‘evaluation

apprehension' (Diehl & Stroebe, 1991; Mullen et al., 1991; Stroebe & Diehl, 1994), which appears to be diametrically opposed to the idea of participative safety.

5.3.2 Input Acceptance

“You do not have to like the people in the team you are working with. You have to respect their judgement, and you have to respect their position within the team/ Respect the job function, their role, and their responsibilities. As long as you respect them, they will respect you. You have to have empathy for them because it makes the workflow a lot easier because everyone is actually on the same page.”

“The bulk of the work [in an agency] is done by your lowest-paid junior executives or junior creative people. That is how you make a budget. So, if you are not listening to these people, then you are not paying attention to them – and then you will not please the guys on top. If you are not listening, you are blocking [creativity], and you are just not going to get the best out of the team.”

“When I joined, I found that the standards in this agency are so high, that you cannot be a prima donna because you will always find someone who is better than you in the next office. That enforces a sense for each other’s talent very very quickly.”

“You might not get to the great idea yourself, but you also know the other person will not get there without you free-associating or your input either. When you actually listen, you get to ideas you never would have gotten to on your own.”

While there have been concepts related to input acceptance in the literature, the term has been coined specifically as a result of the theme emerging so clearly from the qualitative data in the thematic analysis.

Interestingly, in the original introduction of brainstorming, (Osborn, 1953) spoke specifically about the importance on building on each other’s ideas, which requires close attention and listening to the other members of the team. A similar concept also appears in design thinking (Bae et al., 2020; Brown & Katz, 2009; Chang et al., 2019; Meinel et al., 2020; Mierdel & Bogner, 2019; Thompson & Schonthal, 2020; Wattanasupachoke, 2012) and to a degree in hackathons (Chandrasekaran et al., 2018; Granados & Pareja-

Eastaway, 2019; Pe-Than et al., 2019). To have a true collaboration within the idea generation, it requires actually processing the information and ideas contributed by the other team members. While this perhaps is not a ground-breaking insight, the way the interviewees framed the importance of this element certainly suggests that it might be challenging to implement. This finding once again relates directly to a formerly identified process loss factor, specifically to cognitive interference and production blocking. While production blocking sees the team as interfering with the individual's ability to process ideas (DeFillippi et al., 2007; Diehl & Stroebe, 1987; Gallupe et al., 1992; Mullen et al., 1991; Stroebe & Diehl, 1994; Vally et al., 2019) however, another interpretation could be the person's inability to accept the input from the other team members, due to a preoccupation with one's own ideas.

As discussed in the subchapter on method, giving time and space for both individuals as well as shared idea production is essential for an effective creative process. However, relating to the shared process specifically, the ability to create something synergetic, that is more than 'the sum of its parts', integrating the information and ideas of others is perhaps the essential component when participating in collaborative idea generation activities. Input acceptance certainly is related to the element of attention that has been discussed in chapter three. However, the concept described by the experts does appear to relate less to the willingness to pay attention, but to respect the ideas that are being presented and to build on them.

5.3.3 The Value of Partnership

"[A creative partnership] is a very human relationship, almost like a romantic relationship: I hear you, you hear me, and we can build on this together. It is always a yes and not a but."

"Another element that really helped was that two of us had worked together a lot before, but neither of us had worked with the third person. So, there was a combination of familiarity and challenge."

"Nothing is more important than comfort and ease between the members of the team."

“It is almost like having a relationship with someone. You need shared experiences and shared memories to build on that. Once you have a certain amount of trust, a certain amount of jokes, and that does make a huge difference [for the team creativity]”

“From my experience (as an account manager) creative people tend to be really antagonistic. They might not be willing to take input from us on their ideas very well. But if they make a good team and they work as one, the result will be good.”

“There are a lot of differences between my old team and the one I am in now. Collaboration efforts here are praised publicly because it is one of the key things this [organisation] is looking for in teams and work. And as this gets publicly rewarded, you start seeing more people trying to do it [collaborate] and taking inspiration from that.”

This element of the importance of familiarity comes specifically from the role that the creative partnerships appear to play within the larger idea generation team. While the overall team working on a specific account or project is different for each project, there appears to be significant value in having both pre-existing, close relationships as well as new people with new perspectives. This perhaps is the advertising industries reaction to preventing groupthink.

Groupthink, as defined earlier in chapter three defines the gradual decline in a team’s creativity as they get to know each other better (Esser & Lindoerfer, 1989; Janis, 1972; Moorhead et al., 1991; Taylor et al., 1958).

One might then suggest keeping ‘changing up’ the team in order to prevent groupthink. This, however, has also shown to not be an alternative, as newly formed teams have shown to take significant time to ‘warm-up’ (Cable et al., 2012; Gersick, 1988; Reiter-Palmon & Harms, 2018; Russ & Dickinson, 1999) and might not be able to provide the participative safety (Fairchild & Hunter, 2014; Kahn, 1990; Lee et al., 2018; Peltokorpi & Hasu, 2014) that is required to sharing one’s creativity.

The unique structure of creative dyads in the advertising world could be interpreted as an ingenious way of preventing groupthink and simultaneously providing a level of participative safety that otherwise would take significant effort to achieve.

5.4 A Framework for Collaborative Idea Generation

The model presented in this chapter represents the specific adaptations that are being made within the advertising industry to respond to the pressures of having to create novel ideas on a constant basis. However, similarly to how a palaeontologist can make assumptions about the environment by looking at the specific genetic adaptations of a fossil, so too could be proposed to develop a theory of the team-level idea generation process by knowing how advertising agencies are adapting to it.

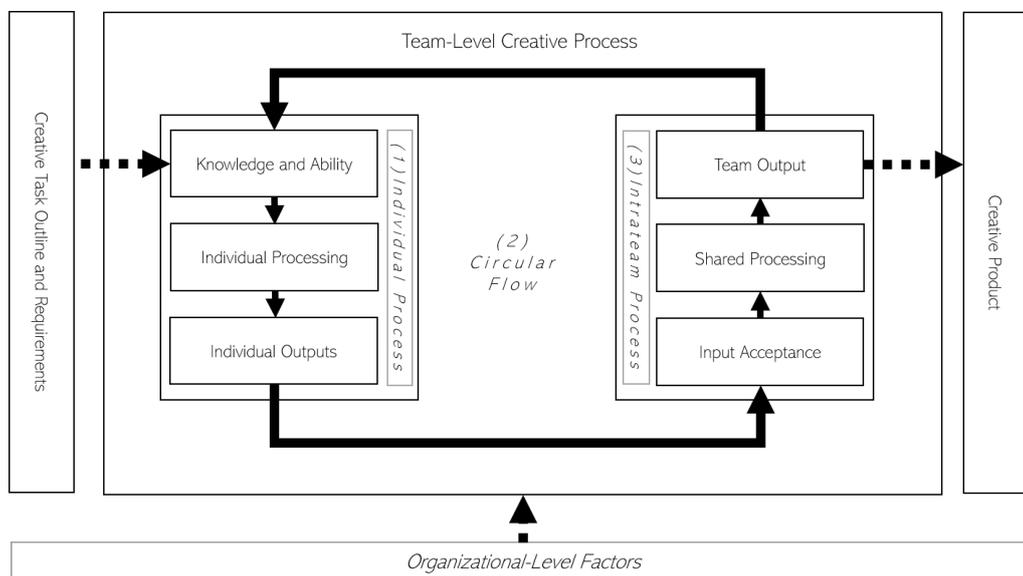


Figure 5-3 Framework for collaborative ideation as based on the combination of contributions framework.

Modelling the three primary factors responsible for enabling a team to perform synergistic creativity and from there re-interpret the components of the Combination of Contributions Framework (Kohn et al., 2011; Mumford et al., 1992; Nijstad & Paulus, 2003), allows for peeling back one more layer of the onion that is team-level creativity. The model represents the ways in which agents within the advertising industry have sought to ideally facilitate and improve the collaborative idea generation es, and therefore allows a deeper understanding of which subprocesses make up the overall collaborative idea generation.

This is where the equation for team creativity and the combination of contributions Framework align. Both postulate one fundamental part of the process to be the cumulative individual creative output.

The individual creative output can be an idea but could be any valuable response to the creative brief, including personal knowledge and experiences. The individuals then have to be willing and able to communicate the output of the individual creative processes to the team. This describes one fundamental area of processes losses, where the individuals might either not find it desirable to share the result within the team, for reasons such as an individual-oriented reward structure, lack of trust and goodwill towards the team, due to self-censorship or due to other constraints such as a lack of time.

The second subprocess, once the individual output has been shared with the team, is the acceptance and integration of individual input into the team-level process and the shared processing of these inputs on the team level. The cumulative stimuli from the individual-level processes have to be accepted by the team, which constitutes another area for potential process loss, as often interpersonal and organisational dynamics complicate this.

For instance, the hierarchy within the team might mean that a more senior team member is not willing to accept the input from a junior member, or that a toxic team member dominates the exchange to the degree that other inputs are not accepted into the team-level processing of the information. The team-level processing transforms the individual inputs into a team-level output, in an ideal scenario adding value already. However, a single exchange between the individual-level and the team-level processing of this would not use the full potential of the team yet. There has to be a continuous, circular interaction between team-level and individual level process outcomes, with the processing of new information within both elements adding value to the next output.

A method for the creative process that consists of a singular conference room meeting, therefore, is unlikely to have this circular flow between the processing power of the team and the individual level. A method is needed that prioritizes a physical or mental divergence, that allows time for individual processing to occur, followed by a convergence of the team members in which the individual-level output is shared, accepted, processes and results in the new team-level output. This team-level output then, in turn, informs the individual-level knowledge and processing of this new input, requiring another round of divergence and convergence. While there has to be an endpoint to the loop, it is clear that a singular brainstorming type session would directly work against a circular flow and would require the individual processing and the team level processing to occur at the same time.

In any given creative team, this framework allows to identify which of the three sub-processes of the collaborative idea generation are not being facilitated correctly. The insights from the model, although specific to advertising, could be applied to nudge these back towards the synergistic middle of the bell curve.

The framework of the collaborative idea generation picks up on Paulus and Nijstad's model while including the insights from the original research. There are three primary components of the collaborative idea generation here: (1) The individual process; (2) the circular flow between the individual process and the intrateam process. The novel addition here is especially the uncoiling of the intra-team process and breakdown into its essential components. Naming the circular flow between these two processes was illustrated by Paulus and Nijstad (2003) before, but this framework does heighten its importance. Further, the framework specifically notes the importance of the initial input into the collaborative idea generation, here called 'creative task outline and requirements' which describes the role the creative brief takes in advertising. This framework also specifically exists within the context of organisational creativity, as is evident through the influence of the organisational-level factors that are illustrated as impacting the entire collaborative idea generation, which includes of course both the individual process and well as the intrateam process.

6. Policy Recommendations

As mentioned at the beginning of this thesis, while there has been and continues to be a flourishing, complex field of team creativity and idea generation research (i.e. Brun et al., 2019; Dong et al., 2017; Fairchild and Hunter, 2014; Lee et al., 2015, 2018; Mumford, 2011; Mumford et al., 2018; Paulus and Nijstad, 2019; Reiter-Palmon, 2017; Reiter-Palmon and Harms, 2018; Reiter-Palmon and Murugavel, 2018; To et al., 2015; Yoshida et al., 2014), this research has been difficult to translate into actionable policy recommendations for practitioners (Paulus & Kenworthy, 2018).

While there are many valid reasons to undertake research in this field, this thesis has been open about its goal to uncover the underlying forces that help or hinder teams in the creative industries in terms of generating good ideas. In this way, this work of research responds directly to the issue raised by Nijstad and Kenworthy (2018).

While the model introduced in chapter five breaks down the tools used in the advertising industry to facilitate team-level ideation at the highest level, this chapter is using these learnings as a base for making more general policy recommendations. As the model is based on an industry with highly distinctive work patterns (Altstiel et al., 2020; Horsky, 2006; Turnbull & Wheeler, 2015), it is unlikely that every element could translate into other contexts. One example of this could be the ubiquitous use of the creative duo (Kilgour et al., 2020; Verbeke et al., 2008). The benefit of these relationships has come across clearly in the interviews, but likely would be highly difficult to introduce in any organisation in which idea generation is of less central importance than it is in advertising. This chapter on policy recommendations aims to look at the adaptations made in the advertising industry under the environmental pressure to create novel and useful ideas and determine which elements could provide useful for practitioners in creative jobs. While these recommendations are intended to be useful for anyone working in a creative context, it is the explicit hope of the researcher, that especially those tasked with leading creative teams take note. While much has been written about effective creative leadership (i.e. To et al., 2015; Hill, 2014; Bilton and Cummings, 2014; Rothwell et al., 2018; Luther and Bruckman, 2018; Gumusluoglu and Ilsev, 2009), the majority of the interviewees did

describe the negative impact of poor creative leadership as their main frustration and the largest blocker of effective idea generation.

6.1 Recommendation 1: Lessons on Leadership

The issue of poor creative leadership builds the foundation of this first recommendation. While there appears to be a wide-ranging consensus amongst both academics and practitioners that a good creative leader facilitates the team process and does not actively participate in the idea generation (Bilton, 2007; Bilton and Cummings, 2014; Carmeli et al., 2013; Catmull and Wallace, 2014; Chechurin and Collan, 2019; Coyle, 2018; DeFillippi et al., 2007; Frishammar et al., 2011; Gilson et al., 2012; Rothwell et al., 2018; Townley et al., 2009), the experts interviewed for this thesis, both in junior and senior roles acknowledged that this was not practised in their organisation.

The data gathered from the interviews revealed two major themes in what the experts considered as the contribution of the leadership to the ideation process: Emotional support and the general facilitation of the team's work. From what can be gathered from contemporary business innovation literature (Brown and Katz, 2009; Burkus, 2014; Granados and Pareja-Eastaway, 2019; Guven, 2020; Pe-Than et al., 2019), this does not track with what is commonly associated with leadership for innovation.

Based on the insights gained from the qualitative data, a recommendation for anyone tasked with boosting ideation or leading a creative team would be to start with giving the people on the team the ability to share, to encourage them and to give them the resources and tools they need, be that emotional support or specialised software.

The recent phenomenon of innovation theatre (Blank, 2019; Kaminska, 2019) stems from a misunderstanding of what an innovative organisation needs to do. It can only be speculated about the individual reasons why innovation methods such as hackathons or design thinking fail in some organisations and work in others (Meinel et al., 2020; Rao et al., 2020b; Wattanasupachoke, 2012), and this thesis does not make a statement to the validity of the approach. However, it can be said that by implementing these methods, the organisations hope for an outside-in transformation into a more innovative and creative

organisation, as promised by the sometimes hyperbolic proponents of these models (Brown & Katz, 2009; Chandrasekaran et al., 2018; Granados & Pareja-Eastaway, 2019; Pe-Than et al., 2019; Thompson & Schonthal, 2020).

The first policy suggestion this thesis make is proposing for the creative leaders to instead take an inside-out approach to their innovation practices, by focussing on their people first. While the model introduced in chapter five has identified the method used to structure and guide the ideation process as important for its success, the sole implementation of a new structure is likely to only make superficial improvements to the organisation's current ability to create new and interesting ideas.

As the quotes in chapter five show, many of the interviewees noted how difficult it is to come into a creative leadership role, as often the skills required to get to this level are fundamentally different to the skills that make a good creative leader. For any organisation consciously wanting to boost their innovation, it would, therefore, be prudent to appoint someone to this position who excels not at delegating tasks, but at supporting their team or organisation and empathetically uncovering the dynamics or structures that are currently impairing the ability to effectively generate ideas. As every organisation is unique, merely implementing a uniform method of generating new ideas might not work, as even famous design thinking agency IDEO acknowledges (Schwab et al., 2018).

6.2 Recommendation 2: Transparency on the Process

Within the framework proposed by this thesis, the Creative Task, or creative brief, as it is called in the advertising industry, essentially represents the raw materials the creative team is able to use for the creation of the desired outcome. While a good creative brief is no guarantee for a successful outcome, the interviewees have made it clear that a bad creative brief will not result in a good creative product, even if the team and team-level process are of the highest quality. While the creative brief can draw obvious comparisons to the 'problem-finding stage' of the team creative process (Lubart, 2001; Runco, 1994), a good creative brief encompasses more than merely the definition of the problem, but a plethora of relevant information about the client, competitors and other relevant campaigns in the

space, which then could draw comparisons to Wallas (1926) proposed stage of preparation.

Notable here is, that while the creative will still both define the problem more clearly during their discussions as well as do some further research themselves, this first step is done for them by experts in providing this overall strategy (Altstiel et al., 2020). While this division of creative labour has come out of the specific environment of the advertising industry, some element of this might translate to other organisations as well. In the business literature the idea generation process is often lumped into the overarching phase of the so-called ‘fuzzy-front end’ (Chamakiotis et al., 2020; Frishammar et al., 2011; Meinel et al., 2020) signifying that idea-generation is not a planned and structured process, but somewhat of a mystery. From anecdotal evidence and the researcher’s own experience, many organisations do not put resources against idea generation but expect ideas to naturally emerge. The second recommendations this thesis makes, therefore, is to approach idea generation with intentionality.

Intentionality here means that the team tasked with the ideation should receive appropriate information about the overall strategic direction the organisation wants to go towards, similarly to the creative brief. Beyond providing this information, however, there needs to be awareness within the organisation that the timeframe for this ideation cannot be a singular meeting. Similarly to the slow co-creation of the brief in agencies in a collaboration between strategists and creatives and the then ensuing iterative process of divergent and convergent idea generation, the leadership needs to clearly communicate how the ideation process looks like as well as give and stick to realistic timelines.

One fundamental insight from the interviews has been the pointlessness of a ‘cold brainstorm’. The interviewees whom themselves have worked in creative roles have noted the necessity of the preparation stage, the convergent and divergent nature of the process and the ‘reliability’ of knowing clear deadlines and having regular check-ins. These are all ways in which the circular flow between team-level and individual-level processing is facilitated within advertising.

It appears that often the ‘default’ mode of generating ideas in many organisations is something similar to the traditional brainstorming (Coyle, 2018), which has been proven to no be effective (Gallupe et al., 1991; Pinsonneault et al., 1999; Taylor et al., 1958).

Structuring the time between individual processing and team-level processing will allow both processes to add more value to the overall team creativity.

6.3 Recommendation 3: Building Respect

Over the course of the interviews, the close personal relationship between the partnered creatives within a larger team has been recurring. Familiarity has been identified as being integral in order to facilitate a positive team dynamic, in turn, necessary to facilitate the sharing of individual-level outputs as well as input acceptance and processing on the team-level.

While there is research on how to facilitate interpersonal closeness (i.e. Aron and Melinat, 1997), based on the insights from the interviews, the main ingredient that results in teams being able to develop ideas together is their implicit respect for each other and trust in the value of everyone's contribution. The assumption that anyone in the team, no matter their station, has the ability to contribute valuable information or novel ideas appears crucial here. As one interviewee stated, "You do not have to like the people you work with, but you have to respect their input".

What it takes to build this respect, however, is more complicated. As noted by a number of interviews; however, the tone gets set by the leadership. This is reflected in a number of studies that show a trickle-down effect of the culture from the leadership (Luther & Bruckman, 2018; Prince et al, 2019)

Perhaps unintuitively, there could also be some benefit to running workshops about the importance of different experiences and backgrounds in creativity. Studies have shown that for example beliefs about attributes of the team, i.e. diversity being conducive to creativity can have a positive effect on team performance (Homan et al, 2015; Salas et al, 2008, 2017). As Homan et al (2015, p. 1456) write: "diversity training increased creative performance when the team's nationality diversity was high, but undermined creativity when the team's nationality diversity was low", this might be a double-edged sword, however.

Undertaking training exercises that show the specific makeup of the team as important for innovation be that their diversity of experience, age, backgrounds, or education might indeed increase, if not their respect for the team, their willingness to integrate their contributions. It is essential for all team members to have a belief in the value of the others' contributions. While providing training is a very scalable approach, something more subtle might be equally effective. One interviewee, for example, described the leadership in her agency, making it a point to celebrate effective collaborations and pointing out how it was the combination of diverse skillsets that made the success possible. Highlighting or otherwise rewarding those who engage in behaviours that are conducive to higher team-level ideation performance might change the behaviour before the belief system. However, changing behaviour first has been shown to change beliefs over time as well (Niedderer et al., 2017).

6.4 Recommendation 4: Eliminating Bad Apples

While there is compelling research on the impact of bad apple behaviours on the entire team (Felps et al., 2006; Jaikumar & Mendonca, 2017), such behaviour might not be noticeable to the leadership.

In the creative industries specifically, where the myth of the genius often still persists (Burkus, 2014; Singh & Fleming, 2010), eliminating a highly-creative individual from the team might even appear unthinkable. Indeed, the way bad apple behaviour materializes in a creative team, identified by the interviewees as Not listening to others, insisting on their own ideas, being extremely competitive and being more interested in their own benefit than in the team's success, and even casual discrimination against others is sometimes even rewarded (Conor et al., 2015; Mallia, 2009).

How then can bad apple behaviour be stopped, if it is this detrimental to the team-level ideation process, but less evident to the leadership? The interviews have painted a clear path for dealing with bad apples effectively: first with empathy, and then not at all. A number of interviewees mentioned that bad apple behaviour is often exhibited by new hires, who have adapted their working style at more 'cut-throat' agencies. While two interviewees specifically talked about approaching such creatives with stern empathy might result in a thorough behaviour change, they also acknowledged that sometimes such a

person might be 'too far gone', in which case the damage to the team and the loss of potential in the ideation process was too great to justify the persons continued presence in the team.

In the advertising industry, teams are assembled for short-term projects on an ongoing basis (Horsky, 2006; Turnbull & Wheeler, 2015). As most industries do not operate on similar timelines to advertising (Granados & Pareja-Eastaway, 2019; Mumford, 2011), the possibility to 'cast the team' is often not given. While this thesis, of course, recommends casting the team with some pre-existing connections, diversity of knowledge and the size in mind, the luxury of actively choosing the team is rare.

However, excluding a bad apple, if not from the organisation, then from the ideation team, ultimately likely is best for the team and the organisation. While there are some 'lone wolf creators' that are highly successful (Ochse, 1993; K. Sawyer, 2008; Shaffer et al., 2016; Weisberg, 1993), integrating them into a collaborative idea generation process might ultimately be to everyone's detriment (Singh & Fleming, 2010). This brings this recommendation full circle to the first recommendation, to begin creative leadership by getting to know the team and their dynamics before anything else.

7. Conclusions

7.1 The Contribution to Knowledge

Collaborative idea generation is an important step in the organisational, creative and innovation processes (Brun et al., 2019; Connolly et al., 1990; Hao et al., 2016; Nijstad & Stroebe, 2006; Paulus & Yang, 2000; Valacich et al., 1994; Wang et al., 2015). While there has been a lot of research about the idea generation process that is brainstorming (Camacho & Paulus, 1995; Collaros & Anderson, 1969; Dugosh et al., 2000; Gallupe et al., 1991, 1992; Osborn, 1953; Paulus & Dzindolet, 1993; Pinsonneault et al., 1999), the aim of this thesis has been to step away from the established models and theories about this phenomenon and to choose a focus on the practical use of idea generation in the industry.

By looking at an environment specifically, that requires a constant production of high-quality ideas, namely advertising (Ford, 2020; Horsky, 2006; Mallia, 2009; Kilgour et al., 2020; Koslow et al., 2003; Turnbull & Wheeler, 2015; Verbeke et al., 2008), this research aimed to discover what practitioners perceive to be the boosters and blockers of team-level idea generation.

Specifically, this thesis set out to answer three research questions. The first question constitutes largely a response to brainstorming research, where laboratory experiments have often shown that collaborative idea generation did in fact show results that were by any metric better than nominal ideation (Dennis & Williams, 2003; Diehl & Stroebe, 1987; Mullen et al., 1991; Pinsonneault et al., 1999; Ziegler et al., 2000). However, researchers in brainstorming have acknowledged that, although *“it was generally believed that groups should not be used for creativity because of inherent process loss in the creative process”* (Nijstad & Paulus, 2003) it is now *“increasingly clear that group interaction is often required in some of the stages of the creative process. In the information age, it has simply become impossible for single individuals to possess all the relevant information, knowledge and expertise.”*(p339). While there has been a thorough acknowledgement of researchers that team-level creativity and some, if not all of its sub-processes require a collaboration of some kind over the past twenty years (Chandrasekaran et al., 2018; Granados & Pareja-

Eastaway, 2019; Hout & Davis, 2019; Karpati et al., 2017; Luther & Bruckman, 2018; Peltokorpi & Hasu, 2014; Reiter-Palmon, 2017; Russ & Dickinson, 1999; Sawyer, 2008; Sawyer, 2003; Zhu et al., 2019), the notion that perhaps idea generation might best be left to individuals has not been fully negated. For this reason, the first research question aims to establish the potential benefit of effective collaborative idea generation. By asking if collaborative idea generation can surpass ‘nominal brainstorming’ when process gains and losses are controlled for, this thesis was able to showcase through the experiment, that if there is some basic control of the process gains and losses, the resulting creativity of the collaborative idea generation was shown to indeed be able to surpass nominal creativity in this case.

While answering the first research question has provided a valuable baseline, the main contribution of this thesis has been in responding to the other two research questions, namely (2) What are the barriers and enablers of effective team idea generation in teams?, and (3) What can we learn from environments with high creative pressure about how to deal with blockers and enablers to increase the likelihood of effective idea generation?

In order to respond to these two questions, this research has utilized an inductive thematic analysis of qualitative industry expert interviews. This has allowed for an approach to the practice of collaborative idea generation in the industry without the weight of existing models or the researcher’s own preconceptions.

The careful and iterative analysis of the interview data has resulted in a three-pillared model of how the industry has adapted to needing to generate ideas on a constant basis. This model identified three areas of strategic choices made by industry practitioners to improve collaborative idea generation. These areas are (1) the structure of the process, an element that has been researched in depth before (Barron, 1969; Bilton and Cummings, 2014; Csikszentmihalyi, 1997; Ghiselin, 2005; Kohn et al., 2011; Lubart, 2001; Mumford et al., 1992; Thompson and Schonthal, 2020; Turnbull and Wheeler, 2015; Vinacke and Eindhoven, 1952). Nevertheless, this thesis was able to identify elements of this that specifically benefit collaborative idea generation in advertising. The second identified area – the casting of the team or team composition has also been discussed at length before, primarily in regards to diversity (Chatman et al., 1998; Homan et al., 2015; Lee et al., 2015; Milliken et al., 2003; Wang et al., 2016) and team size (Gallupe et al., 1992; Hülshager et al., 2009; Peltokorpi & Hasu, 2014; Verbeke et al., 2008) Similarly, however,

this thesis was able to add to the discussion in terms of how these elements interact with collaborative idea generation in the advertising industry. Specifically, the casting of the team with the problem in mind, as well as the conscious choice of ‘team players’ stood out. While the concept of the ‘bad apple’ has been researched before (Felps et al., 2006; Jaikumar & Mendonca, 2017), the significance of its impact on the team has been one of the more surprising learnings from the interview analysis. Lastly, the third component (3) was identified as team dynamics.

Team dynamics offered perhaps the most interesting insights, perhaps owing to the special dyadic structure of team in advertising (Altstiel et al., 2020; Horsky, 2006; Turnbull & Wheeler, 2015; Verbeke et al., 2008) could be read as an interesting adaptation to the challenges of having to create novel ideas on a rolling basis. While it is difficult to say why the dyadic structure has developed as the dominant industry approach, but it is notable that many interviewees noted the benefit of having both an element of familiar relationships (the creative partner) as well as new connections (the rest of the assembled team) provided an ideal space for idea creation.

One element that stood out from nearly all interviews was the concept of what has been called here ‘input acceptance’. This describes perhaps the opposite of some process loss factors, such as production blocking and cognitive interference (Mullen et al., 1991; Nijstad et al., 2003; Stroebe & Diehl, 1994). While interviewees gave this concept different names, such as ‘respect’, ‘humility’, the ‘ability to listen’ or ‘being present’, the effect of this is the same: to truly accept the novel information or idea presented by another team member and to integrate it into one’s own mental model.

The contribution to the knowledge of the model is primarily a breakdown of how experts have responded to a high creative pressure by setting up specific systems and implementing values to boost the potential of collaborative idea generation. While there was a general acknowledgement by the interviewee’s that there rarely is a perfect implementation of these factors in practice, they nevertheless give valuable insights into the hidden barriers and enablers of collaborative idea generation.

With the model showing how the advertising industry responds to these barriers and enablers, this thesis further integrated these insights into the existing combinations of contributions framework, to show the circular nature of collaborative idea generation. This framework specifically showcases the iterative nature of idea generation as well as the

constant exchange between the team and individual level of information processing. This makes clear why the industry often has such a specific method of structuring the process of idea generation and why the team dynamics, specifically the ability to accept the input from others and to process information together is as crucial as the interviewees have described it.

This thesis has further taken these insights as a foundation to make policy suggestions for creative leaders and practitioners. A total of four suggestions were made, namely, (1) to be transparent about the ideal outcome and the timeline for the idea generation, this means showcasing what you understand to be a 'good idea', how you expect communications and potential check-ins to go and to give them all relevant information needed (2) to be conscious that a single brainstorming session does not represent a full idea generation process, but to allow time for individual ideation as well as team processing, ideally on an iterative basis (3) to make conscious decisions when casting the team, both in terms of their ability to work together as well as their relationship with the area on which they are tasked to ideate, and (4) to build respect among the team members, especially respect for each other's unique viewpoints and ideas. This respect crucially is different from the team liking each other and 'getting along'. While that very well might be helpful, the interviews have clearly shown that the ability to integrate the information given by others into one's own mental model is crucial in order to maximise the idea-generating potential of the team.

In summary, this thesis has successfully broken down the complex issue of what blocks or boosts collaborative idea generation through an inductive thematic analysis, on which the researcher has based a model of factors promoting effective collaborative idea generation, thereby making a contribution to knowledge.

7.2 Limitations and Future Directions for Research

As the circumstances of any research, such as funding, time and the number of academics involved limit every piece of research, there are a number of limitations to this doctoral research. Both the number of experts who could be interviewed and the number of experiments that could be undertaken were limited by the research being conducted by a

single person without financial resources to provide any financial compensation for the participants' trouble. Continuing the research within a team and more financial support would likely enable an even deeper exploration of team-level creativity. This at a meta-level, reflects the research undertaken, which shows clearly that collaboration, specifically on the creation of new and useful ideas is crucial.

As the thesis in large parts has served as an exploration of the specific ways in which the advertising industry has adapted to the specific pressure of its environment, the themes that emerged during the thematic analysis vary in how established they are in the existing literature. Specifically, the elements team fit, input acceptance and the value of the partnership structure offer rich potential to be explored in the future.

Similarly, while this thesis has set the goal of uncovering the hidden blockers and boosters of team-level idea generation, another area of future research could dive into the potential to weigh or quantify these gains and losses, to get a better understanding of which elements are crucial, and which ones offer minimal gains or relief of losses.

Yet another avenue that presented itself during the research but ultimately was not explored was how the uncovered boosters and blockers might map onto other types of creative collaboration, such as creative networks. Examples of this could be artist collectives (Hargadon & Bechky, 2006), the bell labs (Gertner, 2012) the homebrew computer club (Elizabeth Petrick, 2018; Levy, 2010) or literary circles (Brauer, 2013; Lilti, 2015) – while made up from individuals that are not working towards a fully shared goal, the cross-pollination of integrating with others in the field appears to increase the creative potential of the individual, a similar effect to creative synergy, that perhaps could be called creative symbiosis.

The realm of exploring how humans relate to one another and create ideas offers near-infinite potential for future research, and understanding the process offers the potential to improve the human condition and work towards solving the multitude of global crises humanity is experiencing at the moment.

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