Making Sense of Disruptive Innovation:
Exploring the Innovator's Dilemma from a Weickean Perspective

By

Mafora Cassious Matibidi

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Supervisor: Mr. C.H. Maasdorp

Department of Information Science

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Declaration

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Summary

The thesis presents a theoretical analysis of the role that organisational sensemaking processes play in shaping how incumbents respond to disruptive innovations. Christensen's theory of disruptive innovation is described and analysed with a view to extend our understanding of the challenges that disruptive innovations present to incumbents. The contribution of the thesis is to position and analyse these challenges as an organisational sensemaking problem.

Christensen's theory offers convincing arguments regarding the challenges disruptive innovations present to incumbents. However, current understanding of these challenges is based on a decision-making perspective, which is rooted in a rational model of organisations, and focuses only on the effects of cognition on actions, leaving the effects of action on cognition unaccounted for. By drawing on Weick's organisational sensemaking perspective, the thesis brings more light to the obscured features within the context where incumbents perceive or interact with disruptive innovations. This affords a broadened focus on and a richer understanding of organisational processes and their outcomes through embracing cognition and action, as well as the interplay between the two, within organisational contexts.

Thus, the thesis reveals the limits of the theory of disruptive innovation by presenting additional dimensions to what shapes human conduct in organisations. Considerations of identity, enactment, commitment, plausibility, and the effects of interrupted projects are among the sources of insight from sensemaking that offer additional or alternative ways for understanding of and theorising about Christensen's observations about disruptive innovation.

The thesis concludes by highlighting the implications of a sensemaking perspective on the study of established organisations and their potential challenges in addressing disruptive innovation driven market changes. Thus, positioning incumbents' challenges as a sensemaking problem also links the fields of innovation and sensemaking.

Opsomming

Die tesis bied 'n teoretiese analise van die rol wat organisatoriese singewingsprosesse speel in hoe gevestigde organisasies op ontwrigtende innovasie reageer. Christensen se teorie van ontwrigtende innovasie word beskryf en ontleed om ons begrip uit te brei oor die uitdagings wat ontwrigtende innovasie aan gevestigde organisasies bied. Die bydrae van die tesis is dat hierdie uitdagings as 'n organisatoriese singewingsprobleem gestel en ontleed word.

Christensen se teorie bied oortuigende argumente oor die uitdagings wat ontwrigtende innovasies verteenwoordig. Huidige verstaan van hierdie uitdagings is egter gegrond op 'n besluitnemingsperspektief gewortel in 'n rasionele model van organisasies en fokus daarom slegs op die effek van kognisie op aksies, terwyl die effek van aksies op kognisie agterwee gelaat word. Die tesis werp, met behulp van Weick se organisatoriese singewingsperspektief, meer lig op hierdie verskuilde aspekte binne 'n konteks waar gevestigde organisasies ontwrigtings waarneem of mee omgaan. Hierdie benadering bied 'n breër fokus op en 'n ryker begrip van organisatoriese prosesse en hul uitkomste deur die insluiting van kognisie en aksie, sowel as die wisselwerking tussen die twee binne organisatoriese kontekste.

Die tesis ontbloot dus die grense van die teorie van ontwrigtende innovasie deur addisionele dimensies wat menslike gedrag in organisasies vorm te beskryf. Oorwegings van identiteit, verbintenis, toewyding, geloofwaardigheid en die gevolge van onderbrekings in projekte is van die singewingsaspekte wat op Christensen se waarnemings oor ontwrigtende innovasie van toepassing gemaak word.

Die tesis sluit af deur die implikasies van 'n singewingsperspektief op die studie van gevestigde organisasies en hul potensiële uitdagings in die hantering van ontwrigtende innovasiegedrewe mark veranderinge te beklemtoon. Dus, die posisionering van gevestigde organisasies se uitdagings as 'n singewingsprobleem slaan ook 'n brug tussen die velde van innovasie en singewing.

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I would like to thank Christiaan Maasdorp for his supervision on and encouragement along the process of completing this thesis. I would also wish to thank to my employer, Nampak, for the funding provided towards my studies, which made the completion of this work possible. The many hours spent on this thesis left you *unpersoned*, so thank you for the patience, and of course the timeous nudging to me, to finish what I had started, Amy.

Dedications

I dedicate this work to my late mother, Malefo Christine Matibidi, who introduced me to and kindled in me a passion for books from an early age; the passion of which is manifestly a burn ongoing.

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Chapter 1: Introduction

1.1 Background

Schumpeter, an economic scholar, has long observed and theorised about innovation driven discontinuous market changes which nevertheless characterised economic developments, accordingly describing the incongruous process as "creative destruction".[1] Thus, the captivating concept embodies a deep sense of paradox, given that creation and destruction are conflicting notions.[2] On the one hand is the bringing of new products, methods or services, as well as new firms, markets and industries, into existence. The flipside of the process *destructs* these very human values it has produced, as the new render the old inapt. Scholars have subsequently come to appreciate the insight that organisational trajectories taken to reach heights of success may still be in the direction of peril.[3] That is, while innovation is considered a necessity for continued success, it embodies complexities which require skilful handling, through which continued prosperity, survival or both can be sustained.

The innovations which drive a force such as *creative destruction*, resulting in established firms' (henceforth incumbents) offerings[4] being supplanted, are considered to be mainly driven by small entrepreneurial firms (henceforth entrants). The introductions of these new offerings redefine laws of competition which restructure, and in some cases obliterate some, markets. Hence, they challenge established firms to either adjust to the new competitive landscape or face possible demise.[5] Augsdorfer *et al.* vividly illustrate the process as follows: "the carpet is pulled out from beneath the current players [while] the stage is set for a new scene which may involve new characters and leave behind the old."[6] The key message in their imagery is that the dynamism of these occasional and unforeseen discontinuous changes

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[1] Schumpeter (2003, pp. 81-86); in reference here is his initial theorisation on the concept of creative destruction, which explained how small, entrepreneurial firms often introduced innovations which are deadly to their established counterparts (Mark I). Schumpeter's later work would also consider how established firms may be in an advantageous position through possessing capabilities which restricted entrants to competitively operate within their established markets (Mark II).

[2] McCraw (2007)

[3] Smith & Tushman (2005); Christensen (1997[2016]); Tushman & O'Reilly (1996)

[4] The term "offering" is used to refer, generally so, to the innovations offered by either entrants or incumbents without specification of their categorisation or qualities.

[5] Schumpeter (1943[2003]); Tushman & O'Reilly (1996)

[6] Augsdorfer *et al.* (2013, p. 47)

tends to render coping mechanisms of most incumbent leaders futile.[1] Accordingly, these drastic changes are associated with the possible dethronement of the incumbents from positions of market or industry leadership by the new players.[2] Schumpeter had indeed noted that these emerging innovations "compete with the old products and old methods not on equal terms but at a decisive advantage that may mean death to the latter."[3] Hence, new offerings may appeal to and lead to a shift in consumption patterns as the greater customer base of incumbents' offerings switch and move en masse to adopt entrants' offerings, rendering the old less attractive if not obsolete.[4] Despite the challenge which entrants' offerings tend to present incumbents with in this regard, it is generally acknowledged that the propensity for incumbents to *ignore* or belatedly respond to the hazard is higher.[5] Consequently, entrants continue to gain market strongholds, reaching a point at which they begin to challenge their established counterparts.[6] At this stage the competitive landscape may favour entrants and their offerings resulting in potential failure, by incumbents, to adjust to the new competitive landscape, while entrants rise to market or industry dominance.

Gans notes that ever since "Schumpeter tantalized us with the notion of 'creative destruction' …we have wondered about the mechanics of the process."[7] Indeed, vestiges of the theoretical heritage of *creative destruction* continue to be discernable within propositions of several scholars' theories. These scholars continue to push further frontiers of our understandings of the mechanics and forces behind the phenomenon.[8] Henderson and Clark also note that "[f]ollowing Schumpeter's emphasis on creative destruction, the literature has characterized different kinds of innovations in terms of their impact on the established capabilities of the firm."[9] Indeed, the relationship between innovation types and their success or impact on competitors' response capacity has been a critical nexus for theorisation about the causals mechanisms of failure and success of the innovations of concern. The earlier categorisation of incremental versus radical; which were ensued by competency-enhancing versus competency

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[1] Meyer *et al.* (1990)
[2] Christensen (1997[2016])
[3] Schumpeter (2003, p. 32)
[4] Christensen (1997[2016])
[5] Henderson (2006); Charitou & Markides (2003); Tripsas & Gavetti (2000); Christensen (1997[2016])
[6] Charitou & Markides (2003); Christensen (1997[2016])
[7] Gans (2016a, p. 84)
[8] E.g., Christensen (1997[2016]); Henderson & Clark (1990); Tushman & Anderson (1985)
[9] Henderson & Clark (1990, p. 11)

destroying ensued;[1] and then architectural versus modular;[2] before the more topical, sustaining versus disruptive innovations;[3] all hinge on this connection.

What knits together the work of many scholars pursuing the question of how innovations succeed in supplanting dominant offerings on the market is the eagerness to unravel the underlying causal mechanisms which facilitate the revolutionary process. The categorisation of innovations has remained a consistent feature of these endeavours. The aim has remained to pry apart innovations which succeed in leading to evolutionary changes to prevalent consumption patterns from those which are revolutionary.[4] Notably, the question about the underlying mechanisms which drive both the success of the new offerings and the failure of incumbents to respond remains a highly contended one.[5] The emerging picture *becomes* that of interrelated anchor points by which scholars attempt to have an improved grasp on this subject.[6] The interrelatedness of these categorisations, mechanisms of substitution and incumbents' troubles, however, also highlight the complexity and breadth of the subject. The current study joins these scholarly efforts by concentrating attention towards difficulties with which incumbents may have in responding to new offerings, which challenge their continued success, existence, or both.

As Christensen observes, earlier theorisation suggested that discontinuous or revolutionary market changes were driven by radically different innovations; whereas continuous or evolutionally environmental changes were based on incremental innovations.[7] Thus, the impaired competitiveness in incumbents' offerings was considered to be a function of lacking requisite proficiencies for imitating the increasingly more competitive, emerging offerings. Tushman and Anderson would nevertheless propose an alternative view, focusing instead on the nature of the knowledge driving innovations, accordingly presenting competency-destroying versus competency-enhancing categorisations. They proposed that competency-

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[1] Tushman & Anderson (1986)
[2] Henderson & Clark (1990)
[3] Christensen (1997 [2016])
[4] Tushman & O'Reilly (1996)
[5] Henderson (2006); Christensen (1997 [2016]); Henderson & Clark (1990)
[6] Indeed, improved understandings on the subject should lead to scholars devising better theories, or better the preparedness of practitioners for responding to possible risks related to the threats which may be posed by competitor innovations. It may conceivably also afford better strategic approaches to introduce innovations into markets.
[7] Christensen (2006); it must be noted that the focus here was on technological products, although the subject has become broadened to look at innovations in general, particularly because the success of these technological products is often facilitated by a novel business model.

destroying, breakthrough innovations, led to discontinuities through "destroy[ing] order in a product class",[1] subsequently changing the competitive landscape to favour the newly introduced innovations. Conversely, competency-enhancing innovations, which were considered to be "overwhelmingly initiated by existing, successful firms",[2] were considered to result in continuous market changes. Hence, their views broadened the focus from the mere radicalness of the innovations to account for the knowledge behind innovations and its impact on competitor's response capacity, or lack of it. Nonetheless, Tushman and Anderson's account ignored "the sometimes disastrous effects on industry incumbents of seemingly minor improvements"[3] in the architecture of the new offerings. To address this blind-spot, Henderson and Clark proposed what they referred to as architectural innovations, which "change the way in which the components of a product are linked together, while leaving the core design concepts untouched."[4] The authors suggested an extension to the prior categorisations of radical versus incremental by adding modular and architectural dimensions.

Incumbents' inefficiencies to respond to innovation driven market ferments was thus largely seen as a function of the intricacies inherent in the attacker's (entrants) offerings. This basis for understanding incumbents' tragedies would however be turned on its head by observations from studies conducted by Christensen, *primarily* from the disk drive industry during the late 1980s and early 1990s.[5] Christensen pointed out that although some innovations which led to incumbents' difficulties were sometimes complex and costly to develop, some of them "were simple extensions of what the leading companies already did better than anyone else."[6] Accordingly, he argued that some of the challenges incumbents confront had nothing to do with the nature of the innovations, instead focusing on managerial decision-making dynamics to explain the problem. Like his predecessors, he proposed two categories, namely sustaining innovations versus disruptive innovations, which nevertheless departed from using only the characters of the innovation to explain its effects. The former category is said to be aimed at satisfying the needs of incumbents' dominant customers, leaving a segment of customers situated either in the lower-end tier or non-users (e.g. those

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[1] Tushman & Anderson (1986, p. 461)
[2] Tushman & Anderson (1986, p. 460)
[3] Henderson & Clark (1990, p. 9)
[4] Henderson & Clark (1990, p. 9)
[5] Christensen (1997[2016])
[6] Christensen (2016, p. xvi)

who cannot afford incumbents' offerings) unattended.[1] Principally, sustaining innovations focus on improving attributes already valued by dominant customers in order to derive more profit or stay ahead of the competition. Disruptive innovations take advantage of the customers not served by incumbents through sustaining innovations by offering inferior and low performing (disruptive) innovations, which nevertheless improve over time, reaching levels incumbents' customers find acceptable.[2]

1.2 Problem Development

According to Henderson, the theory of disruptive innovation has served to revive "debate within academia as to the role of the market in shaping incumbent response to discontinuous technological change."[3] Despite this, Weeks highlights that "Christensen's work has been rarely subjected to the peer reviews that most academics undergo."[4] Thus, despite gaining popularity[5] it has nevertheless evaded requisite scholarly scrutiny, at least initially. However, an increased scholarly scrutiny has led to the interrogation of its theoretical tenets.[6] For instance, Danneels had noted "a lack of constructive criticism of the core concept of [the] theory, namely 'disruptive technology,' as well as its mechanisms and effects on firms and industries."[7] Both have subsequently been attended to by Christensen,[8] although the latter is of continuing contention. To the extent that scholars have debated the causal mechanisms which lead to incumbents' failure to address innovation driven changes which threaten their continued viability, there remains two predominant camps, namely competence-based and cognitive-based narratives.[9] The former camp tends to argue that market shifts are facilitated

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[1] Christensen (1997[2016]); it is worth noting that Christensen acknowledges that a niche market can still exist in the higher-end level of incumbents' market. He proposes that a different name and explanation other than "disruption" be provided, which should help us understand how these innovations and their emergence from the top tier of the markets function in impacting incumbents and their markets. (Christensen, 2006, pp. 50-51)
[2] Christensen (1997 [2016])
[3] Henderson (2006, p. 5); this article is particularly important because it succinctly encapsulates much of prior contentions related to the supposed innovator's dilemma, while directing attention to the core analytical focal point of the theory of disruptive innovation.
[4] Weeks (2015, p. 419)
[5] King & Baartartogtokh (2015); Weeks (2015); Danneels (2004)
[6] King & Baartartogtokh (2015); Markides (2006); Tellis (2006); Danneels (2004);
[7] Danneels (2004, p. 246); Christensen has since addressed some of Danneels' criticism while, as Weeks (2015, p. 219) notes, he is sometimes dismissive of those who criticise his work.
[8] Christensen (2006)
[9] Eggers & Kaplan (2013); Tripsas & Gavetti (2000)

by competencies with which incumbents are deficient.[1] The cognitive camp takes the view that incumbent leaders are often blinded by their cognitive frames or beliefs,[2] which undermine their ability to foresee the potential danger behind emerging innovations. Thus, this latter view embraces the assumption that even if incumbents may have the potential to muster the requisite competency for successfully responding to the imminent danger, they are likely to recognise the implications for market challenges when it is already too late.[3]

The theory of disruptive innovation leans towards the cognitive camp, with its core arguments taking a strategic rationality perspective, particularly focusing on decision-making dynamics of organisational leaders,[4] to explain how incumbents fail to respond to disruptive innovations. The concept, innovator's dilemma, reflects this point as its description makes clear: "the logical, competent decisions of management that are critical to the success of their companies are also the reasons why they lose their positions of leadership."[5] Christensen rejects the arguments made from the competency-based view, resolutely arguing that the real challenge within incumbents, especially in responding to disruptive innovations, relates to their strategic choices, which mirror their resource allocations processes.[6] For Christensen, managerial beliefs, especially as inculcated by business schools, limit resource allocation towards disruptive innovation in incumbents, who tend to favour sustaining innovations.[7]

Meanwhile, Bessant and Phillips assert that incumbents' difficulties to respond to the innovations which come to challenge the viability of their businesses (taking a generic perspective thus), may be a consequence of constraints which function in a mode similar to cognitive dissonance. They make their point in this manner:

> The problem is not simply one of missing important signals about emerging shifts in innovation trajectories in the environment. In a number of cases the information was available to the enterprise but its decision-making and resource allocation processes

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[1] Eggers & Kaplan (2013); Henderson (2006)
[2] Tripsas & Gavetti (2000)
[3] E.g. Tripsas & Gavetti (2000); Christensen (1997[2016]; Garud & Rappa (1994)
[4] Christensen (2016, pp. 42-48)
[5] Christensen (2016, p. xvii)
[6] Christensen (1997[2016]); Henderson (2006)
[7] Christensen (1997[2016])

failed to deal adequately with the new information. Arguably there are internal filters
which act in a fashion analogous to cognitive dissonance in human psychology.[1]

Like Christensen, their focal point is decision-making and related conceptions about resource
allocation, although their reference broadens coverage because it includes cognitive
dissonance – a different dimension to the problem. While Bessant and Phillips may speak of
decision-making and cognitive dissonance in the same breath, the two differ in the manner in
which they relate to human conduct. Cognitive dissonance regulates post-decisional conduct
in which a chosen alternative's negative consequences invoke a negative psychological
feeling; thus the ensuing conduct is driven towards the removal of this feeling.[2] According to
Festinger "[t]he existence of dissonance, being psychologically uncomfortable, will motivate
the person to try to reduce [it.] When dissonance is present, in addition to trying to reduce it,
the person will actively avoid situation and information which would likely increase the
dissonance."[3] Evidently, this process differs from the decision-making process which is
driven towards choosing the best from at least two alternatives,[4] which is nevertheless
operating under constraints associated with *bounded rationality* as the work of Simon has
come to inform organisational scholars.[5]

Such a drive as effort to avoid situations and information which increases the dissonance
begins to bring into focus a different drive to conduct which is not accounted for by a
decision-making perspective. Therefore, the disparity suggest some potential limits to
understandings around the supposed innovator's dilemma given that in the context of
disruption we understand little, for instance, about the consequences of decisions on the
behaviour on leaders of incumbents.[6] While scholars have made strides in understanding
incumbents' challenges by concentrating on managerial cognition and organisational
competencies, we thus understand little about managerial constraints placed upon them by
effects tied to cognitive dissonance.

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[1] Bessant & Phillips (2013, p. 365)
[2] Festinger (1957)
[3] Festinger (1957, p. 3)
[4] Brunsson (2007)
[5] Simon (1991)
[6] Weeks (2015, p. 424)

Boland contrasts a decision-making perspective with organisational sensemaking,[1] which implicitly and yet appropriately suggests the latter to be a possible alternative to studying organisations and their processes. For at least three interrelated factors, that is apt. The first is that the organisational sensemaking perspective has its roots tied to dissonance theory.[2] Secondly, and as a consequence of the first, it suggests the possibility that approaching the challenge incumbents' face from a sensemaking perspective should be fruitful scholarly effort. It should further give us a better understanding beyond the assertion made by Bessant and Phillips. Indeed, Christensen and his associates invite scholars to approach the problems from different perspectives.[3] Third, it has already been highlighted that the decision-making perspective appears to be partial in explaining organisations and their processes, but this contrast can be sharpened further.

As far as the decision-making perspective is concerned, Boland questions, if rhetorical, where "the alternatives that a decision maker chooses among come from in the first place if not from the engaged search for the conditions of betterment by an actor?"[4] The focus on the actor and the actions *necessary* to be taken prior to perceiving alternatives ties in well with Weeks' dissatisfaction that Christensen's theory of disruptive innovations fails "to address the *ambiguities* [italics added] of managerial agency".[5] The common thread that runs through the remarks of both Boland and Weeks is their search for actions in the decision-making perspective or the theory of disruption. Notably, Weeks is not only *sensitive* to the actions which seem unaccounted for, but also to the significance of their traces, the meaning of which is not immediately obvious [ambiguous] to the actor.

Brunsson observes that a "decision making perspective fails to recognize that practitioners do more than make decision … [which] is only a step towards action"[6] He goes further to explain that "[a]n action perspective makes it easier and important to observe that there exist both decisions without action and actions without decisions."[7] Thus, the preoccupation with organisational decisions, as sustained by the presumption that all organisational actions ensue from some specified decisions, miss the point that commitment to projects does not always

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[1] Boland (2008)
[2] Weick (2001); Weick (1995); Weick (1964)
[3] Christensen *et al.* (2015, p. 53)
[4] Boland (2008, p. 59)
[5] Weeks (2015, p. 424)
[6] Brunsson (2007, p. 35)
[7] Brunsson (2007, p. 35)

depart from clearly set out decisions.[1] Boland clarifies that a decision-making perspective is rooted in scholarly tradition which devalues action "as a basis for truth, in favor of the belief in an ideal form that provides a basis for judging what is true."[2] He goes further to address the ontological and epistemological consequences when explaining that the dominance with which such a perspective has become meant that its tradition "has been carried down to us in the form of certain presumptions about the world — both as to what it is comprised of, and as to how we can know it."[3] This stands in stark contrasts with a sensemaking perspective.

The objective is not to disparage the decision-making perspective, on which the theory of disruption rests. Rather, to trace the source of the problem associated with this perspective, given the evidently enduring ontological and epistemological implications associated with adopting it. Meanwhile, this has gradually sharpened the contrast between the two perspectives (decision-making, including its assumptions of strategic rationality and sensemaking), pointing to aspects to which attention can be directed if we are to begin to address the related limitations of the former. Simultaneously then, attention is drawn to what is evidently a blind-spot of the theory of disruptive innovation,[4] hence, largely ignored in debates around the supposed innovator's dilemma.

Weick does suggest that "[o]ne way to shift the focus from decision making …is to look more closely at sensemaking in organizations."[5] Rather than focusing on people who are struggling to make choices when confronted with problems, framing problems as questions of sensemaking directs attention away from *the why* behind people's choices, to the contextual features of the environment in which people confront problems, which may render even competent people inept.[6] It is an appreciation of the unfolding of human conduct, more directly so within an organisational context (the focus of this study), as an "experience of being thrown into an ongoing, unknowable, unpredictable streaming of experience in search of answers to the question, 'what's the story?'" Such a portrayal underlines constraints for comprehensive appreciation of consequences of conduct before the fact, and limitations of

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[1] Brunsson (2007); Mintzberg *et al.* (1990)
[2] Boland (2008, p. 59)
[3] Boland (2008, p. 59)
[4] A notable exception is the work of Lettice and Thomond (2008), which recognises organisational actions and cognitions, which however devote attention specifically to incumbent leaders' schemas and how they influence resource allocations.
[5] Weick (1993, p. 365)
[6] Snook (2001, pp. 206-207)

human foresight placed upon by a fact of action itself unfolding into an unknowable terrain. Borrowing from Reed, Weick also points out that "the linkages between decisions and actions are loosely-coupled and interactive rather than linear."[1] Weick goes further to question assumptions about accuracies in managerial perceptions and their rationality for understanding organisational processes given the less research available for their support.[2]

In addition to the invitation Christensen and associates extend to scholars, Danneels laments that the diversity of disciplines from which scholars approach the subject has not been accompanied by work of interdisciplinary nature; bringing together "ideas from several disciplines to form a comprehensive and rich understanding of the phenomenon."[3] Weick sensemaking perspective seems appropriate for these tasks for several reasons notable from the preceding discussions, namely, (a) it derives from a different scholarly tradition from decision-making, thus offers a different perspective on the problem,[4] therefore it should afford a novel approach to learning about the supposed innovator's dilemma; (b) it focuses on both cognition and actions;[5] and (c) more importantly, the interplay between the two towards influencing organisational outcomes.[6]

1.3 Statement of Problem

Given sensemaking's "central role in the determination of human behaviour",[7] the following research question is pursued: *In what ways may organisational sensemaking processes shape incumbents' responses to disruptive innovations?* Implicit in this question is the constantly referred to problem of these organisations as often struggling to address innovation driven market changes. The question invites an inquiry which is attentive, and thus sensitive, to linkages between processes of sensemaking and constraints these processes place on human

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[1] Weick (1993, p. 634 citing Reed 1991, p. 561)
[2] Weick *et al.* (2005, p. 415)
[3] Danneels (2006, p. 3)
[4] Boland (2008)
[5] Weick (1995); Weick (1988)
[6] Weick (2001); Weick (1964); the concept of organisational outcomes will be used in this study to particularly refer to successes or failures as a consequence of prior organisational processes as shaped by cognitions and actions. It is worth noting, nevertheless, of the potential loose and tight couplings between actions and their outcomes (Weick, 1976), which means the reference does not aim to link specified actions and outcomes but applied more generally to look, for instance, at relatedness of concepts such "strategic choices" (actions) and organisational failure" (outcome).
[7] Weick *et al.* (2005, p. 409)

conduct, which may result in the failure of organisational members to respond to disruptive innovations.

1.4 Intent of the Study

The intent of this inquiry is to subject the theory of disruptive innovation to an analysis based on the alternative perspective of sensemaking as an effort to increase our understanding of the challenges incumbents in addressing disruptive innovations.

1.5 Research Design

The study follows a qualitative research approach, which according to Creswell, is used "to develop theories when… existing theories do not adequately capture the complexity of the problem we are examining."[1] Additionally, Creswell mentions that qualitative research is necessary when "a problem or issue needs to be explored."[2] Drawing on Karl Weick's sensemaking perspective, the study is devoted to exploring, theoretically so, the possible links between organisational sensemaking processes and incumbents' difficulties in addressing disruptive innovations. Both the theory of disruptive innovation and the sensemaking perspective are described and analysed, which forms the background upon which incumbents' challenges can be explicated from the alternative viewpoint of sensemaking. The study draws examples from the work of other scholars, which either reference similar cases used in the theory of disruptive innovation, or contain grains of useful information for demonstrating how organisational sensemaking processes may take shape. Their selection is thus not systematic but rather based on usefulness in exhibiting more clearly the points advanced in the study.

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[1] Creswell (2007, p. 40)
[2] Creswell (2007, p. 39)

1.6 Delimitation

Although there are suggestions that disruptive innovations are paired with business models which may conflict with those of incumbents,[1] the current study focuses on internal organisational processes vis-à-vis notable disruptive innovation challenges which can be explicated in sensemaking terms. In particular, effort is directed towards understanding how organisational members make sense of factors, internal or external to the firms, by highlighting how sensemaking processes may shape the cognitions and conduct of these organisational members in manner which constrain them from addressing disruptive innovations. In short, the study approaches the problem investigated from the internal perspective of incumbents outwards.

1.7 Layout of the Study

The first chapter (Chapter 1) has given an introduction to the study, giving the background on the subject of focus, accordingly highlighting the gap in our understanding, while indicating the approach by which the challenge incumbents confront will be explored. The next chapter (Chapter 2) presents a descriptive and analytical discussion of Clayton Christensen's theory of disruptive innovation, which is followed by a discussion of Karl Weick's sensemaking perspective (Chapter 3). Thereon, the ensuing chapter (Chapter 4) offers an alternative explanation of incumbents' challenges by explaining how organisational sensemaking processes may shape their responses to disruptive innovations. Finally conclusions of the study are presented in the last chapter (Chapter 5), presenting the position taken in the study following the discussions presented in Chapter 4.

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[1] Christensen (2006, p. 43); it must be noted, and as it will be evident in chapter two, that Christensen also takes a similar approach in that he acknowledges that a business model may be the challenge which lead to incumbents' failures to respond to disruptive innovations, however, he directs his core arguments on internal processes which shape incumbents' responses.

Chapter 2: Disruptive Innovation Theory

2.1 Introduction

Christensen's theory of disruption is fundamentally based on findings from a series of case studies conducted in the disk drive industry, and later the excavator industries during the late 1980s to the early 1990s, in the USA.[1] The question he sought to answer in these initial studies was why incumbents, which "invest aggressively in technologies necessary to retain their current customers…"[2] can still fail when disruptive innovations emerge. Thus, he sought to understand why these organisations remain successful in innovation projects which serve their current customers, but prone, nevertheless, to failure at investing in innovations which are outside their primary customer base. Following the case studies, his observation was that "the logical, competent decisions of management that are critical to the success of their companies are also the reasons why they lose their positions of leadership."[3] This has been the centrepiece of Christensen's thinking on the theory of disruption, based on which the concept of the innovator's dilemma is coined. He explains that the nature of disruption goes against *good management* philosophy, which effectively promotes the serving of current customers, although that has the potential to lead to failure in the face of disruption.[4] The theory has gone through many modifications, from its nascent observational stages, then categorisation and association, before a descriptive stage and is currently considered to be at a normative stage.[5]

Christensen mentions as critical to the dilemma the motivations which dictate processes of resource allocation, which are influenced by incumbents' resource dependencies, but also hinting at the career needs of organisational members at different levels. He observes that incumbents tend to be biased towards allocating resources to innovation projects which dominant customers want, which are sustaining in nature whilst neglecting disruptive

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[1] Christensen (1997 [2016])
[2] Bower & Christensen (1995, p. 43); the label "incumbent" is used in this study, and the remainder of the discussions, to *more specifically* refer to an established firm which is well-run and successful resulting in its position of leadership within its respective industry. An "entrant", on the other hand, is a "smaller company with fewer resources" (Christensen, 2015, p. 16) which is initiates or is part of firms which initiate a disruptive market.
[3] Christensen (2016, xvii)
[4] Christensen (1997 [2016])
[5] Christensen (2006)

innovations. To support this view, Christensen emphasises the scarcity of resources, as when he asserts that: "meeting the needs of established customers and fending off competitors takes all the resources a company has, and then some."[1] On the basis of resource dependence, he views that external stakeholders such as customers and investors control how organisations allocate their resources. He highlights the asymmetries of motivation to emphasise that incumbents have less impetus to focus on disruptive innovation, which is the opposite for entrants. We then see incumbents who tend to delay adopting disruptive innovations following their emergence, which result in unpreparedness as emerging disruptive innovations begin to gain a rapid following, including that of or by the dominant customers of incumbents. This process of mass adoption of disruptive innovations, including by incumbents' customers, marks a disruption.[2]

While in early stages Christensen made reference to disruptive technology, he later changed this label to disruptive innovation, the rationale for which accounts for the business model paired with the technology.[3] Thus, his reference to innovation considers both the technology and the business model it is paired with, brought about by entrants which make it difficult for incumbents to emulate. Although references such as the business model, rather than the technology, is what causes the challenge for incumbents, such insight derives from personal conversations rather than research.[4] Furthermore, much of the debates offered by Christensen focus on the internal causes of incumbents' failures.

The most complete discussions of Christensen's theory of disruptive innovation are presented in his seminal book *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*, which was first published in 1997. As such, the current chapter discusses Christensen's theory of disruption, based primarily on the updated version of this source.[5] It is important to note that the theory is constantly going through modifications, which means some of the assertions made in the 1997 are now out-dated.[6] Indeed Christensen continues to invite scholars to find anomalies in the theory, as an effort to find aspects on which further

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[1] Bower & Christensen (1995, p. 44)
[2] Christensen (2015, p. 46)
[3] Christensen (2006, p. 49)
[4] Christensen (2006, p. 49)
[5] Christensen (1997[2016])
[6] Christensen *et al.* (2015)

strengthening may be based.[1] It is for this reason that some up-to-date aspects of the theory are often found in Christensen's later works. In line with these developments, Christensen expresses that "[d]espite broad dissemination, the theory's core concepts have been widely misunderstood and its basic tenets frequently misapplied."[2] By that, he seeks to clarify that some of the criticisms of the theory are at times referring to aspects which have been addressed in later stages. In the interest of presenting the framework in an up-to-date form, Christensen's later publications are consulted in conjunction with the seminal book. With this section serving as presenting a more general discussion of the framework as an introductory background, the ensuing sections delve into the main ideas which anchor disruptive innovation theory's core arguments.

The current chapter looks at the core tenets of the theory of disruption, giving its historical background, before looking at sustaining and disruptive innovations. From this, the discussion proceeds to look at the core concepts which underpin the theory, through which Christensen explains how decisions, as well as what influences them, shape incumbents' responses to disruptive innovations. They include a value network framework, asymmetric motivation, and resources-processes-values framework. Organisational decision-making processes, as articulated by Christensen, are then examined, before delving into the profiles of the firms referred to as incumbents in this study, including the contexts in which they operate. The final part of the chapter offers a critical review of the theory, highlighting its strengths and weaknesses.

2.2 Sustaining versus Disruptive Innovations

The sustaining versus disruptive innovation categorisation focuses primarily on the target customers served, but also considers pricing, performance and convenience dimensions of the innovation. These categorisations are tied to the growth path of an organisation's innovation, which differ on the basis that the former's path is within the current pool of customers, while the latter focuses on new customers, at least initially. The theory explicates on the incumbents' inherent propensity to succeed in sustaining innovation initiatives and their

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[1] Christensen (2006)
[2] Christensen *et al.* (2015)

incapacity to respond to disruptive innovations. This, as he argues, is despite the fact that incumbents often have the capability and resources to develop the same innovations. Figure 1 demonstrates the growth trajectories of sustaining versus disruptive innovations. It also displays the markets in which two different types of disruptive innovations are initiated and their performance and growth trajectory over time.
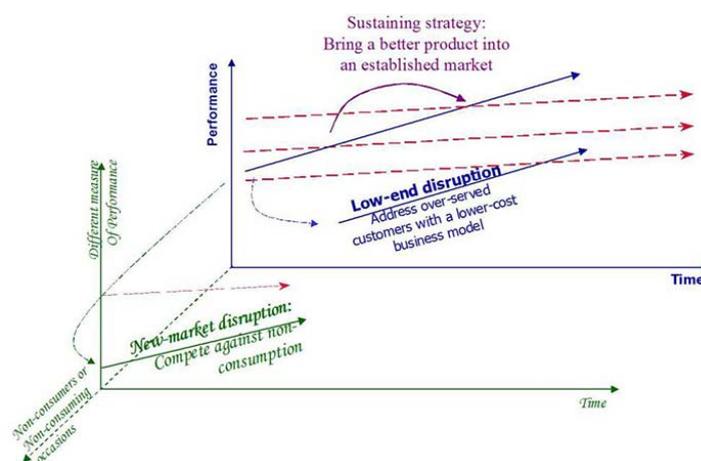
Figure 1: Two dimensional model of disruptive innovation. Source: Christensen (2017)

2.2.1 Sustaining Innovations

Sustaining innovations "improve the performance of established products, along the dimensions of performance that mainstream customers in major markets have historically valued."[1] They are "innovations that make a product or service perform better in ways that customers in the mainstream market already value."[2] Hence, these innovations focus on satisfying the needs of the current, established customers. They are the mainstream offerings which incumbents consciously improve in order to serve the needs of current customers. For this reason, a sustaining innovation growth path focuses on brining better offerings to the established market.[3] What motivates organisations to follow this growth path is the sense of assurance that there are already established customers in these markets, which guarantees

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[1] Christensen (2016, p. xix)
[2] Christensen & Overdorf (2000, p. 72)
[3] Christensen (1997[2016])

sales; hence the motivation to improve these innovations is to derive increased profit margins.[1]

As Figure 1 indicates, the pace of technological progress leads sustaining innovations to surpass customer needs over time through performance overshooting. In accordance, prices for these innovations also become too high. Effectively, this growth trajectory leaves underserved customers at the low-end tier, although there may also be neglected market in the periphery. [2] Christensen considers that incumbents rarely follow the disruptive path, in favour of sustaining innovations. In his words, "[s]ustaining innovations are nearly always developed and introduced by established industry leaders… those same companies never introduce or cope well with disruptive innovations."[3] He explains that in addition to gaining higher profit margins as the motivation, incumbents are also driven to follow sustaining innovations in order shield their current customers from their competitors.[4] In this way, pursuing an innovation strategy which is based on sustaining innovation guarantees immediate benefits in terms of maximising profits, while enabling these firms to win competitive wars.

2.2.2 Disruptive Innovations

Disruptive innovations first target low-end or new markets, introducing new attributes which are initially not attractive to incumbents' dominant customers. They are "financially unattractive for the leading incumbent to pursue, relative to its profit model and relative to other investments that are competing for the organization's resources."[5] The incipient growth paths of these innovations are characteristically outside of incumbents' dominant customer base. These innovations are considered to be of relatively low performance and cost initially, with the additional attributes they offer not only promising low return on investment, but also of lesser value to incumbents' dominant customers. It is a "product or service… that's actually worse, initially, as judged by the performance metrics that mainstream customers

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[1] Christensen (1997[2016])
[2] Christensen (1997[2016])
[3] Christensen & Overdorf (2000, p. 72)
[4] Christensen & Overdorf (2000, p. 72)
[5] Christensen (2006, p. 49)

value."[1] They emerge "at the low end if the market, in the simplest, most unassuming"[2] products or services, selling on the basis of convenience and/or price dimensions. Thus, they are usually introduced to the market as of inferior quality compared to the mainstream innovations and therefore appeal to the underserved customers at the lower end tier of the market (low-end disruption), or focused on non-consumers (new-market disruption). [3] Christensen and Overdorf substantiate that "because disruptive products nearly always promise lower profit margins per unit sold and are not attractive to the company's best customers, they're inconsistent with the established company's values."[4]

However, the acceptance of disruptive innovations by incumbents' dominant customers *catches on* over time as they improve on the attributes which were previously judged to be unattractive and begin to appeal to a larger market. Christensen and Overdorf point to uncertainty as another characteristic of disruptive innovation. They remark that disruptive innovations "occur so intermittently that no company has a routine process for handling them"[5] which highlight one of the key characteristics of these innovations which leads to incumbents' trouble when responding to them. Christensen terms the point at which, in the process, incumbents' dominant customers switch from sustaining to disruptive innovations en masse *the* disruption.[6] More precisely, what defines a disruption is when "a smaller company with fewer resources is able to successfully challenge established incumbent businesses."[7] Christensen does make note that a common pattern with disruptive innovations is that they take "time, experimentation, and trial and error to achieve."[8] Therefore, disruption is understood as a process in contrast to an event.[9] Due to their focus on sustaining innovations and their related higher profit margins, incumbents initially feel unthreatened by the developments of disruptive innovations. Christensen points out that it is only when it is too late – when entrants have gained a stronghold – that incumbents notice the imminent threat.[10]

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[1] Christensen & Overdorf (2000, p. 72)
[2] Christensen (2016, p. x)
[3] Christensen & Raynor (2003, p. 45)
[4] Christensen & Overdorf (2000, p. 73)
[5] Christensen & Overdorf (2000, p. 73)
[6] Christensen *et al.* (2015, p. 46)
[7] Christensen *et al.* (2015, p. 46)
[8] Christensen (2016, p.222)
[9] Christensen & Raynor (2003, p. 69)
[10] Christensen & Raynor (2003, p. 46)

Low-end disruptions directly attack the existing value network, while the new market disruption creates its own first – through new consumption – before pulling in customers from incumbents' value network (discussed later). At their initial stage, low-end disruptive innovations target the low-end tiers of the market, but improve in both quality and performance over time, until they become appealing to incumbents' dominant customers. That is, low-end disruptions begin at the lower tier of an existing value network and follow a growth trajectory that moves towards the point intersecting with mainstream customers' performance expectations or needs. As indicated by Figure 1, the performance trajectory of disruptive innovations improves until it reaches main stream customers. They "attack the least-profitable and most overserved customers at the low end of the value network."[1] Low-end markets are the least profitable bottom tiers of the market, made up of customers with minimal expectations and thus less demanding, compared to mainstream customers.

New market disruptions are those which initiate a new value network before they attack incumbents' existing and draw from them customers, thus resulting in the shrinking of the market pool of these incumbents. New-market disruptions have to "invent the upward path, because no one has been into that trajectory before."[2] Christensen uses the concept of "nonconsumption" to explain new-market disruptions, because instead of targeting consumers in the value network of incumbents, they turn those who have previously not used the products into users.[3] In so doing, they create a new value network. As an example, he explains how the initial introduction desktop photocopiers enabled photocopying of documents at the office, whereas in previous cases photocopying was done by specialised corporates with specialised technicians for operating printers, who served the office workers. Thus, the introduction of desktop photocopiers turned people in the office into direct customers for the photocopiers, who consequently no longer needed the services of specialised corporates. In this case, therefore, the innovation lies in both turning non users into users by growing the market pool of users, and the convenience as a matter of easier access to a product or service.[4] In addition, these innovations are also cheaper. However, In contrast to low-end, new-market disruption "doesn't invade the mainstream market; rather, it pulls customers out of the mainstream value network into the new one because these

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[1] Christensen & Raynor (2003, p. 45)
[2] Christensen & Raynor (2003, p. 81)
[3] Christensen & Raynor (2003, p. 45-46)
[4] Christensen & Raynor (2003, p. 45)

customers find it more convenient to use the new product."[1] Ultimately, incumbents succumb to this shift in consumption pattern.

2.3 Value Network Framework

Rooted in game theory,[2] the value network concept was introduced by Christensen in *The Innovator's Dilemma* to define "the context within which a firm identifies and responds to customers' needs, solves problems, procures input, reacts to competitors, and strives for profit."[3] Christensen makes note that the concept bears resemblance with Nash's Equilibrium, in which case "Company A's understanding of the optimal, self-interested (maximum-profit) strategy of each of the other companies in the systems, Company A cannot see any better strategy for itself than the one it presently is pursuing."[4] Because this applies to all the other companies in the system "none of the companies is motivated to change course, and the entire system therefore is relatively inert to change."[5] He explains that "managerial decisions that make sense for companies outside a value network may make no sense at all for those within it, and vice versa."[6] This is in line with the view that entrants, who are not part of a value network or are new within it, instead find markets which are unattractive to incumbents viable for business to them, in addition to the size of profit margins as another factor on this.[7]

Christensen argues that value networks have a direct bearing on managerial decision-making, as he states that "each firm's competitive strategy, *and particularly its past choices of markets, determines its perceptions* [italics added] of the economic value of a new technology [i.e. innovation]."[8] In this way, he argues further, value networks shape "decision making for organisations within them… organisations grow within these value networks, with the result that 'they are likely to develop capabilities, organizational structures, and cultures tailored to

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[1] Christensen & Raynor (2003, p. 46)
[2] Christensen & Raynor (2003, p. 69)
[3] Christensen (2016, p. 32)
[4] Christensen & Raynor (2003, p. 69)
[5] Christensen & Raynor (2003, p. 69)
[6] Christensen (2016, p. 32)
[7] Given that game theory assumes participants' rational decision-making, the concept of value network can be understood to be based on this similar assumption. However, this is not an exception with Christensen's theory of disruptive innovation. Assumptions of rational decision-making as underpinnings of his arguments are expounded further down, with this section briefly discussing decision-making as it relates to value networks.
[8] Christensen (2007, p. 32)

their value network's distinctive requirements.'"[1] Thus, organisations within the value network will filter the opportunities or threats presented by new innovations in a different manner from those which are outside the value network. For instance, an organisation whose growth strategy has set expectations in conjunction with its current turnover would set growth target based on the size of this turnover. In the case of incumbents, this implies that their profit margins will likely be much higher than those of entrants, meaning that what incumbents perceive as small margins may appear attractive to entrants. On this basis, Christensen concludes that "[v]alue networks strongly define and delimit what companies within them can and cannot do."[2] In relation to this is the view that resource allocation towards innovations will be driven by how organisations see value in a particular market, and because incumbents' growth strategies favour higher profits, disruptive innovations become unattractive. Accordingly, "[t]his pattern of resource allocation accounts for established firms' consistent leadership in [sustaining innovations] and their dismal performance in [disruptive innovations]."[3]

While Christensen recognises that organisations are able to escape value networks, he explains that the process is rather upward than downward, in the sense that it is easier to move into networks of higher value than those of lower value. This is thus in line with the view that profit margins determine which markets will be of interest to organisations and it corresponds with the view that all innovations improve over time. He explains that an "important strategic implication of this *rational pattern of upmarket movement* [italics added] is that it can create a vacuum in lower-end and value networks that draw in entrants with technologies and cost structures better suited to competition."[4] Therefore, rational organisational leaders "can rarely build a cogent case for entering small, poorly defined low-end markets that offer only lower profitability."[5]

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[1] Christensen (2007, p. 33)
[2] Christensen (2007, p. 53)
[3] Christensen (2007, p. 32)
[4] Christensen (2016, p. 87)
[5] Christensen (2016, p. 77)

2.4 Asymmetric Motivation

Christensen considers the impetus to allocate innovation resources for innovation projects as a key problem which shape the innovator's dilemma because it dictates which projects will get funds and those which will not. The disruptive innovation diagram (Figure 1) shows that entrants' innovations start at the lower-end tiers of the market targeting a different set of customers from incumbents'. However, the growth trajectory entrants follow are in the direction of entrants' market segments (i.e. dominant customers), ascending to higher profit levels enjoyed by incumbents. Nevertheless, incumbents remain focused on their dominant customers. Accordingly, Christensen makes note that "[s]ustaining projects addressing the needs of the firms' most powerful customers *almost always* [italics in original] preempted resource from disruptive technologies with small markets and poorly defined customer needs."[1]

The emerging picture is that of unevenness in which, initially, entrants are focused on the lower-end or small markets from which they establish themselves. Nevertheless they ultimately adopt a sustaining strategy and begin to gaze up-market attracted to the profit margins realised by players at the mainstream sector. Conversely, incumbents find entrants' markets less attractive, at least initially. This unevenness, briefly explains the concept of *asymmetric motivation*. Entrants find disruptive innovations attractive in the early stages, at which point derivable profit margins can be accommodated by their cost structures. Incumbents' sizes *vis-à-vis* their growth aspirations, cost structures, competitive pressures and customer demands render disruptive innovations unattractive to them at this early stage. Thus, the concept of asymmetric motivation is central to the innovator's dilemma.[2] However, over time this unevenness takes a different shape, in which incumbents experience declines while entrants ascend to the top. This full rotation is equivalent to a disruption, when the dominant customers incumbents serve subscribe to entrants offerings en masse.

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[1] Christensen (2016, p. 43)
[2] Christensen & Raynor (2003, p. 35)

The "paralyzing effect on industry leaders" which facilitates this rotation and the *considered* resulting customer consumption shift, is summed up in this manner:

> With resource allocation processes designed and perfected to support sustaining innovation, [industry leaders] are constitutionally unable to respond. They are always motivated to go up-market, and almost never motivated to defend the new or low-end markets that the disruptors find attractive.[1]

Thus, asymmetric motivation is regarded as the core factor which is internal to incumbents, disabling them to respond to disruptive innovations. Christensen adds to this, explaining that as entrants move upmarket, they develop skills, processes and cost structures (a business model) suited to operate profitably in these new markets. Thus, entrants evolve with the new market in a manner which places them in stark contrast with incumbents in characteristics necessary to thrive in the same (i.e. disruptive) markets.[2] As incumbents continue to *ignore* these markets, entrants continue to advance in capabilities necessary to render disruptive innovation offerings. Incumbents will in turn struggle to develop the capabilities swift enough as they recognise the necessity. Indeed, Christensen observes that incumbents do at least make efforts to respond, although these efforts are intrinsically made when it is already too late, constraining their outcomes mostly to survival rather than maintaining or regaining leadership positions.[3]

2.5 Resources-Processes-Values Framework

Core to the resources-processes-values (RPV) framework is the view that the very same skills which enable organisations to succeed are the basis for their failure in the face of disruption.[4] The RPV framework portrays organisations as having both tangible and intangible enablers.[5] It is viewed that both resources and processes are likely to be organisational enablers because they represent what organisations can do, however their values contradict this as they define

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[1] Christensen & Raynor (2003, p. 35)
[2] Christensen (2016, p. 47)
[3] Christensen (2016, p. 47)
[4] Christensen & Overdorf (2000, p. 72)
[5] Christensen & Raynor (2003, p. 178-187)

"what organisations cannot do."[1]

2.5.1 Resources

Resources are comprised of "people, equipment, technology, product designs, brands, information, cash, and relationships with suppliers, distributors, and customers."[2] Christensen adds that resources are those organisational enablers which can be "hired and fired, bought and sold, depreciated or built."[3] They are those parts of the organisation which are movable and/or quantifiable, and thus the most tangible of the three.[4] Christensen considers that resources increase the chance for incumbents to successfully respond to disruption; however he acknowledges that this alone is not sufficient.[5] Furthermore, he recognises that on the contrary, entrants' lack of resources is not considered to be a critical success factor in driving disruption as "their values can embrace small markets, and their cost structures can accommodate low margins."[6]

2.5.2 Processes

Processes are defined as "the patterns of interaction, coordination, communication, and decision making employees use to transform resources into products and services of greater worth."[7] Through processes organisations turn inputs, in the form of resources, into outputs, in the form of products or services.[8] Organisational processes can be formal, informal or cultural.[9] While some of these processes are explicitly stated in documents and thus formal, some remain informal and less obvious as, for instance, factors of refinement of the processes are not always documented.[10] Christensen explains that processes contribute to the innovator's dilemma in the sense they are meant to remain relatively unchanged, where any

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[1] Christensen & Raynor (2003, p. 186)
[2] Christensen & Raynor (2003, p. 178)
[3] Christensen & Raynor (2003, p. 178)
[4] Christensen & Raynor (2003, p. 178)
[5] Christensen & Overdorf (2000, p. 68)
[6] Christensen & Overdorf (2000, p. 73)
[7] Christensen & Overdorf (2000, p. 68)
[8] Christensen & Raynor (2003, p. 183)
[9] Christensen & Raynor (2003, p. 184)
[10] Christensen & Overdorf (2000, p. 68)

change is under tight controls so as to achieve consistency.[1] They are designed to achieve specific purposes, and by virtue of this, they cannot achieve different purposes for which they are not designed. Bower and Christensen argue that essentially "the processes and incentives that companies use to keep focused on their main customers work so well that they blind those companies to important new emerging markets."[2] Organisational processes are therefore both strengths, because they are continuously improved to achieve the purpose for which they are designed and weaknesses as they become ineffective in the face of drastic changes.[3] Christensen views that the premises regulating processes have more influence in how organisations approach the analysis of their environments and formulations of strategy.[4]

2.5.3 Values

While values can generally be defined in terms of ethics, in the RPV Framework they are defined more specifically as "standards by which employees set priorities that enable them to judge whether an order is attractive or unattractive, whether a customer is more important or less important, whether an idea for a new product is attractive or marginal."[5] It is reckoned that values govern decision-making, and that this applies throughout different levels of the organisation.[6] In as much as "[a] company's values reflect its cost structure or its business model",[7] values also define weaknesses as they "define the rules employees must follow for the company to prosper."[8] Due to their size, incumbents' values are thus considered to embody growth and the ability to sustain this growth. Therefore, smaller markets are not considered valuable to pursue, an explanation which mirrors prior discussions of asymmetric motivation. As Christensen & Overdorf state it, "[o]ne of the bittersweet results of success, in fact, is that as companies become large, they lose the ability to enter small, emerging

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[1] Christensen & Overdorf (2000, p. 68)
[2] Bower & Christensen (1995, p. 44)
[3] Christensen & Raynor (2003, p. 184)
[4] Christensen & Overdorf (2000, pp. 68-69)
[5] Christensen & Overdorf (2000, p. 69)
[6] Christensen & Raynor (2003, p. 185)
[7] Christensen & Overdorf (2000, p. 69)
[8] Christensen & Overdorf (2000, p. 69)

markets."[1] Thus, we are reminded that the diffusion of innovation usually begins small and grows as it gains attraction, and that this works against the values incumbents develop.

Since organisational strategies tend to be growth oriented, the types of markets they find attractive typically mirror their growth aspiration relative to current sizes. In other words, large firms will have growth targets in proportion to their current annual turnover, a percentage of which is much higher than that of smaller firms.

> A company's values, by necessity, must reflect its cost structure or its business model, because these define the rules its employees must follow in order for the company to make money. If, for example, the structure of a company's overhead costs requires it to achieve gross profit margins of 40 percent, a powerful value or decision rule will have evolved that encourages middle managers to kill ideas that promise gross margins below 40 percent.[2]

The latter part of the quotation reflects the discussions already made previously when discussing asymmetric motivation. There is also a hint of a recognition that values "[must be] consistent with the strategic direction and the business model of the company",[3] which is explained in relation to how larger firms require to equip people at different levels with an understating of what priorities are and on what basis they can make independent decisions. Indeed, these independent decisions are assumed to mirror the firm's values and be in line with its strategic direction and business model. To sum up, resources, processes and values represent internal organisational issues which become impediments for investing in disruptive innovations.

2.6 Decision-Making and Resource Allocation

There are several suggestions so far that the dilemma incumbents come to confront, as explained by Christensen, originates from how organisational members make choices and what influenced the decision behind these choices, which subsequently lead to negative organisational outcomes. As he explains it: "[r]esource dependence as it is enacted through the resource allocation process is the causal mechanism that makes it difficult for the leading

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[1] Christensen & Overdorf (2000, p. 69)
[2] Christensen (2016, p. 165)
[3] Christensen (2016, p. 164)

incumbents to address a disruption."[1] These process are however considered to "make sense",[2] or said alternatively, rational, except that in their consequence they lead to losses in leadership positions and/or failures. Christensen references what he considers as rational to incumbents as those choices that are in line with efforts to satisfy lead customers. This observation is notable from the following statement: "*Good resource allocation processes* [italics added] are designed to weed out proposals that customers don't want. When these decision-making processes work well, if customers don't want a product, it won't get funded; if they do, it will."[3] He explains that "[g]ood management do what makes sense [i.e. what is rational], and what makes sense is primarily shaped by their value network."[4]

Thus, the core arguments which sustain the theory, in as far as incumbents' dilemma is understood, rest upon and are themselves shaped by assumptions about decision-making processes and what influence these decision processes. Implicit in the notion of the innovator's dilemma is the presenting of incumbents as having to *choose* between two supposedly difficult alternatives, namely, disruptive and sustaining innovations. This section looks especially at those aspects of the theory which clarify Christensen's thinking regarding what shapes the processes of decision-making, which he considers to be the eventual difficulties incumbents face in dealing with disruptive innovations.

Christensen reports that he interviewed "more than eighty managers who played key roles in the disk drive industry's leading firms, both incumbents and entrants, at times when disruptive technologies had emerged."[5] He goes further to state that he "tried to construct, as accurately and from as many points as possible, the forces that influenced these firms' decision-making processes regarding the development and commercialization of the technologies either relevant of irrelevant to the value networks in which the firms were at the time embedded."[6] Based on these interviews, he sketches what he refers to as a "decision-making pattern"[7] by which he illustrates decision-making processes in incumbents, meanwhile pointing out observed problem areas of the process. He explains that while incumbents fail in the face of disruption, they are organisations which have nevertheless been

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[1] Christensen (2006, p. 51)
[2] Christensen (2016, p. 42)
[3] Christensen (2016, p. 103)
[4] Christensen (2016, p. 42)
[5] Christensen (2016, p. 42)
[6] Christensen (2016, p. 42)
[7] Christensen (2016, p. 42)

well run, except that "there is something about the way decisions get made in successful organizations that sows the seeds of eventual failure."[1] The assertion can be understood as implying that changing these decision patterns in ways that favour disruptive innovations as well should lead to incumbents' successes in disruptive innovation markets.

Observed as a process of the decision-making pattern, Christensen explains that when prototypes of potentially disruptive innovation are made in incumbent organisations, they are typically presented to lead customers through marketing departments. In line with this is the observation that, during his case studies, prototypes of disruptive innovations were often found to have been previously developed by incumbent organisations despite not being commercialised. If the lead customers show no interest, it typically follows that developments of these prototypes are almost without reservation thwarted. It is only when lead customers show interest do the projects get resources, and when they do not, in which case the innovation does not address the needs of these customers, the project is starved of requisite resources. However, innovations that do not get support do not necessarily die, as entrepreneurial individuals at times do establish new companies to pursue their commercialisation. This cohort tends to include "frustrated engineers from [these] established firms".[2]

It is important to recognise that Christensen considers lead customers as wielding more power in influencing how organisations allocate their resource towards innovation projects. Accordingly, he argues strongly that "demands of a firm's customers shape the allocation of resources in technological innovation",[3] highlighting the relatedness of his views to theories of resource dependence and resource allocation.[4] He has however sometimes made what seems to be an about turn on this, acknowledging it as a "mistake".[5] "A more accurate prescriptive statement is that managers always must listen to customers. They simply must be aware of the direction in which different customers will lead them"[6], he later revised his views. The purported insight behind this revised prescription is, thus, that lead customers are less likely to show interest in innovations which do not fulfil their own needs. The more

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[1] Christensen (2016, p. xii)
[2] Christensen (2016, p. 45)
[3] Christensen & Bower (1996, p. 197)
[4] Christensen & Bower (1996)
[5] Christensen (2006)
[6] Christensen (2006, p. 51)

important insight is perhaps that resource allocation and innovation "are the two sides of the same coin [because only] those new product developments projects that do get adequate funding, staffing, and management attention has a chance to succeeed; those that are starved of reseouces will languish."[1]

Christensen does however bring to light some further intricacies of the processes of decision-making, recognising that "resource allocation is not simply a matter of top-down decision making followed by implementation."[2] He highlights that innovations are typically initiated at the lower levels of the organisations and follow different *filtering* processes dictated by decisions of different people at varying hierarchical levels of the organisation.[3] This is because "crucial resource allocation decisions are made after project approval – indeed, after product launch – by mid-level managers who set priorities when multiple projects and products compete for the time of the same people, equipment, and vendors."[4] This explanation about influences on what ultimately become successful innovation projects, is an illustration of where power lies in organisations in relation to decisions.

As Christensen explains, although it is commonly assumed that executives wield power regarding "important decisions about where a company go and how it will invest its resources… the real power lies with the people deeper in the organization who decide which proposals will be presented to senior management."[5] The point he raises here is particularly interesting given its highlighting of a different place within the organisation where sources of the innovator's dilemma derive, as we begin to see the power of incumbents' leaders as relatively less influential. That is, the executives' making of final decisions is viewed as analogous to rubber stamping decisions which have long been made by different people below them, although such people are mostly viewed as deciding on the basis of customer needs. He also stresses the importance and the closeness of a propensity for success of the project with the career ambitions of different decision makers, which is presented as a pivotal element in determining how innovation proposals are presented to bid for resource sponsorship.

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[1] Christensen (2016, p. 103)
[2] Christensen (2016, p. 103)
[3] Christensen (2016, p. 104)
[4] Christensen (2016, p. 103)
[5] Christensen (2016, p. 236)

Tightly coupled with this is their view of how their sponsorship of different proposals will affect their own career trajectories within the company formed heavily by their understanding of what customers want and what types of products the company needs to sell more of in order to be more profitable. Individuals' career trajectories can soar when they sponsor highly profitable innovations projects. It is through these mechanisms of seeking corporate profit and personal success, therefore, that customers exert a profound influence on the process of resource allocation, hence patterns of innovation in most companies.[1]

Parts of the quotation such as *tightly coupled*, *affect own career trajectories*, and *personal success* begin to show a different element in the process of resource allocation, the focus of which is individuals' aspirations. There are also negative implications for supporting projects which fail due to lack of a market as these "tend to be much more expensive and public failures."[2] Thus, the potential for both success and failure of innovation projects and their close ties with the success or failure of individual's careers are seen as critical in the decision-making processes, which filter and thus determine which projects are ultimately presented to senior managers.

These observations are indeed made in light of, or as influenced by, Pfeffer and Salancik's theory of resource dependence,[3] which Christensen labels as "somewhat controversial" due to its portrayal of executives as powerless, as has just been discussed.[4] Nevertheless Christensen points out that the findings of his studies on disruption support this view, asserting that "customer-focused resource allocation and decision-making processes of successful companies are far more powerful in directing investments than are executive's decisions."[5] It is crucial to also mention that closely related to resource dependence is role of marketing departments, who influence the resource dependence dimension through conducting studies aimed towards understanding the needs of dominant customers. The emerging picture is that of inversed power distribution. Determinants of decisions are largely from outside the firm (i.e. in customers' hands), followed by people from the lower levels of the organisation, with the executives wielding the least influence on decision-making about resource allocation.

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[1] Christensen (2016, p. 104)
[2] Christensen (2016, p. 82)
[3] Pfeffer & Salancik (1978[2003])
[4] Christensen (2016, p. 101)
[5] Christensen (2016, p. 102)

2.7 Incumbents' Market Positions

The theory of disruptive innovation is about the failure of firms which are considered to be leading within their industries and "great", as subtitle of *The Innovator's Dilemma,* in particular makes clear: "when new technologies [or innovations] cause great firms to fail."[1] In this book, as is the case with many of Christensen's publications on the theory of disruption, a long list of industry leading firms as examples of disrupted firms is offered. For instance, he explains that in the case of Digital Equipment Corporation, a previously leading computer manufacturer "the very decisions that led to its decline were made at the time it was so widely *regarded as being an astutely managed firm. It was praised as a paragon of managerial excellence* [italics added] at the very time it was ignoring the arrival of the desktop computers that besieged it a few years later."[2] Such a depiction of astute and excellence are key themes of what characterises incumbents, which indicate how highly esteemed the firms are in the eyes of their observers. Their greatness is not reflected only in their market or industry dominance but also the excellence with which they are considered to be managed. Indeed, Christensen makes reference to their managerial excellence as astounding of characteristic, to which he queries: "Why might firms be regarded as astutely managed at one point, yet subsequently lose their positions of industry leadership when faced with technological change?"[3] The theory of disruptive innovation was born out of Christensen's interest in understanding the cause of failure of leading firms.[4]

The first words of the introduction of *The Innovator's Dilemma* are even more direct.

> This book is about the failure of companies to stay atop their industries when they confront certain types of market and technological change. It's not about the failure of simply any company, but of good companies… It is about well-managed companies that have their competitive antennae up, listen astutely to their customers, invest aggressively in new technologies, and yet still lose market dominance.[5]

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[1] Christensen (1997[2016])
[2] Christensen (2016, p. xi)
[3] Christensen & Bower (166, p. 197)
[4] Lapore (2014)
[5] Christensen (2016, p. xiii)

Notable descriptors denote how esteemed these firms are. They include *good companies*, *well-managed, competitive, admired, emulated, innovative,* and perhaps more important, they *dominate their markets*. Corresponding labels are found, as Christensen makes evident, in prominent business magazines, praising their exceptional performances. It is however notable that these media outlets also report on the misfortunes of these organisations when they face decline.[1] They are not only respected by journalists but also management scholars, considering them as "exemplars to follow."[2] As it is notable, the discernable hues of the theme of high esteem extend to the individual level, portrayed more directly by the phrase "well managed", and although indirectly, by the esteem with which they are held by outsiders. The esteem of organisational members is primarily explained through description of senior managers of incumbents as perceived to be the best in their spaces of business. Senior managers are also the primary focus of analysis in Christensen's theory, with their excellent business acumen referenced extensively to emphasise that they were among the best. As Danneels rightfully observes, Christensen gives much credit to senior managers "insisting on describing them as competent and at the helm of great firms."[3]

It is also important to note what the content of the narrative about these leadership positions of incumbents are, and in what context are leadership positions relevant. For instance, there are both references to industry leadership and market dominance, which highlights some distinctions. Further, it is evident that Christensen recognises that the disruptive and the sustaining markets for these incumbents are not the same. The domination is referred to specific markets, but also notable is that the leadership position is underpinned by and understood in terms of specified offerings.

> IBM dominated the mainframe market but missed by years the emergence of minicomputers, which were technologically much simpler than mainframes. …no other major manufacturer of mainframe computers became a significant player in the minicomputer business. Digital Equipment Corporation created the minicomputer market and was joined by a set of other aggressively managed companies… But each of these companies in turn missed the desktop personal computer market.[4]

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[1] Christensen (2016)
[2] Christensen (2016, p. xv)
[3] Danneels (2004, p. 252)
[4] Christensen (2016, p. xiv)

Digital Equipment Corporation is considered to have "created" a market and joined in the created market by other companies. Where firms are considered to have missed a market, it is the case of these firms not joining, or said alternatively, not being players in this market.

2.8 Critical Review of the Theory of Disruption

Christensen's work offers important insights, with the growth trajectory of innovation being recognised as one of its important features.[1] The theory can also be applauded for highlighting that incumbents tend to lack interest in investing in smaller markets, which nevertheless grow to become dominant and present them with competitive challenges. Thus, it contributes towards prior narrative that incumbents tend to be slow to respond to discontinuous market changes. Christensen demonstrates that despite the fact that firms may initially start within such niches, when they are established they tend to keep holding on to their established markets – holding on to the sustaining path . That is, both entrants and incumbents tend to ultimately gravitate towards a sustaining path, overlooking to establish new markets.

However, the resource dependence theory of resource Pfeffer and Salancik[2] seems to have led Christensen to present incumbents almost as "beggars" who do little to influence the supply of needed resources from their customers. The theory's central argument is that "organizational survival hinges on the ability to procure critical resources from the external environment."[3] It is interesting to note, though, that Pfeffer and Salancik offer an extended view of firms in relation to how Christensen portrays incumbents. The authors explain that despite the constraints placed by external resources, managers make efforts to make their environments favourable,[4] which include various tactics to minimise constraints imposed by the necessary resources.[5] According to Casciaro and Piskorski, one method is through circumventing "the source of constraint by reducing the interest in valued resources, cultivating alternative sources of supply, or forming coalitions."[6] The point here is less about

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[1] Danneels (2004, p. 241)
[2] Pfeffer & Salancik (1978[2003])
[3] Casciaro & Piskorski (2005, p. 167)
[4] Pfeffer & Salancik (1978[2003])
[5] Casciaro & Piskorski (2005)
[6] Casciaro & Piskorski (2005, p. 181)

an exhaustive list of *manipulative* acts, but their existence rather, which bring into focus incumbents' active role in making their environments hospitable.[1]

It remains a question as to the consequences, or as Weeks puts it, the ambiguities of managerial behaviour, following manipulations.[2] Cognition affects actions as represented by explanations of decisions to account for organisational outcomes, but that does not exclude the opposite, in which actions affect cognitions.[3] Pfeffer and Salancik seem to recognise this point, as when they explain that the majority of "constraints on organisational action are the result of prior decision making."[4] In explaining value networks, Christensen makes a (perhaps inadvertently) related remark by highlighting that "each firm's competitive strategy, and particularly its past choices of markets, determines its perceptions of the economic value of a new technology."[5] Accounting for actions in this regard – through demonstrating how prior conduct ties with subsequent cognitions – should bring to light what remains obfuscated by current expositions of the theory of disruptive innovation.

Christensen explains that he "examined the phenomena through the lenses of marketing and finance."[6] The marketing departments, other than doing market surveys to understand user needs – an aspect touched on in the theory of disruptive innovation – they also advertise, the intention of which is to influence how customers perceive their organisations.[7] That is a direct form of environmental manipulation which, for both ontological and epistemological as previously discussed, remained unattended to. Casciaro and Piskorski have already begun addressing incumbents' actions from a financial point of view as cited. These observations, then, invite an inquiry which considers prior decisions or behaviour in explaining conduct, but also sensitive to the consequences of current decisions and behaviour in placing some constraints in subsequent behaviour.[8]

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[1] Huber & Glick (1993, p. 9)
[2] Weeks (2015)
[3] Weick (1964); Weick (2001)
[4] Pfeffer & Salancik (2003, p. 18)
[5] Christensen (2016, p. 32)
[6] Christensen (2006, p. 52)
[7] Huber & Glick (1993, p. 9)
[8] Brunsson (2007); Weick (1995)

Christensen also places greater weight on the deeper organisational filtering processes, especially individuals at varying levels of hierarchy but mostly middle manager, which shape organisational processes of innovation. He stresses the role of people at lower hierarchical levels of incumbents, although he seems to blame decision-making of middle managers and their beliefs in explaining the negative organisational outcomes. What is discernable in these jarring references is recognition that individuals have needs for success, which influence how organisations manage innovation projects. Despite this recognition, he gives these needs and how they influence human conduct less attention.

Further, his explanation about individual organisational members' needs seem to show that the prior debates about organisational values and how they contribute to organisations abilities and disabilities are partial. They are partial to the extent that the needs and values of individuals are not accounted by the RPV model, despite seemingly playing a critical role in directing innovation projects. More important though, they also clash with those of the organisations in which they work, to a degree – for example, this is notable by explanations of frustrated people leaving. Additionally, although there is a hint that Christensen recognises uncertainty as a critical aspect of what challenges established organisations in their response to disruptive innovations,[1] he remains silent as to how these organisations deal with this problem.

As previously hinted, the theory of disruptive innovation has gained much appeal from practitioners and scholars alike, except this has largely not been accompanied by academic scrutiny, at least initially.[2] Weeks correctly notes that Christensen's publications about the theory have largely been published by the Harvard Business Review, and that include *The Innovator's Dilemma*. Hence, these publications are editorially-reviewed, rather than peer-reviewed.[3] While some have made efforts to develop it,[4] arguing for its usefulness, some scholars have challenged its core tenets.[5] Some of the core arguments Christensen makes are thus beginning to be exposed to criticism as notable voices from the academia continue to

[1] Christensen & Overdorf (2000, p. 73)
[2] Gans (2016b); King & Baatartogtokh (2015); Weeks (2015)
[3] Weeks (2015)
[4] E.g. Yu & Hang (2010); Govindarajan & Kopalle (2006)
[5] King & Baatartogtokh (2015); Markides (2006); Danneels (2004)

scrutinise it.[1] These scholars contribute to the development of the theory by highlighting its limitations. This section has built upon previous discussions in the Problem Development section, which make contribution to these critiques. However, the ultimate goal is to highlight the aspects which will be addressed by the alternative perspective of sensemaking which is presented in the next chapter.

2.9 Conclusion

The chapter revisited the core concepts underpinning the theory of disruptive innovation, as principally explicated by Christensen, setting the stage for later discussions of this framework from a sensemaking point of view. The body of work presented in the chapter represents Christensen's thinking on the concept of disruption, and thus serve to specify precisely what Christensen refers to as disruptive innovation and how he theorises about it. In as far as the challenges incumbents face, which lead to their inability to successfully respond to disruptive innovations, Christensen's analysis of organisational processes in short point to decision-making processes as the problem. More generally, he highlights several factors which coalesce around decision-making processes, shaping these processes in ways which lead incumbents to favour sustaining innovations over disruptive innovations. They are presented through the concepts of value networks, asymmetric motivation, and the RPV framework (especially the values aspect). The critical analysis of conceptions of the theory of disruptive innovation highlight several weaknesses which either remain unchecked or have been brought to light but not addressed. These issues will be revisited in in Chapter 4, particularly making effort to discover the potential for the ways in which sensemaking addresses them.

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[1] King & Baatartogtokh (2015); Weeks (2015); Lapore (2014); Markides (2006); Tellis (2006); Danneels (2004).

Chapter 3: Sensemaking in Organisations

3.1 Introduction

The current chapter turns attention to the sensemaking perspective. It looks at the conceptual basis and propositions of the perspective, giving added nuance to how it contrasts with the theoretical assumptions of the theory of disruption. Thereafter, an explanation of what sensemaking entails follows, ensued by discussions focusing on its seven properties. The sensemaking's interruption model is then discussed, which highlights how it instigates and thus demonstrates explicit efforts for making of sense in organisations. Then attention is devoted to beliefs and actions as drivers of the sensemaking, before a critical analysis of the sensemaking perspective is offered. According to Weick "there are ways to talk about organizations that allows for sensemaking to be the central activity in the construction of both the organization and the environment it confronts."[1] The main purpose of this chapter is to demonstrate this central activity.

3.2 Foundations of the Sensemaking Perspective

Weick's thinking on organising and sensemaking has been developed over years through embellishing vestiges of findings from his doctoral dissertation. The study was designed to understand the effects of cognitive dissonance (cognition) on performance (action).[2] Weick reiterates that "[w]hat continues to interest [him] about that study is that it does not only capture the effect of cognition on action, it also captures the effects of action on cognition."[3] Thus, the sensemaking perspective sheds light on the effects of both cognition and actions on each other, or more precisely, the interplay of these effects. The historical roots of the sensemaking perspective are however not as easily traceable. Citing potential "seductions of hindsight bias and concealment of the powerful role that chance plays in the determination of outcomes,"[4] Weick remains indisposed to their tracing. Hindsight bias, as a characteristic of reflective thought, is indeed one of the key themes of the sensemaking perspective.

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[1] Weick (1995, p. 69)
[2] Weick (1964)
[3] Weick (2001, p. 6)
[4] Weick (1995, p. 65)

Retrospection is one of its seven properties.[1] The hints of chance's role in the process are clearly indicated by its plausibility quality.[2] It would thus appear as though Weick eschews being caught up making effort at accomplishing that which his work demonstrates as hard to.

One of the earliest sources Weick references is the American philosopher and psychologist William James' 1890 publication, *The Principles of Psychology*, in which issues of human consciousness are of focus, especially regarding how consciousness selects stimuli (cues) relevant to current projects from its environment.[3] Sensemaking (initially spelled sense-making) as a tool to conceptualise organising was first introduced by Weick through his seminal book, *The Social Psychology of Organizing,* as a core function in his Enactment-Selection-Retention [ESR] model.[4] The ESR model is a portrayal of a "reciprocal relationship between ecological change and enactment [which] includes sensemaking activities of sensing anomalies, enacting order into flux, and being shaped by externalities."[5] The model draws from ecological studies to explain organisation-environment relation, in which the degree of organisational openness to discontinuities or changes in its environment places demands on sensemaking processes driven to achieve internal order in relation to the external changes.[6] This process may also start with organisational actions, which change their environment and thus invigorate cues to which attention is subsequently drawn.[7]

Weick's *The Social Psychology of Organizing* expresses a dissatisfaction with the dominant theorisation about organisations of the time, which are however still dominant to date. Eisenberg notes that before Weick, "organizational analysts regarded equivocality as inherently problematic and to be either ignored or expunged from organizational life. Weick turned this idea on its head, arguing instead that equivocality is the engine that motivates people to organize."[8] Weick's work moves away from and challenges assumptions about the rational model of organisations. As pointed out on the back cover of *Sensemaking in Organizations,* the more dominant rational model of organisations and its "focus on decision making and the conception of strategic rationality… ignores the inherent complexity and

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[1] Boland (2008, p. 58); Weick (1995, pp. 24-30)
[2] Weick (1995, pp. 55-61)
[3] Weick (1995, p. 65)
[4] Maitlis & Christianson (2014); Boland (2008); Weick (1969)
[5] Weick *et al.* (2005, p. 414)
[6] Weick (1995, p. 70); Weick (1979, pp. 130-131)
[7] Weick (1995, pp. 30-38); Weick (1988)
[8] Eisenberg (2006, p. 1696)

ambiguity of real-world organizations and their environments."[1]

Weick views organisations and their environments as complex entities, which are in constant flow of rapid change. On this basis he conceives that the core question to pursue when studying organisations is less about what they are than the processes by which they are produced.[2] He further counsels that organisational scholars have to "stamp out nouns" and replace them with verbs or gerunds when talking about organisations.[3] This redirects attention away from an objectified view of organisations (e.g. structures) to the organising process which draws together human action towards collective objectives. He affirms that "[t]he language of sensemaking captures the realities of agency, flow, equivocality, transience, re-accomplishment, unfolding, and emergence, realities that are often obscured by the language of variables, nouns, quantities, and structures."[4] Despite the focus on process over structure, Weick does not outright reject objective reality of organisations. He submits that if we froze, or observed over a short time interval, the core process by which human action is organised (i.e. sensemaking), we would be disposed to adopting a realist ontology and see an object. However, an extension of this duration over longer periods sensitises the observer to the core process which holds together the organised activity.[5]

Another point Weick raises concerns the limited information processing capacity of humans, which draws from Simon's notion of *bounded rationality*, in which the challenge for theories of rational decision-making are brought to light. As Weick puts it "[t]he essence of this notion is that individuals have perceptual as well as information-processing limits, and even though they may intend to act rationally, they can do so only in a limited fashion."[6] Therefore, not only do humans have to make decisions which are "satisfying", but further, implementation of that which follows from the decisions are also subject to limitations due to the grounding of the decision in satisfying conclusions.

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[1] Weick (1995)
[2] Weick (1969)
[3] Weick (1979, p. 44)
[4] Weick *et al.* (2005, p. 410)
[5] Weick (1969)
[6] Weick (1969, p. 9)

Weick traces his earlier interest in sensemaking back to Garfinkel's study of decision-making in jury deliberations in the 1960s, which demonstrated how "[f]acts were made sensible *retrospectively* [italics added] to support the jurors' choice of verdict."[1] This suggests an inversed construction of accounts where a conclusion is first entertained, after which justifiable "facts" which support that conclusion are selectively sought. Weick associates this with Festinger's dissonance theory and its concern with "*post*decisional [italics in original] efforts to revise the meaning of decisions that have negative consequences."[2] What is interesting about both these cases is that prior decisions go through revisions contingent on their outcomes, meaning that which is finally referred to as the decision is in effect only belated as the "outcome comes before the decision."[3] This insight sensitises investigators to potential biases which can be involved when people construct accounts about which decisions are placed as precursor for some related outcomes.[4] The sensemaking perspective is also informed by ethnomethodology. Weick parallels that with cognitive dissonance theory given that both operate under the assumption of a presence of some observer, which influence conduct by placing demands on accountability on human actors to prove rationality and social competence.[5]

3.3 Sensemaking Explained

Weick explicates sensemaking as a process through which human consciousness attends to portions (extracted cues) of their ongoing flow of experience and draw from a stock of prior conceptions (frames) of reality stored in memory to generate plausible account of what is going on.[6] What makes sense is that which resembles something in the past,[7] which means

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[1] Weick (1995, p. 10); for disambiguation, both Brenda Dervin (1999) and Dave Snowden (2005) have proposed variations of "sense making" theorisation which differ from the Weickean perspective as discussed in this chapter.

[2] Weick (1995, p. 11)

[3] Weick (1995 citing Garfinkel, 1967)

[4] It is observable thus, that Weick does not move away from theories of decision-making, but instead draws our attention to how rationalisation of decisions shapes cognition as efforts are made to find justifiable "facts" supporting outcomes of decisions. This also begins to show that the earliest parts of decisions may not be as clear in later stages, which means that which is referred to as the decision may have only been formulated in light of evident outcomes.

[5] Weick (1995, p. 13)

[6] Weick (1995)

[7] Weick (1995, p. 110, 170)

the process relies on reflective thought.[1] Sensemaking is the search for answers, first to the question "what's the story here?", or queried alternatively, "what is going on?", and the second question, "now what should I do?" which implies that the process orientates and regulates human conduct towards the emerging reality.[2] While prior experience (causal maps) affords people a sense of immersion into their current flow of experience through a sense of familiarity, occasions which lack in this familiarity violate the flow of experience, which engender a search for meaning, or said alternatively, instigate a sensemaking process driven by a quest for meaning.[3]

Unusual situations, under which held expectations about how the world functions come under duress, instigates the sensemaking process, just as it is the case for a need to act into worlds in which no clear expectation have been constructed yet.[4] The inability to generate an account equates to absolute lack of congruity between any held expectation with what is occurring, or what may occur, which leads to a state of puzzlement. The collapse, violation or interruption of expectation engenders a search for answers for the two questions as previously mentioned and thus, to solve the puzzle. Plausible hunches are constructed based on the stock of frames stored in the memory and tested through action. However, this process unfolds on, and therefore changes, *for better or worse*, the puzzling situation just as it affords the opportunity to generate meanings for resolving the puzzle.[5] The recursive interplay between actions and cognition *potentially* leads to the enlargement of the speculation *as* it continues to gain some credence.[6]

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[1] Weick (1995, p. 24-30)
[2] Weick *et al.* (2005)
[3] Weick *et al.* (2005)
[4] Weick (1995, p. 83-100)
[5] Weick (1988)
[6] It is important to note so far that what perpetuates this process is not so much that credence is built upon accurate resemblance, which was implied by the mention of a construction of "plausible account" earlier, as it may be a belief analogous to a self-fulfilling prophecy set in motion. Thus, plausible sense made may turn out to be perceived as accurate sense depending on whether the initial hunch or supposition validated itself by initiating favourable actions, which in their outcome confirmed the supposition. Weick broadens the self-fulfilling prophecy proposition, initially made by Merton (1948 as cited by Weick, 1995, p. 147), in which the latter viewed the incipient supposition as inaccurate, or an error. However, Weick contents that whether the initial supposition was accurate or not will depend on who the observer is, for he or she who confirms it by their actions under the drive of such an "inaccurate" hunch, can only perceive the initial prophecy as having been accurate because the outcome proved it. Thus for Weick, if the initial supposition was verified, then it *means* it was accurate. (Weick, 1995, p. 147)

Explained within the organisational context, sensemaking is considered to be "a significant process of organizing… [which] unfolds as a sequence in which people concerned with identity in the social context of other actors engage ongoing circumstances from which they extract cues and make plausible sense retrospectively, while enacting more or less order into those ongoing circumstances."[1] In addition to highlighting the significance of sensemaking as a mechanism by which organising is achieved, this explanation highlights core characteristics of the process, which are identity construction, retrospection, enactment, social, ongoing, extracted cues, and plausibility. Most important, the enacting of "more or less order" highlights the important fact that the outcomes of efforts to make sense of puzzles "are not always sanguine."[2] The counsel here is that sensemaking and its genesis trade on invention rather than discovery. The strength of the beliefs under operation and the resultant plausible sense made, greatly influence the direction of its ensuing processes.

Because any process which follows from interrupted expectations constructs new meanings, Weick has the following caution: "When people confront noncontingent reinforcement of their [interaction with their environment], they try to discover a structure that is not there. Their main recourse is invention."[3] Commitment may be achieved just as a window of danger may open because "[t]these inventions tend to be plausible, persistent, and sealed off from refutation."[4] This is because "once a tentative explanation has taken hold of our minds, information to the contrary may produce not corrections but elaborations of the explanations."[5] In other words, sensemakers are disposed to the potential for acting either favourably or dangerously, the latter of which may persist even in the face of information which suggests the behaviour is not favourable to the actor or their subject.

A study by Weick and Sutcliffe about the conduct of leaders at Bristol Royal Infirmary's (BRI) makes that point clearer. The authors observed how members of the BRI continued to administrate a paediatric cardiac surgery program for many years despite evidence showing its failure as the death rate of the centre was much higher than the national statistics.[6] As Weick highlights, "[t]hat mindset prevailed partly because surgeons constructed their identity

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[1] Weick *et al.* (2005)
[2] Weick *et al.* (2005, p. 416)
[3] Weick (1995, p. 84)
[4] Weick (1995, p. 84)
[5] Weick (1995, p. 84 *citing* Watzlawick, 1976, p. 50)
[6] Weick & Sutcliffe (2003)

as that of people learning complex surgical procedures in the context of unusually challenging cases."[1] Although this is a case of a public institution and not a firm, Weick has often reminded us that what is explained in the sensemaking perspective concerns human conditions, which means any given context with favourable ingredients for commitment may lead to a similar conduct. It was the justifications considered acceptable within the context that allowed for the organisational members' beliefs to continue taking such a harmful route.

3.4 Properties of Sensemaking

Previous discussions have indicated that the sensemaking process is characterised by seven properties, often referred to as Weick's "sensemaking framework".[2] He suggests that they are core explanatory guides to understanding the sensemaking process, "how it works, and where it can fail."[3] Weick likens the seven properties to "an observer's manual or a set of raw materials for disciplined imagination."[4] That is, the listing provides a set of ideas which may be used to probe the subject of interest to elucidate which among them become evident or salient. Weick captures this framework in what he calls a "recipe" for sensemaking. It follows a narration of a little girl who is told to think before speaking, to which she quizzes: "How can I know what I think till I see what I say?"[5] Notably, in this question the girl wanted her action of saying to precede her presentation of what she will explain her thoughts as, because from that point she would have generated a fodder from which her later justifications about what she considers to be her thoughts can feed from.

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[1] Weick *at al.* (2005, p. 416)
[2] Maitlis & Christianson (2014, p. 62)
[3] Weick (1995, p. 18)
[4] Weick (1995, p. 18)
[5] Weick (1995, p. 12); according to Weick, the I represents identity, the saying which precedes the thinking both indicate that action precedes cognition, which is retrospective and that this action put something out there to be inspected, which equates to enacting an environment. Further, this process unfolds in a social setting, implied by he or she who asks the initial question and thus socialises the girl. The question is also spread over a duration, which explains the ongoing property. The focus of the talk is on the "what" the girl thinks, which is the cue extracted, but there also remains an element of doubt which means that which is ultimately the answer is plausible (pp. 61-62).

3.4.1 Grounded in Identity Construction

Weick firmly anchors the sensemaking process in the human actor's identity construction, highlighting that in the previously mentioned sensemaking recipe *she* who does the sensemaking is the central point of reference.[1] While this may denote a quality of individuality, Weick maintains that "no individual ever acts like a single sensemaker."[2] That is, from a Weickean standpoint, sensemaking is always social. He explains that people assume different identities given different social settings, a point made vivid through Mead's depiction of an individual as a "parliament of selves".[3] The result is that for human actors, to shift "among interactions is [to] shift among definitions of self",[4] which implies a process in which continued assessment in pursuit of finding and presenting the self which is considered appropriate for certain settings is always ongoing.

While that may suggest that different contexts will represent sources of the puzzles, the attempt to find a suitable self for a said context also points to self-definition as another source. As Weick puts it "the sensemaker is himself or herself an ongoing puzzle undergoing continual redefinition, coincident with presenting some self to others and trying to decide which self is appropriate."[5] The more general point is that the self and the context recursively influence each other, despite the higher chances that the "self, rather than the environment, may be the text in need of interpretation."[6]

Brought to organisational settings, Weick shares the important insight that, "who we think we are (identity) as organizational actors shapes what we enact and how we interpret, which affects what outsiders think we are (image) and how they treat us, which stabilizes or destabilizes our identity."[7] Some identity scholars have gone further to make connections between organisational identity, image and reputation. As it is notable above, usage of the concept "image" here functions as a referencing tool which represents external stakeholders' perceptions of the organisation. Thus, an image refers to the meanings held by external stakeholders about an organisation's references *as interpreted and perceived by internal*

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[1] Weick (1995, p. 18)
[2] Weick (1995, p. 18)
[3] Weick (1995, p. 18)
[4] Weick (1995, p. 20)
[5] Weick (1995, p. 20)
[6] Weick (1995, p. 23)
[7] Weick *et al.* (2005, p. 416)

stakeholders. However, from external stakeholder perspective, the image constructed about an organisation equates to reputation.[1] This, then suggests that the concept of image serves as the nexus through which "[i]dentity and reputation depend on… and feed off each other"[2] as they are interlocked by these perceptions from the internal and external sides of organisations. Indeed, organisational identity is considered to be "the backbone of reputation."[3]

Weick makes clear that identity construction and the process of sensemaking in general, involve affect, the negative feeling of which motivates actions to repair the perceived discrepancy. Despite the fact that "people learn about their identities by projecting them into an environment and observing the consequences";[4] and also by taking "cue for their identity from the conduct of others, [although making] effort to influence this conduct to begin with",[5] observers do not accept those presented identities arbitrarily. More important, he or she who does the sensemaking is conscious of the observers' conduct, and in fact sizes up their appraisals in the process, the inferred judgements of which influence subsequent sensemaking.

> Depending on the "weight and character" of the questioner [i.e. the observer], the imagined judgement of that person, and one's own resulting *self-feeling* [italics added], that small act of sensemaking… can affect individual interpretations and actions, which can then diffuse and have much larger organizational effects.[6]

Thus, it further matters who the observer is and the weight of their feedback influences subsequent sensemaking. Weick parallels the negative affect with how people deal with cognitive dissonance, as when he states that "the chance to reaffirm a self-concept reduces the discomfort felt when the person confronts discrepancies between belief and action similar to those that animate dissonance reduction."[7]

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[1] Brown *et al*. (2006)
[2] Rindova & Fombrun, (1998, p. 66)
[3] Fombrun (1996, p. 111)
[4] Weick (1995, p. 23)
[5] Weick (1995, p. 23)
[6] Weick (1995, p. 22)
[7] Weick (1995, p. 23)

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Weick gives added nuance to explain issues of identity construction within organisational settings by drawing from Dutton and Dukerich's analysis of a case of identity ambiguity or dissonance at New York Port Authority. This was a result of homeless people occupying the facilities of the organisation, "whose identity in the eyes of its employees was that of a professional, altruistic, can-do agency that acted like a family while delivering quality service".[1] This presented organisational members with certain degrees of ambiguity as their organisation was now associated with a social problem which lends itself to multiple interpretation. As such, "the positive identity and the negative image affected members' interpretations of who they were, what they felt, what they faced, and what they were doing."[2] Because individual organisational members construct meanings about the self idiosyncratically, nevertheless relative to the organisations for which they work, their perception about the meaning outsiders attach to their organisations have a bearing on their sense of self as it does to their sense of association to their organisation's identity. Weick explains how dynamics of this complexity could lead to individual organisational members, who assume both the identity of the individual self just as this individual self could act as *the* organisation,[3] making efforts to maintain, try to repair, or dissociate with their organisation's identity.[4]

Thus motivation to maintain or repair the identity of their organisations hinges strongly, or weakly, on the degree of organisational members' association with the identity of their organisations. Because "depending on who I am, my definition of what is 'out there' will also change",[5] dissociation and association with organisational identity are coping mechanisms organisational members may apply in dealing with the ambiguities. How organisational members associate and dissociate with organisational identity has a bearing on how they interpret organisational events, given that interpretation depends on the definition of the self in relation to *what is out there.*

Weick suggests that organisational members are inclined to engage in efforts which are likely to paint them in a positive light, an explanation which ties to the three identity needs drawn from the cultural self-presentation theory of Erez and Earley. Weick presents identity

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[1] Weick (1995, p. 21)
[2] Weick (1995, p. 21)
[3] Weick (1995 *citing* Dutton & Dukerich, 1991)
[4] Weick (1995, p. 21)
[5] Weick (1995, p. 20)

construction as aimed towards sustaining self-enhancement, self-efficacy and self-consistency.[1] A threat to affirming any of the three triggers a sensemaking process aimed towards restoring the disconfirmed need. As Weick puts it "[t]he meaning that is actually sustained… tends to be one that reflects favourably on the organization and one that also promotes self-enhancement, efficacy, and constancy."[2] Furthermore, he points out that threats to identity may instigate sensemaking processes driven to "alter the sense they make of those images, even if it means redefining the organisational identity."[3] He also suggests that organisational members may intentionally engage in sensemaking processes which aim to redefine their organisational identity in the event that efforts to repair the meanings attached to the identity of their organisations fail. More important for the current study is the sequence here, in which the first efforts are driven toward repairing the identity, after which the alternative action of seeking a new identity would follow.

The overarching, implicit message in Weick's discussions of identity in sensemaking is that the property of identity construction is more influential in the process of sensemaking relative to the other properties. For instance, the implied message in the saying that sensemaking is "grounded in identity construction", is a hint that the identity of the sensemaker is the primary concern and has a major influence on how the process unfolds. Indeed, he points out that "sensemaking begins with a self-conscious sensemaker",[4] a point more vividly stated earlier by pointing out that all of the four pronouns of the sensemaking recipe point to the sensemaker. Further, Weick stresses that "the establishment and maintenance of identity is a core preoccupation in sensemaking"[5] because "[d]epending on who I am, my definition of what is 'out there' will also change."[6]

While all these observations are implicit in Weick's discussions of sensemaking, he explicitly concedes to Helms-Mills' argument that identity construction "is at the root of sensemaking and influences how other aspects or properties of the sensemaking process are understood".[7] Also important to the current study is the observation that "[b]eliefs about the identity of the

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[1] Weick (1995, p. 20)
[2] Weick (1995, p. 21)
[3] Weick (1995, p. 21)
[4] Weick (1995, p. 22)
[5] Weick (1995, p. 20)
[6] Weick (1995, p. 20)
[7] Weick *et al.* (2005 *citing* Helms-Mills 2003, p. 55)

firm are a key part of the mental model",[1] which influences organisational strategy.[2] Weick's analysis of the work of Porac *et. al*., demonstrates how organisations competing within the same space identify themselves as players within the market, and yet seek to differentiate their competitive characteristics from the rest. The study also highlights how leaders' mental models help define organisational strategy and its competitive space.[3] Some scholars note that "identity is a major influence on the resource allocation process… [as] the firm that defines itself as a distinctive consumer products company will seek to build organizational processes and to accumulate the resources and skills that complement this identity."[4] Thus, organisational identity, as a metaframe within which the environment is interpreted and meaning is made, plays a critical role in defining what organisations do and where they prefer to direct their actions.

Weick has allegorically explained tools as the mode by which people identify themselves, noting that sensemakers tend to be unwilling to drop these tools, even when it is critically indispensable to do so. They do so because dropping the tools is equivalent to dropping their identities, which leads to puzzles in as far as one does not know who they are afterwards.

> The reluctance to drop one's tools when threat intensifies is not just a problem for firefighters. Navy seamen sometimes refuse orders to remove their heavy steel-toed shoes when they are forced to abandon a sinking ship, and they drown or punch holes in life rafts as a result. Fighter pilots in a disabled aircraft sometimes refuse orders to eject, preferring instead the "cocoon of oxygen" still present in the cockpit. Karl Wallenda, the world-renowned high-wire artist, fell to his death still clutching his balance pole, when his hands could have grabbed the wire below him.[5]

Despite the symbolic flavour of these examples when used to explain organisations and the people within them, Weick has suggested the social-psychological implications of dropping these tools have usefulness in analysing the conduct of organisational members.[6] Weick and associates emphasise Albert and Whetten's description of organisational identity as that

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[1] Weick (1995 citing Porac *et al.* 1989, p. 399)
[2] Weick (1995, p. 76)
[3] Weick (1995, pp. 76-77)
[4] Stimpert *et al.* (1998, p. 88)
[5] Weick (1996, p. 301)
[6] He also demonstrated how even scholars, just as it is the people they study in organisations seem to have the same challenge, often reluctant to drop their outdate paradigms (Weick, 1996).

which is "core, distinctive, and enduring about the character of the organization"[1] as the basis upon which inquiries of identity are built. Some scholars have come to demonstrate that identity is indeed malleable and can be changed, despite the acknowledged difficulty related to the process.[2]

3.4.2 Retrospective

The property of retrospect brings into focus the position of the person who does the sensemaking in relation to duration or time, and the implication of the ongoing, fleeting quality of time and its experience on attention. Weick explicates that time has two distinct forms. The first is the "coming-to-be and passing-away that has no contours, no boundaries, and no differentiation."[3] This denotes an ongoing, never-stopping quality of time which, however, when its portions are bracketed and attended to, can also be understood in terms of episodes. He states that the latter form is more common because it is how we usually perceive (or rather talk about) time. The splitting of pure duration into portions or episodes *only* implies that direction of attention is towards portions of the continuity, and in effect, that which has already elapsed.[4]

Therefore, "the creation of meaning is an attentional process, but it is attention to that which has already occurred."[5] This is particularly so because the never-stopping quality of time dictates that our perception of reality is in fact always delayed and therefore in the past, even if this delay may be as minute as a fraction of a second.[6] As such, the slight passing of portions of our perception into the past is inescapable. The implication of this is that, no matter how small the slippage is, human perception is in reality always a memory. That anchors Weick's argument that sensemaking can only be retrospective. He makes this point clearer by stating that "it is only possible to direct attention to what exists, that is, what has already passed."[7]

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[1] Weick *et al.* (2005 *citing* Albert & Whetten, 1985)
[2] Gioia & Thomas (1996)
[3] Weick (1995 *citing* Schutz, 1967, p. 47)
[4] Weick (1995, p. 25)
[5] Weick (1995, pp. 25-26)
[6] Weick (1995 *citing* Schutz, 1967)
[7] Weick (1995, p. 25)

Brought closer to organisational context, Weick makes clear the influence of the mixed content which passes into the past, from which content for meaning construction is drawn. To do so, he also points out an element instrumental to the glancing back, namely current action. Given that "people typically have more than one project underway, and have differing awareness of these projects, reflection is overdetermined and clarity is not assured."[1] Thus, over-determination of reflection is dictated by the fact that attention can only be backward, although there remains the challenge that the past makes "many different kinds of sense"[2] given the varied, passing away content *vis-à-vis* undergoing projects. He stresses that this leads to confusion, rather than ignorance.

> The important point is that retrospective sensemaking is an activity in which many possible meanings may need to be synthesized, because many different projects are underway at the time reflection takes place… The problem is that there are too many meanings, not too few. The problem faced with a sensemaker is one of equivocality, not one of uncertainty. The problem is confusion, not ignorance.[3]

The challenge, for organisations, is therefore that different people will interpret events differently, given their differentiated sentiments and goals in relation to similar projects. As he puts it "projects and feelings that are under way will affect the backward glance and what is seen."[4] The recognition that people in the higher up levels of organisations see and interpret event differently from those who are the lower levels of organisations,[5] in particular underscores this notion. Another implication of this is that "meanings change as projects and goals change."[6] This explains the reality of organisational life where projects are not only underway at the same time, but are as likely to compete for attention and resources too. He views that what will guide what people search for when they look back is "values, priorities, and clarity about preferences" because these help with prioritisation of critical projects,[7] but in so doing also direct attention to specific cues over others.

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[1] Weick (1995, p. 27)
[2] Weick (1995, p. 27)
[3] Weick (1995, p. 27)
[4] Weick (1995, p. 26)
[5] Weick (1995, p. 27)
[6] Weick (1995, p. 27)
[7] Weick (1995, pp. 27-28)

Furthermore, retrospection introduces the element of hindsight bias in sensemaking.[1] The point Weick makes is that glancing backward does not yield accurate results, and that this is contingent on whether the outcomes are already known or not. Thus, retrospective sensemaking edits the history of outcomes which are already known in a manner which simplifies what led to the outcomes. Drawing from Starbuck and Milliken, who assessed the accuracies of executives' perceptual filters, Weick states the following: "If the outcome is perceived to be bad, then antecedents are reconstructed to emphasize incorrect actions, flawed analysis, and inaccurate perceptions, even if such flaws were not influential to or all obvious at the time."[2] Weick reminds us that everyday sensemaking involves short time spans which should minimise the effects of hindsight bias. He advises students of sensemaking to take seriously, or rather "become more comfortable" with retrospective sensemaking as it underpins most assumptions about organisations, including issues of strategy,[3] just as it does organisational structure.[4] On this, he sensitises the student of sensemaking to the role of hindsight and how its influence permeates much of organisational reality.

3.4.3 Enactive of Sensible Environment

The essence of enactment sensemaking is that actions produce cues which serve as raw material that form part of, or become, that which is perceived as *the* environment. If we unpack the inherent process of 'enacting of sensible environment', we see that it contains two parts, the first of which is an action, which produces and links directly to the second part, which is a sensible environment. In effect, it is the consequences of actions which produce that which becomes sensible. Viewed within the context of organisations, Weick's idea suggests that sensible portions of the organisations and their environments are in part produced by the actions that go on in organisations. He states that "people who act in organizations often produce structures, constraints, and opportunities that were not there before they took action."[5] Thus, Weick's idea functions as a useful analytical tool to observe organisations and the actions which go into them, or put more precisely, to observe how actions produce organised work, opportunities and constraints within organisations.

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[1] Weick (1995, p. 26)
[2] Weick (1995, p. 28)
[3] Weick (1995, p. 29)
[4] Weick (1995, p. 24)
[5] Weick (1988, p. 306)

To portray how managers enact their environments, and in what ways they produce structures, constraints and opportunities, Weick analogises law making with managing. Law makers, he explains, "take undefined space, time and action and draw lines, establish categories, and coin labels that create new features of the organisation that did not exist before."[1] The same can be said about strategy formulation, where lines are drawn for instance, about what will be done, how it will be done, timeframes for completion, including what will be excluded. In so doing, people will act within the confinement they placed in their environment, which did not exist before.

To convey the same message, Weick uses the word "materialize". He and his associates state the following: "When we say that *meanings materialize* [italics added], we mean that sensemaking is, importantly, an issue of language, talk, and communication. *Situations, organizations, and environments are talked into existence* [italics added]."[2] Apart from the hint that words are the content of sensemaking, this exposition highlights what the process, including its content, does. They produce meanings which, in their subsequent perception, become the feedstock of what is considered to *the* reality. Said alternatively, the outcome of sensemaking equate to such sensible, noticeable (to a degree, orderly) realities as situations, organisations and environments. A similar term he uses, which nevertheless puts in clear view the role cognition plays in the process, is "real-ize". In his words, "[i]n the process of acting out and real-izing their ideas… [people] create their own realities."[3] The word "real-ize" suggests invention, instead of discovery. It literally means, to bring into reality. Thus, actions turn those that were abstract (ideas) into concrete or perceptible things (realities). These realities are linked, or more precisely, *relate* directly to the actor, as indicated by the adjective, "own".

In other words, organisations are not detached from their environments, but instead they *relate to these environments*, which is in contrast to conceptualisations of organisations which are reactive to supposedly detached environments. Weick states that, instead of "talking about adapting to an external environment, it may be more correct to argue that organizing consists of adapting to an enacted environment, an environment which is

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[1] Weick (1995, p. 31)
[2] Weick *et al.* (2005, p. 409)
[3] Weick (2001, p. 195)

constituted *by actions* [italics in original] of interdependent actors."[1] This enacted environment represents the raw material left from elapsed action, referred to as a "residuum" as well, chiefly to stress its *coupling* with the actor and related implications.

> The word 'residuum' is preferred to the word 'residue' because residuum emphasizes that what is left after a process cannot be ignored or left out of account because it has potential significance… The product of enactment is not an accident, an afterthought, or a byproduct. Instead, it is an orderly, material, social construction that is subject to multiple interpretations.[2]

An important point for issues of sensemaking is captured by the last line, and that is, this residuum lends itself to multiples interpretations. Organisations are themselves social constructions, which implies that they are products of social interaction, which involves a synthesis of multiple, idiosyncratic meanings of individuals. The result is that the system is itself is a reservoir of differentiated beliefs, and despite that it is saturated in and held together by relatively uniform beliefs or values, and it is still capable of producing multiple interpretations of a single point of reference.[3]

While it is evident so far is that actions and cognition are involved in the process. Weick is resolute about the sequence, arguing that at "the heart of enactment is the idea that cognition lies in the path of the action."[4] In his view, people "often don't know what the 'appropriate action' is until they take some action and see what happens… it is less often true that 'situations' determine appropriate action than that 'preconceptions' determine appropriate action."[5] This implies that 'appropriate action' is relative to the consequences of the preceding actions, except those elapsed actions were under the direction of, and testing prior conceptions. In this way, "frames guide conduct by facilitating the interpretation of cues turned up by that conduct."[6] Thus, not only do people's actions effect changes to the environment, but these very actions are based on preconceptions developed in prior sensemaking, which he explains in this manner: "Actions enable people to assess causal beliefs that subsequently lead to new actions undertaken to test the newly asserted

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[1] Weick (1969, p. 27)
[2] Weick (1988, p. 307)
[3] Weick (1995, p. 71)
[4] Weick (1988, p. 307)
[5] Weick (1988, p. 306)
[6] Weick (1995, p. 127)

relationships."[1] What Weick also highlights is uncertainty in the outcomes of actions, implied here by the assertion that the preconceptions (causal beliefs) are themselves undergoing assessment and updating on the basis of outcomes of recent actions. In other words, the testing of causal beliefs implies that the actor's puzzle is ongoing.

Another important aspect of Weick's conceptualisation of the sensemaking perspective for the current study, and in particular enactment as a process which materialise situations, organisations and environments, is the relation frequently referenced thus far. The relation between human actors and their outputs, or lifted instead to the macro level of analysis, between organisations and their environments, Weick's exposition sensitises us further to consequences of environmental changes for organisations which remain open to these inputs. As we have noted in identity construction, the exchange of inputs works also in reverse. Thus, "[p]eople create the environment as the environment creates them."[2] Therefore, Weick counsels that we should eschew *anticipatory judgement*. He draws from Follet to give nuance to this idea,[3] pointing out that outcomes of this relation cannot be predicted. To elaborate, Weick points out that what is often observed as the outcome is a portion of an ongoing process.

Some of the preceding expositions do indeed reveal realist ontological hues in Weick's ideas, as when reference was made to realising and materialising. This "ontological oscillation" is however something Weick embraces. In Weick's explanation "[p]eople engage in oscillation when they attempt to show how the supposedly hard, concrete, tangible aspects of organisational life are dependent on subjective constructions, but smuggle in realist assumptions that posit constraints and objects that exist independent of subjective constructions."[4] In this analysis, which is characteristically ontologically oscillating, Weick moves between the subjective quality of human actors' preconceptions in enabling them to register that which is seen[5] and its nuances for interpretation. This however also points to real objects which are seen, or may be *realised/materialised*. Not only is the material world socially constructed, in this fashion, but it influences further processes of sensemaking.

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[1] Weick *et al.* (2005, p. 416)
[2] Weick (1995, p. 34)
[3] Weick (1995, p. 33 *citing* Follet, 1924)
[4] Weick (1995, p. 34)
[5] As he puts it, from a sensemaking standpoint, believing is seeing.

More important, the nuance to organisational actions is neatly coupled with the challenges or fortunes organisations come to face.[1] If the "enactment perspective urges people to include their own actions more prominently in the mental experiments they run to discover potential crises of which they may be the chief agents",[2] organisational observers should then come to grips with sensitiveness to potential spinoffs of actions which go on into these organisations.

3.5.4 Social

Previous discussions about identity construction have already begun to highlight the social quality of the sensemaking processes. This section gives added detail. In sum, human conduct "is contingent on the conduct of others, whether those others are imagined or physically present."[3] Hence, sensemaking "is never solitary because what a person does internally is contingent on others. Even monologues and one-way communications presume an audience... [They] change as the audience changes."[4] Accordingly, organisational life is conceptualised as social just as the process of coordinated action is premised on shared meanings, by which people manage to achieve agreed upon goals.

However, Weick goes beyond the narrative about shared meanings used often to explain how coordination is achieved within organisations, highlighting its limitations. He exemplifies that goals may be achieved through alternatives means such as "equivalent meanings, distributed meanings, shared experiences, overlapping views of ambiguous events, or nondisclosive intimacy."[5] All of these present interesting questions for how organisations achieve goals because assumptions may replace expressed agreements just as the quality of relations among people should influence organisational outcomes or processes. The key message is that organisations are social entities and that this quality of them has a bearing on human conduct.

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[1] Weick (1995, p. 31)
[2] Weick (1988, p. 316)
[3] Weick (1995, p. 39)
[4] Weick (1995, p. 40)
[5] Weick (1995, p. 42)

3.4.5 Ongoing Projects

Weick asserts that the essence of sensemaking is that "reality is an ongoing accomplishment that emerges from efforts to create order and make retrospective sense of what occurs."[1] Closer to this is the notion that "pure duration never stops",[2] which has been discussed previously. The implication of duration on attention is thus a key issue. To attend to a certain portion of a flow (of experience) is to ignore other portions of it. Moreover, Weick views that it is not in the will of a human actor to step outside this flow and objectively observe it.[3] That idea is captured well in the following statement: "The experience of sensemaking is one in which people are thrown into the middle of things and forced to act without the benefit of a stable sense of what is happening."[4] In other words, action unfolds into an unknown terrain after which assessment ensues, aimed at making sense of what is going on.

The ongoing property of sensemaking sensitises us to challenges human actors face when events defy their expectations, in which case prior beliefs collapse under the weight of implausibility. It makes vivid the point that when human actors are faced with puzzles, the world does not pause so as the puzzling situation can be resolved first, following which one can continue to act with at least a sense of what is going on. In this state of "throwness", human actors "cannot avoid acting"[5] and the significance of traces (i.e. its residuum) of this action cannot be ignored.[6] Human actors are therefore constantly involved in ongoing effort to accomplish a sense of reality, where acting in this flow is not just inevitable, but the consequences of the action can only be known afterwards.[7] Retrospective effort to accomplish the meaning *in* what is going on should thus be constant if one is to have a sense of about what to do next, but in the pursuit of the answer, or meaning, that context is being changed.

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[1] Weick (1993, p. 635)
[2] Weick (1995, p. 43)
[3] Weick (1995, p. 44)
[4] Weick (2001, p. 462)
[5] Weick (1995, p. 44)
[6] Weick (1988, p. 307)
[7] Weick (1995, p. 44)

3.4.6 Focused on and by Extracted Cues

Weick explains that sensemaking tends to be swift, the associated curse of which is that it is harder to study the process than its outcomes. He proposes, nevertheless, that in order to study sensemaking processes, "we need to watch how people deal with prolonged puzzles that defy sensemaking, puzzles such as paradoxes, dilemmas, and inconceivable events."[1] That is, because of the "sluggishness" imposed on the process as a consequence of associated effort to make sense, we can have a glimpse of how people notice and then interpret cues. He further explains that we "also need to pay close attention to ways people notice, extract cues, and embellish that which they extract."[2] There are two important factors, or "two points of reasoning" he highlights in relation to cue extraction. Namely, they are perceived to represent the entire "material" from which they are extracted, and their extraction implies some implication. The example he gives to clarify this, is one of observing a chemically unstable dye on a cloth as an implication of low quality of the entire cloth. The point here is that focusing on and extracting these cues from the material has some implication for the entire substance, despite that other parts of the substance may not be of equal character.[3]

Weick describes extracted cues as "simple, familiar structures that are seeds from which people develop a larger sense of what may be occurring."[4] The metaphor of seed is used here to point out the open-endedness of sensemaking when *focused by* extracted cues. He analogises that while a seed may specify what kind of tree will become of it, it will never determine its exact shape and height. That analogy suggests the vague and indeterminate quality with which sensemaking processes develop.

The noticing and interpretation of an extracted cue depends on "local contingencies" or context. However, noticing is additionally under the influence of the quality of that which is noticed, which is in some way salient given the local contingencies. An important message here is that "context affects the extraction of cues, and [that] ...small, subtle features can have surprisingly large effects on sensemaking."[5] Weick also highlights that organisational settings are made of different people and that they are political, leading to a range of influences on

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[1] Weick (1995, p. 49)
[2] Weick (1995, p. 49)
[3] The dye might for instance be unstable but the textile of higher quality and less susceptible to being torn.
[4] Weick (1995, p. 50)
[5] Weick (1995, p. 52)

how cues are enlarged. That suggests the possibility for multiple interpretations (later discussions clarify how multiple meanings are synthesised) and power in determining how the extracted cues are enlarged, or said alternatively, which meanings are sustained. He underlines that "the point to be retained is that faith in these cues and their sustained use as a reference point are important for sensemaking."[1] The faith in these cues lead people to act with some confidence, which suggest that they act as if the meanings derived from interpretation of these cues are real. Indeed they may, through the ensuing enactment, become real in consequence, a process which Weick equates to the unfolding of a self-fulfilling prophecy.[2]

3.4.7 Driven by Plausibility Rather than Accuracy

Drawing from the work of Starbuck and Milliken on managerial perception, Weick advances the idea that even if accuracy was achievable, managers' perceptions about their environment are seldom accurate.[3] However, Weick does not see this as problematic given the sensemaking perspective's concern with "plausibility, pragmatics, coherence, reasonableness, creation, invention, and instrumentality."[4] In line with this, he suggests that inaccuracies of the environment may still be beneficial if they serve as motivation for action.[5]

Weick offers a variety of reasons[6] why he considers that plausibility, rather than accuracy, is of primary concern in sensemaking. They include that (a) perception entails filtering of relevant stimuli for current projects from noise; (b) hindsight bias dictates that accuracy will be difficult to achieve because the past has been reconstructed in light of current understandings; (c) the time pressures of organisational life means that speed often takes precedence over accuracy; (d) the fleeting nature of sensemaking means that even if accuracy is to be achieved, it becomes relevant for short time; (e) the social nature of organisational life brings into question the attainability of assessing the accuracy of a group (e.g. executives), which is dynamic rather than static; (f) perceptions of accuracy are validated

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[1] Weick (1995, p. 53)
[2] Weick (1995, p. 54)
[3] Weick (1995, p. 57)
[4] Weick (1995, p. 57)
[5] Weick (1995, p. 57-60)
[6] Weick (1995, p. 57-60)

when ensuing actions enable resumption of and facilitation of ongoing projects, which means "accuracy is project specific and pragmatic";[1] (g) "[b]iased noticing may be bad for deliberation, but it is good for action"[2]; and (h) perceptions are themselves in part predictions, which may change what is prophesised just as the similarity of perceptions do not guarantee similar outcomes. What Weick considers important is a plausible account or good story which leads to a bolder, motivated action. This produces material that can be retrospectively attended to and interpreted in the interest of gaining understanding of what is going on.

Weick asserts that "in studies of sensemaking… accuracy is nice, but not necessary."[3] To illustrate this, he often recounts of a story about a reconnaissance unit which got lost in snowy mountains, but used a map found in a pocket of one them to find their way back to their camp, only to discover later that it was a map of a different mountain.[4] This highlights the resemblance of sensemaking processes to a self-fulfilling prophecy. Their bold action based on stronger faith in a map that is nevertheless faulty led to a discovery of a path to safety.

Thus, plausibility in sensemaking brings attention to the fact that smallness may have large consequences if people take it more seriously and enlarge it through committed action. When the soldiers committed to a wrong map, their actions facilitated orientation and motivated continued effort, all of which ultimately saw them finding their way back. He extends this to organisational strategy, explaining that viewed from a sensemaking perspective, strategic plans function in an analogous way to self-fulfilling prophecies set in motion because they motivate action, and have the potential to validate the initial plans in their outcome.

> Strategic plans are a lot like maps. They animate and orient people. Once people begin to act (enactment), they generate tangible outcomes (cues) in some context (social), and this helps them discover (retrospect) what is occurring (ongoing), what needs to be explained (plausibility), and what should be done next (identity enhancement). Managers keep forgetting that it is what they do, not what they plan, that explains their success.[5]

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[1] Weick (1995, p. 59)
[2] Weick (1995, p. 60)
[3] Weick (1995, p. 56)
[4] Weick (1995, p. 55)
[5] Weick (1995, p. 55-56)

Weick and associates assert that the sensemaking perspective's character of plausibility is at odds with theories of rational decision-making, "which assume that the accuracy of managers' perceptions determine the effectiveness of outcomes."[1] However, Weick cautions that "[t]he very ease with which people can slip into such self-sealing logics is part of the unease that all of us feel when we think about 'plausibility' as one of the properties of sensemaking."[2] The danger lies in plausible sense which gives confidence to actions which may be directed towards producing negative outcomes.

3.5 Sensemaking in Organisations

Weick highlights that organisational sensemaking and sensemaking in general are not identical. Principal to what distinguishes the two is that organisational settings are permeated with high expectations of accountability, are less social and less tolerant to mistakes. For this reason, Weick explains that "organizations challenge everything and ask for explanations of everything including rationality itself."[3] The point is to underline a different sort of expectation about how organisational members should conduct themselves and how such an expectation – of high accountability for one's conduct and its outcomes – shapes organisational sensemaking processes. That is in contrast to sensemaking which unfolds in different contexts. Accordingly "much of organizational life is fair game for continual negotiation, controlled information processing, and mindful attention and how much needs to be reaccomplished and how pervasive is the need for accounting, justification, and rationalizing."[4]

Further discontinuities include "when imagined social conduct is converted into face-to-face social interaction, and …when one of the participants in the interaction is replaced and the interaction continues somewhat as it did before."[5] His conceptualisation sensitises the observer to what holds together organisational members' orderly, coordinated action and their efforts in the direction of collective goals, which in their outcome *realise* what is then conceived as organised activity, environments or outcomes. Accordingly, Weick

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[1] Weick *et al.* (2005, p. 415)
[2] Weick (1995, p. 84)
[3] Weick (1995, p. 64 *citing* Czarniawska-Joerges, 1992)
[4] Weick (1995, p. 63)
[5] Weick (1995, p. 72)

conceptualises organisations "as social structures that combine the generic subjectivity of interlocking routines, the intersubjectivity of mutually reinforcing interpretations, and the movement back and forth between these two forms by means of continuous communication".[1] Explained inversely, the two conceptual tools of intersubjectivity and generic subjectivity explicate an oscillating social process by which organising is achieved, where at the intersubjectivity level selves interact to establish routines. The innovative interaction at this level follows interruption or a sense of uncertainty which requires unfreezing or placing less control on formerly established routines to allow adjustments. When order is established, freezing follows, in which the tighter grip of the hand of control in generic subjectivity takes over so that these established routine can allow for substitunality. That allows people who did not partake in the establishment of those routines to take over from predecessors.[2] Thus, intersubjectivity is more conducive to organisational change while generic subjectivity is favourable to stable environments. Nevertheless, Weick highlights that "[g]eneric subjectivity does not disappear completely when people interact to synthesis new meanings",[3] since it is existing routines and roles that are under modification.

These expositions suggest that the social construction process begin at the lower level, where individual organisational members' interpretations are synthesised, and the organising tools of interlocked routines are updated, before control becomes possible. However, the system continually oscillates between these levels, contingent on the level of discontinuity in their environments and the need to absorb changes into its processes. Core to this oscillation is communicating selves with varying levels of contribution and authority. Thus, intersubjectivity is the primary site where meanings are generated before they are crystallised into organisational roles and routines. As such, organisations "make sense, literally and figuratively, at the bottom."[4] The level above generic subjectivity, extrasubjectivite, is "a symbolic reality such as we might associate with capitalism or mathematics, each viewed as a subjectless batch of culture"[5], and the level below intersubjectivity is the individual level of intrasubjectivity. These two levels can be thought of as relevant for the analysis of

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[1] Weick (1995, p. 170)
[2] Weick & Quinn (1999); Weick (1995, pp. 70-75)
[3] Weick (1995, p. 71)
[4] Weick (1995, p. 117)
[5] Weick (1995, p. 72)

sensemaking at individual and institutional level.

3.6 Interruption of Ongoing Projects

According to Weick, sensemaking "begins with the basic question, is it still possible to take things for granted? And if the answer is no, it has become impossible to continue with automatic information processing".[1] Thus, human actors are constantly "immersed in flows, [and] they are seldom indifferent to what passes them by… [as] the reality of flows becomes most apparent when that flow is interrupted."[2] Weick equates interruption to "a signal that important changes have occurred in the environment."[3] The changes also evoke emotion, considered to feature "between the time that an organized sequence is interrupted and the time at which the interruption is removed, or a substitute response is found that allows the sequence to be completed."[4]

The involvement of emotion in the process triggers an activity in the autonomic nervous system, which has influence on both attention and recall. As Weick explains, what is more troublesome about this situation is that, as arousal increases, people focus more on that which is considered psychologically central, and away from that which is considered psychologically peripheral.[5] In other words, actors at this stage will focus more on that which causes interruption, and pay less attention to context or other environmental factors which may nevertheless be crucial for dealing with the interruption. Therefore, any peripheral cues that may be necessary to make sense of the psychologically central phenomena would consequently be missed, making sensemaking more difficult.[6]

Weick cautions that focusing only on the centre and neglecting the periphery may mean that one is getting better at performing a task which has become irrelevant. Thus "not only does interruption produce arousal but arousal uses up attention, reduces the cues that can be used in sensemaking, focuses attention of the interruption, and has the potential to escalate

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[1] Weick (1995, p. 14)
[2] Weick (1995, p. 45)
[3] Weick (1995, p. 46)
[4] Weick (1995, p. 46)
[5] Weick (1995 *citing* Mandler, 1984, p. 256)
[6] Weick (1995, pp. 101-102)

cognitive inefficiencies."[1] Arousal decreases efficiencies for "complex thought processes".[2] Both interruptions and arousal have the potential to lead to narrowed perception as well as heightening habitual response.[3] This means the availability of attention for sensemaking should depend on the degree to which the pendulum swings between the extremes of taking things for granted and lack of any sense as a consequence of interruption. In the former, much of what is going on is perceived to reaffirm expectations, while in the latter case, held expectations collapse under sheer puzzlement. Weick refers to that latter extreme as *cosmology episode*, where "people suddenly and deeply feel that the universe is no longer a rational, orderly system."[4] During interruption, the flow of the process starts with effort to resume the interrupted activity, and if resumption "is problematic, sensemaking is biased either toward identifying substitute action or toward further deliberation."[5] The ensuing illustration (Figure 2) depicts the process.

Figure 2: Interruption model (general)

Brought closer to organisations, Weick links emotion to interrupted organised activity (e.g. task completion through following standard operating procedures); drawing our attention to the fact that core to organised activity is expectation. For example, specific actions following a plan should be anticipated to lead some outcomes for which the plan is intended. More important, he highlights the fact that "the interruption of higher order, more pervasive plans should be more arousing than disruption of lower order plans."[6] These ideas should bring some light to the analysis of how organisational members deal with varying degrees of interruptions to (e.g. strategic) plans. In particular, the last point is worth some attention as

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[1] Weick (1995, p. 101)
[2] Weick (1995, p. 102)
[3] Weick (1995, p. 85)
[4] Weick (1993, p. 633); he uses the word vu jade, which is the opposite of déjà vu to explain the experience.
[5] Weick *et al.* (2005, p. 409)
[6] Weick (1995, p. 46)

the description "higher order, more pervasive plans" seems suitable for plans which are core to organisational wellbeing.

He also suggests that "[a]rousal should build more quickly the more tightly organized an interrupted action sequence is."[1] Weick makes note that the propensity for arousal to heighten is contingent on the value of the plans as well as the actor's capacity to find the substitute means to complete the interrupted activity. He views that people with richer repertory of, and thus, alternative responses to interruptions, or those who have the ability to improvise, should experience less arousal than it is the opposite case.

3.7 Beliefs and Actions in Sensemaking

Sensemaking "is an effort to tie beliefs and actions more closely together as when arguments lead to consensus on action, clarified expectations pave way for confirming actions, committed actions uncover acceptable justifications for their occurrence, or bold actions simplify the world and make it clearer what is going on or what it means." [2] Arguments and expectations represent beliefs or cognitions, while commitment and manipulation represent actions. Weick explains that beliefs drive the sensemaking process through selective perception, which is explained by the rather counterintuitive saying that "believing is seeing."[3] He adds that "to believe is to initiate actions capable of lending substance to the belief",[4] which resemble the unfolding of a self-fulfilling prophecy.

Weick has long argued that "too little attention has been paid to actions and too much to conditions, plans, and beliefs."[5] He expresses that "organizations are loosely coupled systems in which action is underspecified, inadequately rationalized, and monitored when deviations are extreme".[6] The degree of autonomous actions which go on into organisations and the puzzles of the traces they leave, should lead people to "search for explanations that are

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[1] Weick (1955, p. 46)
[2] Weick (1995, p. 135)
[3] Weick (1995, p. 134)
[4] Weick (1995, pp. 133-134)
[5] Weick (1969, p. 30); As it was noted in the previous chapter, this symptom was evidently characteristic of the framework of Disruptive Innovation, and it was in particular discussed as one of its weaknesses.
[6] Weick (1995, p. 134)

appropriate in that context and that also preserve self-esteem",[1] given the high demands of accountability in organisational settings and the innate need for people to look socially competent. The ensuing sub-sections offer more flesh to these forms of sensemaking.[2]

3.7.1 Sensemaking as Argument

Weick acknowledges that despite the usefulness of the sensemaking recipe "how can I know what I think until I see what I say?" to convey the process imagery of sensemaking, it is too tidy to explain organisational sensemaking. There remains a degree of tension in organisations, because organisations are made of individual members whose beliefs are idiosyncratic, which should consequently lead to differentiated noticing and interpretations. Thus, idiosyncratic sense may be made, but its curse on organisation will be restrained coordination, unless they are synthesised towards achieving orderly interaction. Thus, argumentation is seen as a process in which the assortments of meanings are merged to define collective goals.

The colourful description by Taylor and Van Every that sensemaking "is a way station on the road to a consensually constructed, coordinated system of action"[3] highlights the role of communication in this form of sensemaking. Likewise, it underlines communication's role in facilitating sensemaking processes in organizations.[4] This also puts into the spot light organisational events where interactive talk is characteristic, such as meetings. Thus, argument sensemaking can be viewed as a tunnel into which diverging views may be brought and synthesised towards consensus on action and what it is hoped to achieve. Some arguments may gain lasting durability as "weak definitions of a situation, embedded in tentative initial proposals, gradually become elaborated and strengthened as proposers confront critics."[5] Despite the implicit message that such definitions should gain strength on

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[1] Weick (1995, pp. 134-135)

[2] While argumentation is discussed here, it remains a lesser salient feature in debates of how beliefs and actions lead to constraints in the conduct of organisational members. It is therefore not offered as a dedicated section in the ensuing chapter, although its operation in organisational setting, and thus incumbents as discussed in this study, is assumed.

[3] Taylor & Van Every (2000 *as cited by* Weick *et al.* 2005, p. 409)

[4] Weick *et al. (*2005)

[5] Weick (1995, p. 145)

the basis of the weight of the argument, critics of sensemaking[1] have lamented that Weick's treatise leaves unexplained the role of power. Thus, if power is factored we may also expect that the definitions that are elaborated and strengthened may be those of powerful people, despite their weight, or lack of it.

3.7.2 Sensemaking as Expectation

Weick explains that beliefs, in the form of expectations, can be drivers for sensemaking through working as frames within which cues are noticed and interpreted. He suggests that expectations have a tight grip on the sensemaking process as they "tend to filter input more severely, which raises a host of issues concerning accuracy, errors and the limits of social construction."[2] The suggested limit on social construction of meanings, denote traces of "group think" as it entails that common expectations within organisational members should lessen the chances that individuals will make differentiated interpretations of events. An important message is that although organisational roles, routines, and strategies "create the orderliness and predictability that we count on when we organize", they nevertheless remain source of blind spots. His caution is that these blind spots "often conceal small errors that are getting bigger and can produce disabling brutal audit."[3] In other words, expectations may create organisational blind spots in perceiving environmental variations that may bring into question that which is expected, and this may in effect, delay noticing of threatening events.[4] As he explains it, since expectations "tend to be held more strongly… people tend to be more interested in confirming them than in rebutting or contradicting them."[5]

A further important point concerns the operation of expectations under turbulence, stating it in the following manner: "Time pressure encourages people to seek confirmation of expectancies, to cling to their initial hypothesis, and to prefer a narrative mode of thought to one that is paradigmatic and more data driven."[6] By this he means that accuracy is hard to achieve in turbulent environments, in which top-down, that is schema, rather than evidence

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[1] e.g. Helms-Mills (2003)
[2] Weick (1995, p. 145)
[3] Weick & Sutcliffe (2007, p. 23)
[4] Weick & Sutcliffe (2007, p. 23)
[5] Weick (1995, p. 145)
[6] Weick (1995, p. 153)

driven, sensemaking will be dominant. Weick makes note that in fact expectations should be the primary drivers of sensemaking in times of uncertainty than are arguments, suggesting that the role of arguments in the process may only come later to validate the initial sensible structures first put in place by expectations.

3.7.3 Sensemaking as Commitment

Commitment sensemaking is important to understand because it embodies interacts that seed initial stages which lead to social order. Although the order is continuously reaccomplished, the glue facilitating that order is continually produced by justifications for prior interacts.[1] In other words, this form of sensemaking explains how organisational members become bound to certain projects or conduct in or outside organisations based on prior actions, decisions or actions. It can be understood better if the phenomenological influences are underlined, because they highlight the behaviour of people as influenced by some perceived observers, and the continued need hence, to act rationally for ego-defensive reasons in the eyes of such observers.

These ideas explain how people direct attention towards certain cues which are used as acceptable resources for justifying their actions, which does nevertheless not exclude biases towards to cues which support the justifications. As Weick expounds, "tenacious justification can produce selective attention, confident action, and self-confirmation. Tenacious justifications prefigure both perception and action, which means they are often self-confirming."[2] The emerging picture is that of people engaged in a self-sustaining system which favours continued embellishment rather than the opposite. The conundrum is therefore that acknowledgement necessary for discontinuation may likely portray a negative (unwanted) image on the part of the actor. If the aim has been to achieve an image of rationality and social competence, failure at these should induce cognitive dissonance and efforts to remove related negative feeling. As the system builds up, people are not conscious to its operation and their continued hand in feeding it, which increases commitment, even though such commitment may be in the direction of jeopardy.

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[1] Weick (2001, p. 15)
[2] Weick (1988, p. 310)

Thus, commitment follows from the trace of action for which one is evidently accountable, placing constraints on the actor's subsequent conduct. Weick mentions three basic conditions which should result in commitment to actions, namely that (a) there is evidence that the actions took place, or they were publicly observed (visibility of the behaviour); (b) that the actions are irrevocable (irrevocability of behaviour); and (c) that there remains no doubt that the actor is responsible for the actions because they made the choice to act (volition of behaviour).[1]

In organisational contexts, highlighted as placing higher demands on accountability and even question rationality itself, the pressure for accounting for one's actions should be expected to be higher. Such result in increased need for justification for one's intended actions or the outcomes of these actions, including outcomes of autonomous actions; particularly when they are negative. Weick highlights just how such justifications may heighten commitment, and thus continue to feed the system, pointing out that "[e]xplanations that are developed retrospectively to justify committed actions are often stronger than beliefs developed under other, less involving, conditions."[2] Here, an important factor to which attention should be drawn is the distinction between the contexts which have higher demands for justification of one's actions and those which are less so. He further states that a "tenacious justification can produce selective attention, confident action, and self-confirmation"[3] which begins to indicate how perceptions become influenced through selection of acceptable resources over those are considered, by the sensemakers, to be less so.

Weick specifies that the "macrolevel recipe to produce commitment is a setting where there is action, publicity, choice, high stakes, and low tolerance of mistakes."[4] He further explains that "[l]ow tolerance of mistakes strengthens commitment by increasing the necessity to justify whatever one does although low tolerance could also mean weakened choice."[5] In other words, once the system of commitment begins to strengthen, it limits different choices which deviate from the initial choices made. That is because "[o]nce it becomes harder to change the behaviour than to change the beliefs about that behaviour, then beliefs are

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[1] Weick (1995, p. 157)
[2] Weick (1988, p. 310)
[3] Weick (1988, p. 310)
[4] Weick (1995, p. 158)
[5] Weick (1995, p. 158)

selectively mobilized to justify the act."[1] Weick cautions about the selective attention related to commitment and thus the influence on perception.

> The dark side of commitment is that it produces blind spots. Once a person becomes committed to an action, and then builds an explanation that justifies that action, the explanation tends to persist and become transformed into an assumption that is taken for granted. Once this transformation has occurred it is unlikely that the assumption will be readily viewed as a potential contributor to a crisis.[2]

The way in which the blind spot develops and the consequences thereof are worth watching, especially because, as pointed out, this may drive the behaviour right into the direction of jeopardy without the actor realising how the initial justification set a stage for the chimera. Thus, the blind spots also make it difficult for people to see where the problem lies, which perhaps is why the system of commitment becomes self-sustaining.

The notion of self-sustaining ties to the reason commitment is also discussed as escalation, "where it is portrayed as a force that blocks withdrawal from situations of growing loss. [It] is viewed as a liability because it reduces flexibility, learning and adaptation."[3] All this has its genesis from the fact that "once people choose how to justify the actions that they choose to perform, they fix their frame within which their beliefs, actions and accusations will then make sense." [4] That fixing of frames is worth some extension here because the question becomes what is the content of the frames to which beliefs are fixed and thus cues are interpreted within. Discussing interruption of projects and where people draw from to resume them, Weick and associates mention "institutional constraints, organizational premises, plans, expectations, acceptable justifications, and traditions inherited from predecessors"[5] as the content. It is important here to remain sensitive to the type of reservoir (frame) which may be fixed as the place into which fitting resources or acceptable justifications (cues) are fit in to make sense. The fixing suggest that once this framework begins to function as the primary context in which cues are fit, it will continue to stubbornly remain the primary framework. Weick and associates make direct portrayal of where and how frames can be fixed, with further cues fit within them to make interpretations and thus construct meaning.

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[1] Weick (1995, p. 156)
[2] Weick (1988, p. 310)
[3] Weick (1995, p. 161)
[4] Weick (1995, p. 164)
[5] Weick *et al.* (2005, p. 409)

> Bristol Royal Infirmary's (BRI) [continued] a pediatric cardiac surgery program for almost 14 years in the face of data showing a mortality rate roughly double the rate of any other center in England… [Investigations] concluded that there was a prevailing mindset among people at BRI that enabled them to 'wish away their poor results' as a 'run of bad luck' even though 'there was evidence sufficient to put the Unit on notice that there were questions to be answered as regards the adequacy of the service'.[1]

They explain that the "mindset prevailed partly because surgeons constructed their identity as that of people learning complex surgical procedures in the context of unusually challenging cases."[2] Thus, once the premises which served as one of the primary frames within which to interpret death rate (cues) was that they are in a process of learning something difficult, the increased in death rate was *seen* to them as *acceptable.* The consequences should have, from an outsider's perspective, such as the community served, been interpreted differently which should have been why the investigation was necessary to begin with.

Weick advises that "if we want to understand the sense people make of the world, one place to start is to inquire about earlier binding actions and the acceptable justifications that were available when the binding took place."[3] He also stresses that just because "justifications may be adopted for ego-defensive reasons, that does not mean they are necessarily inaccurate or fanciful."[4] By that he highlights that given the focused attention on that which is justified and the need to legitimise it, sensemakers begin to see more details on it, which further gives them confidence about what is being justified. It is therefore observable that commitment may lead people into treacherous terrains, just as it may be beneficial in strengthening or motivating actions. Also, it may start with small sensible structures which are continuously embellished into those which are larger and more impactful.

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[1] Weick *et al.* (2005 *citing* Kennedy, 2001, pp. 247-248)
[2] Weick *et al.* (2005, p. 416)
[3] Weick 1995, pp. 156-157)
[4] Weick (1995, p. 158)

3.7.4 Sensemaking as Manipulation

According to Weick, manipulation "involves stabilizing an otherwise unstable set of events so that it is easier to explain them."[1] That is just another way of saying manipulation "involves simplification of the perceived world by operations on the word itself rather than on the perceiver."[2] The message conveyed is that in manipulation, the unfolding of the actions is driven by pursuit of orderliness that fulfils some aspirations. For example, organisations use different manoeuvres to make their environments hospitable.[3] Weick sees the unfolding of such actions, in accordance with the beliefs under which they are directed, functioning in a mode analogous to self-fulfilling prophecies.[4] That means the incipient beliefs' propensity for self-validation is increased when the beliefs strengthen the actions.

To the degree that these environments lead to selective perception, as for instance, when the expectations limit cues noticed[5], manipulation has some constraints as well. In relation to this, Weick argues that the view that "environments can be manipulated collapses the deterministic/choice dimension, because people choose their constraints…once people choose how to justify the action that they chose to perform, they fix the frame within which their beliefs, actions, and associations will then make sense."[6] That is, once an intention to manipulate an environment for certain ends exists, rationalisation of the actions taken forms a pillar around which the sensemaking process pulls towards, selecting some cues from the environment while filtering out contradictory cues, which may nevertheless be beneficial. Thus, Weick sensitises us to the role of actions in constructing constraints regardless of what may have been an intention, given that once a justification is made, the subsequent actions and cognitions will be interpreted within the belief on which the justification hinges. But this also suggests that the justification may in consequence redefine that intention by seeing only those aspects which support the justification in the developing story.

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[1] Weick (1995, p. 135)
[2] Weick (1995, p. 135)
[3] Weick (1995, p. 164)
[4] Weick (1995, p. 134, 163)
[5] Weick (1995, p. 26)
[6] Weick (1995, p. 164);

In short, action driven sensemaking sensitises us to what people do about their enacted environments. The trace may be a pillar around which the ensuing sensemaking is anchored when accountability for the actions that produced them matter, just as the equivocality in this enacted world may require efforts, or said in the language of this section, manipulation to make it orderly.

3.8 Scholarly Criticism of the Sensemaking Perspective

The sensemaking perspective has often been criticised for paying less attention to power relations.[1] That is because much of the ideas Weick presents assume that organisational participants have an equal role to play in the process. However, that obscures the fact that the sense made by more influential participants may, through processes of sensegiving, for instance,[2] receive more currency over that of the less influential participants. That has prompted Weick and associates to suggest that future inquiry of sensemaking and power may direct attention to such questions as "how does power get expressed, increase, decrease, and influence others?"[3] They nevertheless point to some modest answers already provided by scholars in this regard thus far, despite being less developed. On a more general level, these answers point to more than the sensegiving by more influential participants, highlighting a pervasive way they may extend their control. For instance, through dictating how other participants make sense through the seven properties of sensemaking. That includes "things like control over cues, who talks to whom, proffered identities, criteria for plausible stories, actions permitted and disallowed, and histories and retrospect that are singled out."[4] Therefore, powerful people may for highlight which cues are more important to focus on in organisations, and thus directing organisational attention or resources towards those cues. Another aspect of the sensemaking perspective which is considered to be less developed is how emotion imbues and thus influence sensemaking processes,[5] although this aspect has relatively received better attention in comparison to the issue of power prior discussions

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[1] Helms-Mills (2003)
[2] Helms-Mills (2003)
[3] Weick *et al.* (2005, p. 418)
[4] Weick *et al.* (2005, p. 418)
[5] Maitlis & Christianson (2014); Weick *et al.* (2005)

about interruption and affect indicated.

3.9 Conclusion

This chapter discussed the sensemaking perspective, explicating its unfolding, which follows recursive interplay between cognition and action, materialising environments that become opportunities and constraints for organisational members. The chapter discussed the historical background of the ideas which underpin the sensemaking perspective, and in particular highlighted some of the core concepts which underpin the sensemaking framework. The chapter also explained and discussed the seven properties of sensemaking. This was followed by a look at a sensemaking perspective on organisations, which indicated features of organisational sensemaking, contrasted with every day sensemaking. The principal distinction between the two was that organisational sensemaking unfolds under conditions of greater need for accountability and justification, which is the case with everyday sensemaking. Then followed a look at the concept of interruption, and how it engenders sensemaking, directed towards search for meanings, first to enable resumption of the interrupted activity, and secondly, towards substitute action or further deliberation, should resumption fail. The chapter also brought into view the role of beliefs and actions in driving sensemaking, before critical analysis of sensemaking was discussed.

Chapter 4: Making Sense of the Innovator's Dilemma

4.1 Introduction

Following presentations of the theory of disruptive innovation and the sensemaking perspective in the two preceding chapters, the current chapter proceeds to explore the role of sensemaking in shaping incumbents' responses to disruptive innovations. The core focus of the chapter is to try to establish links between the activity of sensemaking, which has been demonstrated as constructing organisations and the environments they confront, and incumbents' responses to disruptive innovations. The debates begin with a recap of the contrast between rationality leading to and rationalisation of actions. The former shapes assumptions of the theory of disruptive innovation, while the latter is well entertained in the sensemaking perspective. The debates continue to explore the potential role for identity construction processes to shape incumbents' responses to disruptive innovations. The debates about organisational identity are focused mostly on beliefs organisational members hold about *who they are* and the expectations nested in those beliefs, which include how outsiders view and perhaps should treat them. Thereafter, attention is directed to organisational actions, demonstrating how organisational members may enact environments which become the constraints they confront. Further, discussions about plausibility follow, the arguments of which highlight the challenge incumbent members may face in identifying an emerging disruption. Then the interruption of ongoing projects model is presented and discussed, highlighting that it has vignettes of much of what has been discussed in prior sections, before a conclusion is provided.

4.2 Rationality for Choice versus *Post*-decisional Rationalisation

To recap, the theory of disruption has its arguments positioned ahead of a point at which decisions are made, assessing the motivations, beliefs and rationality (or its lack thereof), as they lead to or shape those decisions. Accordingly, it builds argument on these bases to explain what shapes incumbents' responses to disruptive innovations. However, as to what consequences follow from the actions resulting from those decisions has not been much of a concern. It has nevertheless been demonstrated so far that such an approach leads to theoretical obstacles which can be addressed from a sensemaking perspective. Boland does a

great job in drawing the line between where Christensen stands and the opposite side of the line in his explanation that decision-making "is prior to and culminates in the action of a human being."[1] On the other hand, sensemaking "is concerned with making things that have already happened meaningful to us. It follows from, and is based on, the prior action of a human being."[2] What he explains is that the dominant focal points of the two look at contrasting sides of time as it relates to actions to explain human conduct. The sensemaking perspective swings between the two lines, although it is less concerned about the future and how it influences perception and rather explains how reflective thought guides the action that is unfolding into an unknowable and indeed sometimes treacherous terrain.

As previously highlighted, human decision-making is under the fate of bounded rationality resulting in decision-making processes which are good enough, or satisfying.[3] Burgelman and Grove highlight another challenge with such an assumption: "In spite of the best attempts at business and engineering schools to inculcate rational analysis, when the business gets into serious difficulties or key managerial assumptions are challenged, objective analysis takes second seat to personal/emotional reactions."[4] The point here is not to deprive rationality of its rightful place in organisational processes, or more precisely, attempts people make to achieve it, but rather to revisit conspicuous cautions already flagged on it. Further, the sensemaking perspective does assume some rationality of organisational members, but only contextually and plausibly so. Indeed, Weick asserts that despite the potential for being good at making decisions, organisations can still falter if they fail at making good sense.[5]

The jarring gaps between the aspired goals in plans and the outcomes of those plans [6] stubbornly place demands on theories of organisations to account for the actions of organisational members instead of focusing just on their supposed rational or irrational intentions. This is perhaps a consequence of the slippages between espoused theories of actions and what in effect is done.[7] The importance can be stressed by underlining that actions leave in their wake trails which, along with their intended and unintended outcomes, have to pass the test of accountability and high expectations, which make up organisational

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[1] Boland (2008, p. 55)
[2] Boland (2008, p. 55)
[3] Simon (1991)
[4] Burgelman and Grove (1996, p. 19)
[5] Weick (1993, p. 636)
[6] Brusnsson (2007); Burgelman & Grove (1996)
[7] Argyris & Schon (1974)

contexts. Such assumptions as decisions which mirror actions[1] already fail this test because, as we have seen, some decisions which are said to have led to the actions are sometimes only constructed or modified after the action has already elapsed, in the interest of accountability. Similarly, well planned projects do not always lead to intended goals, which open up a window for finding acceptable justifications to construct accounts for the outcomes, which, despite being plausible, may not necessarily be accurate. These invented stories are presented as though one has been rational or at least justifying why they may have failed to be so, at the time of or prior to taking actions.

While the concept of accountability as a crucial feature of organisational contexts is clear in sensemaking, it is implied in discussions of disruptive innovation theory. The suggestion that incumbents are publicly traded makes a straightforward example. Nevertheless, the mere fact of their existence as organisations suggest that Weick's sensemaking perspective and its explication of accountability as an important feature of organisations mean Christensen's organisations of focus bear a similar characteristic. The point here is to underline accountability as a core issue in organisations, which highlights the necessity for both efforts to act rationally and to justify outcomes for which people are responsible. However, cognitive biases related to efforts to act rationally and rationalisation for outcomes of actions already taken are like two roads going in opposite directions, each leading to the end of the other. The end of rationalisation for outcomes is a position constructed following the arrival (outcomes), driven towards legitimising why this position was reached. Conversely, the end position of rational action (why choosing the alternative) is first specified, and justification for why it must be reached constructed beforehand.

Although negative outcomes of *clear choices* can be judged by observers as being consequences of error in judgement, rationalisation of decisions highlights the possibility that people may alternatively be motivated to cover these presumed errors in order to look accountable, to preserve their self-esteem (e.g. the view that they are excellent leaders). Brunsson has in particular remarked that when faced with negative consequences of their decisions, organisations disguise in order to cover up for the discrepancies.[2] His point is similar to the "*post*decisional" attempts to reconstruct meanings of prior decisions, which is

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[1] Christensen & Bower (2003, p. 18)
[2] Brunsson (2007)

aimed towards influencing how negative consequences are perceived, as discussed in the sensemaking perspective.

The point is not to disparage arguments that errors in judgement do occur, but to shift the focal point towards the conduct which may ensue when actors perceive or anticipate such judgements from observers, and the fate of vestiges of such conduct. For instance, it could lead to manipulative conduct as people make efforts to reorganise their environments so that it remains favourable to what they aimed to achieve (e.g. disrupted projects which were ongoing). What these expositions highlight is that rationalisation of actions will, consciously or unconsciously, function in the service of portraying decision makers as rational, which is what they have set out to portray themselves as in the first place.[1] However, that may come at a cost, which will begin to be visible from the next section, although the more related later debates on organisational actions have better vignettes of how such costs may be incurred.

4.3 Identity and Disruption

This section addresses the issue of identity as it relates to disruptive innovations, arguing that the concept of identity construction presents a multifaceted way to understand incumbents' conduct *vis-à-vis* disruptive innovations. A reasonable place to start is to highlight that from a vantage point of sensemaking leadership positions, and therefore the identities, of incumbents are a salient feature worth watching. Hence it is crucial feature worth analysing so as to establish its potential links with the challenges these organisations face in dealing with disruptive innovations. However, understanding the linkage is contingent on the clarity as to the contexts in which identities or leadership positions are relevant, and more important, the boundaries of those contexts within which such relevance prevails. This clarification is seen as necessary because there remain some ambiguities placed by indiscriminate references to industry and markets in the theory of disruptive innovations. The mind-set which guides this analysis is that moving between different contexts (markets or industries) will require organisations to construct relevant identities suitable for the new context. This is argued to be not a mere issue of identity construction, which is core in sensemaking, but also a factor which leads to direct impingement on organisational strategy.

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[1] Boland (2008, p. 61)

4.3.1 Organisational Identity and New Markets

It is important to highlight from the beginning that no *clear distinction* between industries[1] and markets is made in the theory of disruptive innovation, which is exemplified soon. To begin with, an existence of demarcations created by different innovations is notable in Markides' explanation that "[d]ifferent kinds of innovations have different competitive effects and produce different kinds of markets."[2] Although it is also notable that Christensen differentiates between low-end, new-market, as well as sustaining markets,[3] it is argued in this section that there are potential limits to these categorisations. Hence, a clarification which is made to pointing out that more than different value networks, there are varying gaps between different markets. The demarcations and the related gaps are demonstrated as instigating identity puzzles in incumbents.

4.3.1.1 Industry versus Market

The first line of the introduction of *The Innovator's Dilemma* states: "This book is about *the failure of companies to stay atop their industries* [italics added] when they confront certain types of market and technological change."[4] Here the focus is on the industry, but the last line of the same paragraph states the following: "It is about well-managed companies that have their competitive antennae up, listen astutely to their customers, invest aggressively in new technologies, *and yet still lose their market dominance* [italics added]."[5] And so is a statement he makes in a recent publication: "Across industries ranging from computers to retail to steel, *leading firms failed to remain dominant in their respective markets* [italics added]."[6] A loss of market dominance and industry dominance may be simultaneous but it is not necessarily the same thing (expounded further down).

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[1] The label industry is used here to generally refer to a major sector (computer manufacturing) within which different niches of markets (e.g. desktops, laptops, etc.) fall.

[2] Markides (2006, p. 19)

[3] The concept of new market disruptive innovations is itself an upshot of Markides' (2006) frustration that Christensen's work was initially applied to technological innovations but was later indiscriminately applied beyond its initial scope. Thus, the concept was introduced to address Markides' point, but that may have not been sufficient.

[4] Christensen (2016, p. xiii)

[5] Christensen (2016, p. xiii)

[6] Christensen *et al.* (2018, p. 7)

The lack of clear distinction between an overall industry, for example computer manufacturing, and segments of this industry, which could include desktops computers or laptops is problematic for reasons stated. That should also benefit the ability to achieve some precision as to the loss of leadership positions. Thus, is the loss related to a market or an industry? Is the loss of leadership necessarily a failure? These questions will be clarified as we go along. To begin with, a desktop manufacturer could, as an example, be an overall industry leader on the basis that it accounts for the majority of sales in the computing industry (e.g. 80%). Another firm may be a player in this same industry, and have a market share of 80% in sales in the laptops segment, which may nevertheless account for just 20% of overall industry sales, meaning both these firms are leaders in their respective markets. This is despite the desktop manufacturer taking the overall industry lead. Notable, and an important feature of the theory of disruptive innovation, is that small firms initiate specific market niches, which are smaller in the beginning but grow to become larger. Whether they are within the existing value network or not, if they reach a point of disruption, they would ultimately overtake previously dominant firms they ultimately supplant.

From a strategic point of view, incumbents consciously define who they are going to serve as their primary customers (market) and by the same token, who they will exclude. Furthermore, the fact that incumbents' offerings differ from those of entrants suggest that these two assemblages of firms define themselves differently. This is the same point Markides makes as previously (4.3.1) quoted. Tripas highlight the same point, which is more directly linked to the current debates, when she says: "Even seemingly minor shifts from a technological standpoint may challenge the existing organizational identity if, by pursuing the new technology, the organization violates the core features associated with its existing identity."[1] Thus, whether the disruptive innovation is low-end or new market, from an incumbents' point of view, both the markets associated with these two different categories are new. This distinctiveness has implications for current organisational identity just as it will impinge of the existing strategy. It invites redefinition of who organisational members think they are and how they do things. It violates existing expectations.

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[1] Tripsas (2009, p. 441)

4.3.1.2 Sustaining and Disruptive Innovations Demarcations

Not only do lines between markets, including low-end and sustaining innovations, exist but they exist because they are put in place, or said in the language of sensemaking, enacted (discussed further later) by the organisations themselves. They are socially constructed, for instance, through strategy formulation in which parameters are set to define the space within which the organisation will operate, whether these are geographical or it is achieved through segmentation of the market. Such concepts as low-end and new-market disruption point to some contexts which incumbents had excluded from their core strategic focus, or never conceived of which by default suggest the market-to-be would have never been within the definition of current strategies of these firms.

The point is that incumbents are aware of these boundary demarcations because they constructed them so as to distinguish themselves and give their existence a clearly defined purpose. Beyond their individual organisation demarcations lie groupings of organisations which identify themselves alike and compete against one another.[1] Indeed Christensen recognises these demarcations and groupings, notable for instance in this observation: "Digital Equipment Corporation created the minicomputer market and was joined by a set of other aggressively managed companies… But each of these companies in turn missed the desktop personal computer market."[2] Thus, in this grouping of each should have identified itself more generally as minicomputer manufacturer, who competed against other players in the segment, yet each of them would have still tried to distinguish itself among its competitors. Being ranked a leader in a market is a clear example of how an organisation may begin to distinguish itself.

4.3.1.3 Relevance of Leadership Positions to Markets

Organisational rankings play an important role in as far as identification is concerned.[3] Also, organisations do not only identity themselves by the markets within which they play, but also through the modes by which they achieve their strategic goals, symbolised previously as

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[1] Gioia (1998); Porac *et al.* (1989)
[2] Christensen (2016, p. xiv)
[3] Elsbach & Kramer (1996)

"tools". The latter feature of identity mirrors well the point made by Tripas' as it has been highlighted (4.3.1.1). Such identification is recognised, but nevertheless although unsurprisingly, unappreciated by Christensen. Such references to minimill firms to define firms which use minimill technology to make steel or integrated mills as those which "take their name from the integrated process of transforming iron ore, coal, and limestone into final steel shapes"[1] substantiate this point. Such meanings are not simply differentiating the firms but also play a critical role on how these firms define who they are, and how they differ from their competitors.[2] Thus, incumbents' identities may be anchored on such features as markets, within which they are embedded, the mode by which they compete within these markets, and their rankings.[3]

Following the analysis here in conjunction with those which have been made so far, a firm which should successfully avoided losing industry leadership would have to transition from its home segment into a new market which is overtaking its own. The challenge for retaining a leadership position in the industry is already noticeable – the previously leading firm will not automatically be a leader in the new market until it enters it. To become dominant it would have to enter the market and grow to become larger than the players already in the segment, or acquire a firm already leading in this emerging segment. The question which naturally follows then is, when an organisation is said to have lost a leadership position, does this position relate to its former home segment of the industry, the new segment, or the overall industry? That question is relevant also because a firm which has lost an industry leadership position may remain a leader in its home segment. One of the reasons for this is that disruption does not always lead to the total removal of incumbents' markets, but also does not always reach a point at which the markets size initiated becomes bigger than incumbents' segment.[4] Thus, some firms continue to operate in their home markets post disruption, either providing their offerings to a smaller market or because their offerings still appeal to a greater market share – as when disruption did not overtake their markets. They may, conceivably, remain leaders in the niche markets.

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[1] Christensen (2016, p. 87)
[2] Porac *et al.* (1989)
[3] But we are also beginning to see frames within which environmental cues may be fit and make sense of changes. From the sensemaking perspective, such efforts as to remain in a leadership position within a particular market may bear incipient minimal structure, with remaining a leader becoming a fixed frame within which cues enlivened by enactment are fit and continue to feed and embellish the initial minimal structure.
[4] Charitou & Markides (2003)

IBM, which is the pioneer of the mainframe computer market, and remains a leader in this segment to date, makes a straightforward example. Even though it is referenced as having lost its leadership position when the minicomputer segment overtook the mainframe, and thus dominating the computing industry, the fact remains that IBM is still a leader in the mainframe market.[1] Christensen has in some cases even treated belated entry into the new segments as failure, even though some of these firms retained leadership in their markets and have later grown to become dominant again in the new segment.[2] Indeed, the delay in entering the new segments is considered to decrease the chances for successfully retaining dominant industry positions by occupying a bigger share of the new segment (that is, if this segment has overtaken incumbents' home market share). However, belatedness does not always equal to a failure. With that said, it is evident that the leadership positions, which may be an important aspect of identities of incumbents, are tied to the firms' core market segments. The important point to retain is that identity meanings, such as leadership positions, which are crucial as demonstrated through the sensemaking perspective, do not automatically become applicable to the new context.

4.3.1.4 Demarcation Hopping and Potential Obstacles

From here, an important factor to revisit and expound on is that moving between these contexts should place demands on sensemaking processes driven to answer two key questions, namely, what is out there, and who should we be in order to deal with it? The sensemaking perspective has suggested that in addressing these two points of the puzzle, the latter will carry more weight. Rephrased in the language of this chapter, the question of who incumbents should seek to be or define themselves as when they shift from their home markets into a new market, will present more difficulty than defining the new market it has to enter (Intel example to follow underscores the same point). From Christensen's point of view, the focus is limited to the impetus or lack of it, to investing in the new market, as dictated by assumptions of financial gain. If there is no motivation, as a consequence of perceptions of lesser profits offered by the new market relative to the size of the firm and its growth

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[1] Vanian (2016)
[2] Weeks (2015, p. 419)

aspiration, the argument is that incumbents would not move into the new market. Presentations in this subsection offer an alternative explanation.

It is demonstrated that to "hop" between different markets requires these firms to construct identities congruent with the new market. The two points of the puzzle just mentioned suggest that this redefinition will be a challenge. It requires the discarding of currently held meanings established about whom organisational members think they are, and the construction of new ones. It is a case of moving from some sense of order to uncertainty and the actions which are associated with the movement are neither inconsequential nor avoidable. These points matter particularly in light of arguments presented earlier, namely that identity meanings do not necessarily transition into the new markets with these firms. The possibility that incumbents may continue to define themselves in terms of well-established identities rooted in markets within which they operate in longer than it is safe cannot be precluded. Meanings such as being a leader could especially be stronger because they define the organisation in a more prestigious way to both organisational members and outsiders, which should be motivating to and imbue a greater sense of self-esteem to internal members.

The drive to focus on, making effort and wishing to remain leaders can function as a metaframe within which a leading firm interpret market changes just as it is its basis for formulating or continuously redefining its strategy. That extends the explanation to the possibility that current identities may consequently function as filters, disabling an earlier welcoming of and interpretation of salient cues about market changes. The prior point rephrased then, it is possible that incumbents may hold on to established identity meanings such as being leaders in their current market longer than it is safe to do so. Christensen gives tantalising acknowledgements about incumbents' tendencies to hold on to and thus defend their leadership positions.[1] Nevertheless and perhaps for the reason that the propositions of the theory of disruption do not recognise identity beliefs as important, he continues to explain what shapes this conduct as a problem of asymmetric motivation. Limitations to this explanation versus current arguments will be demonstrated in the ensuing debates. For now, suffices it to emphasise that this latter point maybe the more challenging to incumbents than Christensen acknowledges.

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[1] E.g. Christensen (2016, p. 47)
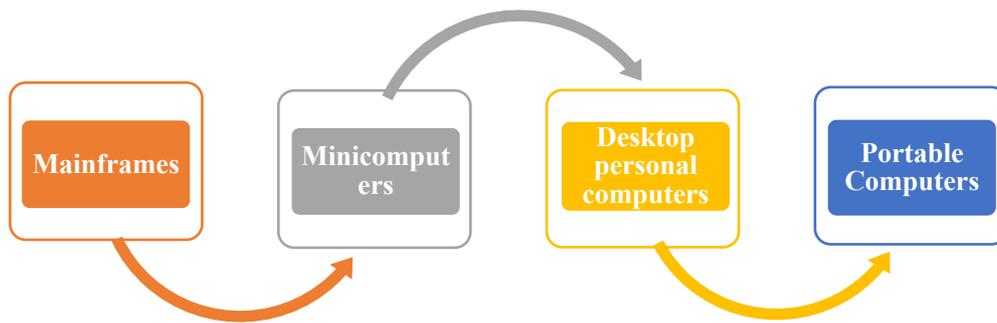
Figures 3: Disruption trajectory (computer industry)

Again, the introductory section of *The Innovator's Dilemma* will be helpful here, which for instance states the following: "IBM dominated the mainframe market but missed by years the emergence of minicomputers… no other major manufacturer of mainframe computers became a significant player *in the* [italics added] minicomputer business." [1] Notably, this was a single instance of disruption and other instances recurrently followed in the same industry. The point is, for a firm such as IBM to have transitioned into different new markets (figure 3) which emerged and dominated the overall computing industry over the years, it would have required the redefinition of its identity to match the different markets it would have had to enter.[2] The recurrence of these changes should in particular heighten the challenge given the frequency with which established identity meanings would be destabilised in the process of making effort to move from one context to the next.

However, the more challenging problem would have been holding a lead across these different markets because it would have required not only redefining the new identity but also the letting go of such strong identity meaning as being a leader in a particular market. It is the ensuing example from *The Innovator's Dilemma* which however, inadvertently, unravels some of the core arguments made in the theory of disruption, just as it clarifies and support the arguments advanced in this chapter. Christensen explains how Intel (incumbent) transitioned from sustaining offerings to, or as he puts, discovering a disruptive market as follows:

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[1] Christensen (2016, p. ixv)

[2] The only exclusion would have been playing in these markets through acquiring firms in the market or setting up stand-alone firms in each of these different markets as they emerge. The work of Christensen indicates that this has been a strategy used by some firms which avoided disruption, but no firm he observed seems to have repeatedly adopted the same strategy.

Its storied success is even more remarkable because, when its initial leadership position in the DRAM market began crumbling between 1978 and 1986 under the onslaught of Japanese semiconductor manufacturers, Intel transformed itself from a second-tier DRAM company into the world's dominant microprocessor manufacturer.[1]

Although Christensen paints a somewhat neat picture of how Intel made this transition, Burgelman and Grove give an "untidy" version of what took place. Their explanation is as follows:

Intel's exit from the DRAM business, for instance, was delayed by the fact that *top management was still holding on to Intel's identity as a memory company* [italics added], even though the company had become a non-factor in DRAMs with 2-3 percent market share by 1985… Getting through the period of immense change requires reinventing—or perhaps rediscovering—the company's identity. Since companies and their leaders are shaped by their past, this is truly hard.[2]

It is important to note that Andy Grove was one of the leaders at Intel at the time. It must also be noted that Christensen used this example for demonstrating how organisations discover and move into new markets. The example's usefulness relates to how it outlines an organisation's move from one market to the next, which is just what incumbents would have to do when their home markets are disrupted. In fact, Intel had to move from its core market because it was no longer profitable as the Japanese firms invaded its market with cheaper products, a case similar to how disruption impacts incumbents' markets. This example defies the narrative provided by Christensen on many levels. Conversely, it sums up some of the arguments made so far, which are themselves based on the discussions of identity constructions as presented in the preceding chapter. First, it underscores the point that organisational leaders may hold on to established identity meanings, but also highlights the necessity for and the related challenge for redefining the current identity. A further noteworthy point is that Intel had as minuscule as a 2-3% share of the market it formerly dominated (DRAMs) and yet its leaders continued to define the firms according to that fading

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[1] Christensen (2016, p. 153)

[2] Burgelman and Grove (1996, p. 15); the authors further suggest that holding on to identity meanings may have led to the failure of many other leading to swiftly move into new markets before their home markets shrunk or diminished into insignificance. For instance, they mention that "IBM's slowness in taking advantage of the RISC microprocessor architecture (which it had invented in the mid-1970s) was, no doubt, attributable, at least in part, to top management's perception of IBM as the leading 'mainframe computer' company in the world. Similarly, Microsoft's relatively weak past strategy in networking operating systems probably was, in part, due to their corporate identity throughout the 1980s as the 'desktop operating system' company." (p. 16).

shadow of its former self. Also, indication by the quote is that organisational members identified themselves by the form of offering (a memory company) by their organisation, not the microprocessors which formed a bigger share of their offerings. Even of further importance is that the changing of the company's identity from DRAMs to microprocessors manufacturer is noted as having had a delaying effect.

Christensen further details how Intel entered the new market *prior to formal strategic decisions*, in which *only in retrospect* managers realised that the organisation had a sizeable share in the new market. It is important to note here that Intel was already profitable in the microprocessor manufacturing business before formal decisions about entering the market, and efforts to change the firm's identity from DRAM to microprocessor manufacturer were made. In Christensen's words, Intel moved "away from the DRAM business and into microprocessors— without an explicit management decision to do so."[1] This contradicts the view that decision-making processes in incumbents sow the seed for incumbents challenge to move into new markets. But it also highlights a theoretical obstacle of the theory to the degree that it defies assumptions that organisational actions always proceed from clearly defined decisions.

Furthermore, the effect of asymmetric motivation and value networks do not account for why Intel found it hard to change its identity from a DRAM into microprocessor business, which may perhaps explain why this was observed as being "remarkable". In the case of Intel, formal decisions to enter the new market followed only when the firm was already profitable in this market, which leads to the second point. Christensen emphasised profitability, the key issue in the asymmetric motivation concept, as the *core issue* which lead to incumbents lacking motivation to move into new markets. But as this example shows, Intel was already profitable in this market but it nevertheless found it difficult to change its identity from DRAM to microprocessor manufacturer. Although it ultimately moved into the market, its identity delayed it from discarding meanings related to its prior market and identifying itself with the new market as earlier as it should have. Indeed, Christensen explains that moving into this market could not have been based on clear choices as "so little was known of the microprocessor market at that time [i.e. prior to entering the market, hence] explicit analysis

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[1] Christensen (2016, p. 153)

would have provided little justification for a bold move into microprocessors."[1] That is, if we follow from some of Christensen's core arguments, it should have been easier for Intel to change from DRAM business to microprocessor considering that Intel was already facing trouble in its home market while profiting in the new market.

Even if organisations made an intentional move to enter the emerging market however, the sensemaking research suggest that there exists another challenge, which relates to how organisational members construct an identity, which should be congruent with the new context.[2] The sensemaking process of identity construction has to be ensued by sensegiving processes in which leaders make efforts to pass on their envisioned identities to organisational members, the new meanings of which may conflict with the old, which increases the potential for identity dissonance. Whether this becomes a successful process or not, what is suggested is that it may lead to delays. Signs of possible identity dissonance are notable in the Intel's example where offerings were at a certain stage incongruent with their perceived identity.

In closing, these debates in part answer the following puzzle: "why have incumbent firms generally intensified their commitments to conventional technology, while starving efforts to commercialize new technologies-even while the new technology was gaining ground in the market?"[3] Although debates focused on commitment will follow, suffice it to answer so far that one of the reasons may be that these new markets are viewed as incongruent to organisational identity, hence the current strategy too. An interesting observation is that if at this stage we revisit the disruptive innovation theory model, following debates made in this section, something begins to look missing. Because the model's growth trajectory indicates only an upward growth, possible re-direction, and even the branching of innovation trajectories, or firms into new markets, is obscured. These debates also highlight that innovation trajectories do not simply move upward but may take sideward turns.

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[1] Christensen (2016, pp. 153-154)
[2] E.g. Corley & Gioia (2004)
[3] Christensen & Bower (1996, p. 199)

4.3.2 Organisational Image and Disruption

Prior discussion of the RPV Framework highlighted resources, processes and values which are necessary to drive current projects (sustaining innovations), although the same may become deficiencies in disruptive innovation projects because they are constructed around the former projects. It was recognised that some of these building blocks of the framework are tangible while others are intangible. Although acknowledging brands and product designs, the meanings attached to which could potentially be some valuable intangibles, a missing factor among them is reputation as a key component of organisational resources. As it has been noted, the reputations of incumbents (as it is their identity) become a salient feature when the theory of disruption is looked at from a sensemaking standpoint. Therefore the general point made here is that the sources of the competitive advantages of incumbents do not exclude their reputational statuses; [1] which have influences on or are influenced by organisational identity as previously discussed. This section looks especially at the ways in which organisational members' *sense* of who they are, as mirroring the image or reputation of their organisations, may influence how they perceive disruptive innovations. The concept of image has been explained as the nexus linking identity, which is organisational members' perceptions about their identity as viewed by external observers, and reputation, which is the external overseers' perception about the identity of a particular organisation.

Weick has suggested that identity construction in sensemaking is driven towards satisfying three needs, namely, enhancement, efficacy and consistency of meanings related to the identity of the self. As previously noted, Weick points out that when organisational identity meanings are incongruent with and thus leading to contradiction between meanings of self-references and the perceived meanings observers impose on these referents, organisational members tend to make efforts to resolve the discrepancy. It was also highlighted that the incongruence is accompanied by a negative feeling that drives the need to remove it by taking actions which are driven to remove the discrepancy. That displayed organisational members as inclined to *sustain* meanings which reflect favourably on the organisation, which also means meanings which maintain enhancement, efficacy, and consistency of the self. These are social and psychological needs entrenched in organisations and their members.

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[1] Rindova & Fombrun, (1998, p. 63)

The core argument of this sub-section is that identity needs of incumbents may have implications for how incumbents approach disruptive innovations. It is asserted that disruptive innovations do not seem to feed identity needs of incumbents, at least initially, which might explain why incumbents are initially uninterested in investing in them. As a start, the table ensuing (Table 4.1) makes a generic comparison of the characteristics of disruptive innovations and identity needs. The comparison of the characteristics of disruptive innovations with organisations' identity hints at the conceivability that the nature of these offerings may negatively influence preferences for them by incumbents. Of focus are the very inferiority, poor performance and the new attributes, which may challenge those of sustaining innovations. In their initial stages disruptive innovations do seem to stand in stark contrast with an image of high esteem held by the industry leading firms with such labels as well-managed, admirable, emulated, and innovative, among others. Continued effort to innovate sustainably should be in line, for instance, with the self-esteem needs of incumbents, especially if we factor Christensen's realisation that these organisations are driven to win competitive wars.

Another way to make the same point, especially giving some intricacies on how the points just highlighted may play out, is to present an illustration which takes the form a metaphor built around the three identity needs. The resulting analysis observably points to the identity construction process as likely to be open to growth and stability, rather than the opposite. The aim of the depiction is to link identity construction with features of the theory of disruption, pointing out the potential for identity incongruity to be presented by disruptive innovations.

Characteristics of Disruptive Innovations	Identity needs
1. *Inferior quality* 2. *Poor performance* 3. *New attributes* 4. *Discontinuity (or interruptive potential impact on ongoing sustaining innovation projects)*	1. *Enhancement* 2. *Efficacy* 3. *Consistency*

Table 1: Characteristics of disruptive innovation versus incumbent's identity needs

In the depiction, inflation corresponds with identity construction, in which there is continued availability of a fodder to feed the three identity needs, while deflation corresponds with or more precisely, results in identity incongruence or threat. As efficacy (success of current or sustaining projects) continues to be validated by sustained growth, consistency (e.g. we are a successful, growing and leading firms) will serve as a stopper. A threat to any achieved state of identity will lead to efforts to remove that threat and thus inhibit a downward progression (deflation). That is, (1) the ongoing feeding of the self-enhancement need represents inflation; (2) self-efficacy is represented by the inflate-ability of this balloon; and (3) self-consistency is represented by a stopper or valve. As organisations enact their strategies and achieve outstanding outcomes, which boost their identity and thus reputations, the enhancement need is fulfilled. This fulfilment is thus equivalent to inflating the balloon, but it also validates the efficacy (e.g. well-managed firm) demonstrated by the positive outcomes of actions, or beliefs of successfully executing of strategies. This imagery is in line with the word "construction", the equivalent term of which could be "building" (e.g. reputation or self-esteem).

The balloon model suggests a different way to look at organisations because in essence, the success of this process constructs an increasingly improving self-esteem, which may possibly develop an *amour proper* (used here to refer to organisational ego).[1] A sense of the potential for losing leadership positions, for instance, cannot exclude certain forms of reputational loss (e.g. lower ranking), which may trigger the motivation to avert this rank. Notable efforts to move up-market when entrants begin to nibble on the lower-end of the market, which means beginning to take market share of incumbents, can be linked to organisational drive to innovate sustainably and stay ahead of current competitors. Further, events such as shrinking market share, revenues and/or rankings as a result of disruptive impact, should threaten the inflation processes as portrayed by the suggested model previously discussed. By the same token, these should threaten the identity or reputational meanings held by organisational members. To consider an organisation a leader in a specific market reflects a form comparison, or ranking, in which its peers are rated lower.

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[1] An interesting alternative is to draw parallels between leadership position and their saliency in respective markets to a levitating balloon, whose higher levels lends itself to noticeability, or unobstructed constant watch by observers relative to its peers in the market.

A study by Elsbach and Kramer, which cements Weick's identity construction model, seems especially pertinent to current demonstrations. In the study, the authors investigated the sensemaking processes of organisational members in "top 20" leading business schools and tried to understand how they cope with perceived drop in the rankings. The scholars demonstrate how, following a drop, organisational members of leading schools engaged in sensemaking processes which constructed new meanings to highlight aspects about their organisational identity not considered in the ranking to uphold their identity "status".[1] To the extent that holding on to identity meanings lead to delays in addressing problems, their study bolsters the insights proposed in the sensemaking perspective about identity construction, and used here as a portrayal of the balloon model. However, and more importantly, for current debates, it highlights that there will likely be an impetus on the part of incumbents to sustain meanings attached to the meanings centred on their leadership positions. The study is also crucial to the point that it shows that meanings related to leadership positions matter to a great degree. Indeed, some authors are taking note that leadership positions are in some cases responsible for the late adoption of emerging innovations.[2]

Lastly, such an expression as made by one senior manager at Polaroid, a leading instant photography firm, recounting how he, among other organisational members interpreted changes related to an impending disruption driven by digital photography,[3] also seems useful here. He queried as follows: "Can we be a down and dirty manufacturer at the same time we're an innovator over here? Can you have two different philosophies running simultaneously in the company?"[4] Being "down and dirty" seems to stand in stark contrast with being "an innovator", to the extent that the former descriptor points to a perception low-esteemed vis-à-vis the latter, which portrays a certain quality prestige. In the case of Intel, Grove expressed the following: "Intel equaled memories in all of our minds. How could we give up on our identity? How could we exist as a company that was not in the memory business? It was close to being inconceivable."[5] This statement is permeated with a sense of attachment and defeat just as it denotes great uncertainty and confusion. It is deeply soaked in the question, who should we be if we are no longer a memory company, a label which meant

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[1] Elsbach & Kramer (1996)

[2] The work of Burgelman and Grove (1996) was previously quoted to indicate how IBM and Microsoft became victims of their own identity beliefs.

[3] Gans (2016b, p. 56)

[4] Tripsas & Gavetti (2000, p. 1155)

[5] Grove (1996, p.90)

a lot to us?

4.3.3 Individuals' Identity Needs and Disruption

Christensen has brought into view an individual level of analysis, at which he reports how professional success needs shape the conduct of those who are involved in innovation projects within incumbents. The picture is that of people motivated to drive projects which promise to boost or sustain their careers, as opposed to projects which do not support career growth or threaten their positions or job security. Of more importance is the observation that the professional growth needs often play a critical role in shaping the direction innovation projects and their fate. For instance, Christensen explained how these processes influence resource allocation within incumbent firms, emphasising how organisational innovations depend on resources. It was noted that organisational members act as individuals just as they act as the organisation. Their meanings are blended with other organisational members', but also power does play a role in sensemaking processes.

It remains intriguing then that Christensen devotes almost all attention to the reasons behind the supporting and pursuing of projects deemed to stand a better chance of gaining favour from dominant customers by managers. Thus, he recognises and yet remains silent of the influences of the needs of individuals in these members in shaping the innovator's dilemma. Although the need for personal success may be justified as motivated by financial motivations, a successful career also provides these people with a perception of self-esteem attached to their status within them firm, within the market, industry or society in general. However, the opposite can be said about faltering careers as a result of disruption, which may in part result in efforts to hold on to such meanings of esteem depending on the malleability individuals believe there is in their environment and the powers they have. Christensen has noted that failures of projects tend to be costly and public. Such noting of the public nature of these failures should even be obvious in the event of the leaders of prominent firms which are of focus in this study; the firms which have been described as of constant watch by external stakeholders. What that publicity implies, however, is the potential dissonance in cognitions when people who are considered competent confront situations which begin to threaten that perception.

The more general point is that people in organisations have a high appetite for ascending to higher positions. Their conduct in pursing these positions and following achieving them may have an impact when these organisations have to make changes which threaten both. Hues of that point are discernable in the work of other scholars. Starbuck and Milliken note that the lower levels of organisational hierarchies are made of members who aspire to be in leadership positions and interpret their environments within their organisations on this basis.[1] Burgelman and Grove make the same point, although they extend the subject to include constraints which lead organisations to stick to current strategies, projects or markets, which is a key topic in this study:

> Companies often experience an inertial aftermath of success: They have become sharply aware of the competencies that made them successful against the initial competition and they continue to rely on these distinctive competencies even when the competition changes. *Also, companies usually organize themselves in such a way that the employees representing these competencies are likely to have the greatest influence in the strategic decision-making process* [italics added]. Changes in the basis of competition thus often evoke inertial responses by incumbents.[2]

The emerging picture is that of organisational members who have become successful and influential as they move to the upper echelons of the organisation. The question which remains is what happens to the members who reach, or are in pursuit of, these higher positions when disruptive innovation driven changes emerge? Burgelman and Grove have suggested that those who are in positions of power, having reached there due to their successes can be a critical source of inertial forces. That point can be expanded and given more nuance if we revisit the identity needs already discussed, in relation to the professional growth related to projects they lead, or threat resulting from change. The previously raised question rephrased is thus, are there any influences identity needs have on organisational members' interpretations and actions in the emergence of disruption which may, ultimately then, have influences on the directions their organisations take? It is argued here that the answer is yes, in part because of the deliberations made thus far in this subsection, but the picture can be given more detail.

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[1] Starbuck & Milliken (1988, p. 53)
[2] Burgelman & Grove (1996, p. 14)

Another way to support the answer is to recognise that disruptive innovations may require cessation in projects which these individuals lead and have higher prospects for, which may negatively affect expectations on continued professional success. Thus, disruption may present organisations with the need to terminate ongoing projects – which were paired with the current organisational strategy. In the language of sensemaking, such a termination equates to interruption (to be delved into later). From an identity construction point of view, one critical aspect which should be threatened is continuity, if we recognise that the positions held may have to be redefined in the new competitive landscape. This could also threaten consistency and efficacy, for instance, should those who are well equipped to lead the new projects be positioned in more powerful positions at the expense of loss in power in previously powerful individuals. For instance, restructures are often related to incumbents' challenges to wrestle or respond to the emergence of disruption.[1]

The possibility that members may have individualistic values to protect and use their positions of power to direct organisations towards certain direction cannot be ignored. That does not exclude the possibility that these members may exercise resistance towards strategic changes, which threaten the projects they lead or have sponsored (and thus their positions) as when it is necessary to divert resources and attention to new projects for purposes of strategic renewal. The latter point is exactly what Burgelman and Grove have highlighted. A study by Burgelman, which also focused on Intel and what delayed the firm from shifting from DRAM to microprocessors, makes a similar point: "Emotional attachment by many top managers to the product that had 'made Intel' was also part of the inertial force [which delayed Intel from moving into a new market]. In the course of the interviews, most managers mentioned emotional factors to explain why it had taken so long for Intel to get out of the DRAM business."[2] Burgelman's work may also mean that these managers' sensemaking processes, in the face of change, may be fastened around justifications sustained by the noted emotional glues.

If we tie the careers of these organisational members with the concept of identity construction, it is then possible to explain how this sensemaking processes may influence organisational members' interpretations and actions. Weick has allegorically made reference

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[1] Christensen & Raynor (2003)
[2] Burgelman (1994, p. 41)

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to identities as tools, by which he explicates how organisational members' identification based on the means by which they achieve their goals.[1] In the current study, the tools or identifications may be in reference to sustaining innovations – for instance, the ongoing sustaining innovation projects, how they have been achieved and the status meanings which are tied to these innovations. If we follow the narrative of this subsection and the work of Christensen in general, it suggests that organisational members' success is based on the sustaining innovations, and therefore, their esteem is tightly coupled with them.[2] Dropping these innovations and pursuing disruptive innovations may then present challenges, such as, who these people are when they let go of the projects which led to their success, just as it may be a question of who their organisation is when it is no longer a leader in the industry. Although the rational choice stance might propose that these organisational members will readily drop the tools when they begin to see them as less beneficial, this is not the image portrayed in the theory of disruptive innovation. Arguably, incumbents' persistence in clinging to their sustaining innovations (tools), sometimes until their death, mirrors the work of Weick than the arguments Christensen makes. Indeed, scholars have also empirically demonstrated that organisational leaders often do cling to what has made them successful.[3]

All of the points deliberated on within this section portray the critical role of identity construction in organisational processes, especially as these processes relate to and shape innovation projects. What is ultimately important is what sense is made as people interpret changes within the metaframe of current identities and the related beliefs – e.g. we are leaders and intend to maintain these ranks within current markets or on the basis of current "tools"; and what actions ensue as coloured by the sense made. It is of crucial importance then to revisit the "chilling" aspect of sensemaking, which is that "once a tentative explanation has taken hold of our minds, information to the contrary may produce not corrections but elaborations of the explanations."[4] In other words, organisations may continue to hold on to meanings which are irrelevant to current challenges, and continue to do so until a crisis situation.[5] The initial steps into these dangerous traps as beginning with beliefs has been

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[1] Weick (1996); Weick (1993)

[2] Burgelman and Grove (1996) add that when these members have reached leadership positions, thus on the basis of the success of their projects, they tend to be emotionally attached to their projects, which present challenges when organisations have to make strategic shift and pursue different projects.

[3] E.g. Tripsas & Gavetti (2000)

[4] Weick (1995, *citing* Watzlawick, 1976, p. 50)

[5] The empirical study about Bristol Royal Infirmary presented previously demonstrated the same point.

demonstrated so far, and the ensuing two sections begin to highlight how actions may enact an environment which itself becomes a constraint.

4.4 Enacted Constraints

The theory of disruption has been criticised as leaving organisational actions and the ambiguities of their outcomes unaccounted for. Nevertheless, Christensen has highlighted that incumbents may be "creative" in fighting disruptive innovations. The blind spots related to such an assumption or leaving unexplained organisational actions have been highlighted in previous debates. This section begins to bring some light to this obscured facet, especially linking it to disruptive innovation or related contexts. The enactment model of sensemaking has highlighted the role of the interplay between cognitions and actions in organisations. The focus here is how they may lay a ground which becomes rife with entrapments of commitment (discussed in the next section), which could potentially delay incumbents from changing their strategies and/or move into new markets.

In essence, enactment denoted the interplay between cognition, which has been of much focus in the preceding section, and actions, which will begin to show up from hereon, and how this process *materialises* the environments which people confront. This view directs our attention to the actions of organisational members, in addition to their cognitions, as places to look for in order to understand challenges organisations confront. Hence, some of the places to look for in order to understand these challenges will include the conduct of incumbents prior to the emergence of disruptive innovations, especially understood within the context of the prevailing beliefs and related actions during these times. Also, the analytical focus should cover the time when disruptive innovations have emerged, whether these define ignoring or fighting them. Unfortunately, the theory of disruption is almost silent in this regard. Given this gap, the study draws from related work of other scholars of disruptive innovations, who have at least provided some insights, especially into the conduct of incumbent leaders when confronted with disruptive innovations.

Hints given by Christensen such as fighting the laws of disruption, including ignoring them, provide a good starting point. Some of the obvious questions to ask then should include, in what ways and on what basis do incumbents fight disruptive innovations, or what Christensen terms the "laws" of disruption? Although fighting does clearly denote a form of action,

ignoring is itself not void of action. Christensen explains that rather than paying attention and responding to disruptive innovations, incumbents focus on and improve on sustaining innovations, including shifting to the higher-end tiers of their core markets. That signals both cognition and actions in that some justification has to prevail to sustain such strategic conduct. Hence, the ensuing debates build on these hints as useful anchor points. The aim is to highlight the forms of actions which incumbents take and the ways in which these actions may "materialise" constraints.

The previous discussion of asymmetric motivation, in which incumbents are portrayed as looking down upon disruptive innovations, includes an element (i.e. talk) less paid attention to in the theory of disruptive innovation, but often made clear by other scholars. As clarified by Christensen, initially, disruptive innovations' target markets which tend to be too small for and unappealing to incumbents. The same observation is reflected in studies of other scholars who sought to understand how incumbents respond to disruptive innovations.[1] If from this point we consider talking as equivalent to acting, the expressed impressions made by incumbents, during this point or the emergence of disruptive innovations in general, are therefore worth some attention. The phrase *expressed impressions* thus serves the purpose of highlighting that the words incumbent leaders use,[2] which *may* represent their beliefs about these innovations are made public, either within the internal space of organisations, or externally. In the language of this section, these impressions are enacting the environment. They put something out there. Some of these expressions are indeed reported in industry media such as the business magazines, but they also bubble up in scholarly literature when scholars conduct studies to understand the reasons behind incumbent leaders' conduct.[3]

It should be noted that the distinction between what is described as public and private may in this context be trivial, especially if we factor that organisational actions are observed by fellow organisational members.[4] The expressed impression point to two directions simultaneously. It gives a glimpse of the meanings which incumbents' leaders tend to impose on disruptive innovations; but it also brings into view how these expressions are "put out there" and become part of the environment. Evidence suggests that incumbent leaders are

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[1] E.g. Charitou & Markides (2003)
[2] As it was noted in Chapter 3, words play a crucial role in sensemaking.
[3] Charitou & Markides (2003); Starbuck & Nystrom (1997)
[4] Weick (1995)

also often interviewed by the industry media to comment on the emerging competitor offerings.[1] Although Christensen often cites these publications (especially in *The Innovator's Dilemma*), his focus tends to be on reporting the performance of incumbents.

A notable regularity across the expressed impressions, which is in line with the unevenness notable in Christensen's concept of asymmetric motivation, is that incumbents are inclined to focus on the cues which highlight the weaknesses of competitors' offerings compared to their own. Interestingly though, this is not limited *by* the characteristics of disruptive innovations and extends as such to what may be regarded as sustaining innovations. In other words, incumbents seem be as likely to highlight their competitors' weaknesses, while ignoring any additional strengths evident in the disruptive innovation offerings. Arguably, such a bias is driven by an effort to highlight the strength of their (incumbents) own offerings. In addition, these expressed impressions are also reported to often have derisive connotations, well exemplified by the work of Starbuck and Nystrom, explaining how a mechanical calculator manufacturer (Facit) reacted to the emergence of electrical calculators, as follows:

> The immediate reaction of Facit's top managers was that these funny little plastic boxes with little red lights on them *had to be a passing fad* [italics added]. It was obvious to Facit's top managers that no one would trade in a nice solid machine that went thumpity, thumpity, thump for a silly little box with little red lights on it! Facit would move into electronics gradually over the next decade or two, but it would do so in a careful, orderly way while maintaining high product quality.[2]

Facit would go on and, in the language of the theory of disruption, be disrupted by electronic calculators in a space of just two years. Other examples of this include expressions at these earlier stages that emerging disruptions are not threats, as they are perceived to be in unrelated markets.[3] The inclination to view entrants' offerings as inferior should have a straightforward basis. Comparably, the markets incumbents serve are generally demarcated from those of entrants by the disparities of such main characteristics as offerings of superior quality, performance and price.[4] Considering the size of incumbent organisations, their positions within respective markets (including reputation of brands) and the better quality of

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[1] Gans (2016b)
[2] Starbuck & Nystrom (1997)
[3] Charitou & Markides (2003)
[4] Price may be viewed as a disadvantage for accessibility to those who cannot afford the offering, but it is arguable that people who afford expensive offering may also consider them as a status symbols.

their offerings, it is thus not surprising that these organisations will highlight their strengths, and the weakness of their counterparts to stress their competitive edge.

Indeed, a positive appraisal of competitor offerings should, in the eyes of observers, signal an admission that one's offerings are of lesser value.[1] It seems implausible that incumbents' appraisal of competitor offerings, and especially those of smaller entrants, the offerings of which are inferior, could be positive. This should nevertheless be cognitively challenging because held beliefs about high-esteem should be incongruent with an acknowledgement that a smaller opponent's offerings are better. Thus, public acknowledgement by an organisation that competitor offerings are better should not only mean endorsing the competitor, but it should also lead to cognitive dissonance.[2] The implausibility of this should even be higher if we consider that these organisations, as Christensen suggests, derive their resources from external stakeholders whose support is arguably based, in part, on the reputations of the organisations and their offerings.

Expressions are also carried in the slogans of organisations, often used in adverts to highlight what they perceive as the "selling points" of their offerings. Previous discussions in sensemaking have indicated how organisations manipulate their environments, including through advertising, in order to make them favourable to their operations. The crucial questions, as earlier suggested, relates to the fate of these enacted worlds. An organisation may face challenges where it has to introduce a product which contradicts its marketing message.[3] Indeed, in some cases organisational leaders do dismiss innovation ideas because they do not "want to confuse the marketing message already in place."[4] Porter makes a related point: "A company known for delivering one kind of value may lack credibility and confuse customers – or even undermine its reputation – if it delivers another kind of value or attempts to deliver two consistent things at the same time."[5] His remarks are especially interesting as they link what has previously been discussed (section 4.3.2.) with current debates, reflecting how important is organisational image and its influences on strategic choices. The influence wielded by marketing departments as demonstrated in the theory of

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[1] Such admission should also lead to increased dissonance of cognition, just as the balloon model suggested.
[2] Weick (1995); Festinger (1957); the balloon model aimed to demonstrate the same.
[3] E.g. "*The best or nothing.*" Mercedes Benz (2018)
[4] Schneider (2017, p. 65)
[5] Porter (1996, pp. 68-69)

disruption should lend support to these observations, particularly because they are the organisational departments directly responsible for environmental manipulation.

Further, ignoring disruption suggests that incumbents do notice emerging innovations but instead engage in different forms of actions. What other scholars note is that some disruptive innovations, especially business model innovations, do not develop into disruption.[1] In either case, they do reach a point at which incumbents notice them and have to respond. At this stage, several strategies to respond are pursued, but they do not exclude continuing to ignore these innovations. What this implies is that some legitimisation takes place, on which incumbents act. Whether these legitimisations are based on perception of the size of the market and its lack of convincing profit margins as Christensen has suggested,[2] or because incumbents reckon disruptive innovations as unrelated markets,[3] what matters in current discussions is the durability of these meanings as embedded in the legitimisations. It also matters how they are communicated and who the audiences are. Some scholars of disruption have shown that these views are shared among organisational leaders just as they are reported in financial reports, or presented to shareholders.[4]

Christensen has particularly noted that given that the process of disruption is sometimes slow, "incumbents can get quite creative in the defense of their established franchises."[5] Their actions in doing so have been considered to include, for instance, lobbying legislators to put in place regulations which inhibit the growth or encroachment of disruptive innovations into their market;[6] efforts to disrupt the disruptors through introducing counter offerings;[7] and what is considered "rational decisions" to ignore disruption.[8] If we consider that one of the core issues is the delay in incumbents to shift into the new contexts; that fighting of disruption is not always a successful approach to responding to them; and that justifiable actions may lead to commitments, these manipulations seem to suggests ways in which incumbents may begin to set themselves for failure in the face of advancing disruptive

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[1] Charitou & Markides (2003)
[2] Gans (2016) and Charitou & Markides (2003) also cite similar examples in which incumbents ignore pursuing disruptive innovations on this basis.
[3] Charitou & Markides (2003)
[4] Gans (2016b); Charitou & Markides (2003); Starbuck & Nystrom (1997); Burgelman & Grove (1996)
[5] Christensen *et al*. (2015, p. 48)
[6] Osiyevskyy & Dewald (2015); it must be noted that this study was looking specifically at the behaviour of smaller firms.
[7] Charitou & Markides (2003)
[8] Henderson (2006)

innovations. Whichever actions are taken opportunities as well as constraints are set in construction. These constraints have the potential to lead to selective perception of incumbents' environments, in which the trace of actions or the justifications to manipulate the environment to favour incumbents' businesses may become the primary pillar around which cognitions are bound. This is especially true if we consider Weick's insight about the ingredients for commitment, a subject to which we will soon turn to.

Both the Intel and mechanical calculator manufactures demonstrate more directly where the theory of disruption falls short. The theory cannot explain why the former company struggled to move its core business into a market where it was already a player and making profit. On the other hand, Facit continued to invest in mechanical calculator despite losing market share as a result of electronic calculators by a small competitor gaining customer appeal, which Facit could nevertheless manufacture but had opted to place the commencement of their production on hold instead.

4.5 Commitment to Sustaining Innovations

It was pointed out in the theory of disruptive innovation that there prevails a form of commitment in which incumbents continue to do what made them successful even in the face of a drastically shifting market, while entrants continue to attract a share of incumbents' customers. In the event in which incumbents' markets are ultimately disrupted, this process leads to the shrinking market niche of incumbents until a point of insignificance, which either leads to the death of that market or industry or it remains a small niche. Although commitment is explained in terms of resources, Weick provided an alternative mechanism which can constrain organisational members' conduct. The recipe for this form of commitment included action, publicity, choice, high stakes, and low tolerance for mistakes, which heighten justification while limiting choice. Weick has also cautioned that the incipient steps into troubles may be small volitional actions which are enlarged over time through an enactment of an environment which becomes a constraint, inevitably leading people into unexpected traps. The aim of this section is to explore possible links between disruption and commitment.

To begin with, the profiles of incumbents seem to score higher on all of the ingredients of commitment. Their actions and choices are open to scrutiny, either through leaders acting or making choices other organisational members become aware of, or publishing their strategic moves, choices and justifications in annual reports, for instance. In fact, Burgelman and Grove observe that when faced with what they call Strategic Inflection Point (SIP),[1] organisational leaders go through a process that starts with denial, followed by escape or diversion, and then acceptance, before pertinent actions are sought.[2] They explain this process in the following manner, quoted at length because it highlights some of the actions which are taken by leaders, which remain unobserved in the theory of disruptive innovation.

> Denial is prevalent in the early stages of almost every instance. To appreciate this, read the annual report management letters of companies that, in retrospect, we know were facing a SIP. Escape refers to the personal actions of top managers. For instance, frequent public speeches on vague subjects given by CEOs of companies facing difficult times or the move of corporate headquarters away from the center of business action is signs of attempted escape. Diversion, by contrast, refers to the worst kind of escape, often involving major acquisitions unrelated to the core business that faces a SIP. Effective top managers go through these first two stages as well, but they are able to move on to the acceptance and pertinent action stages before it is too late.[3]

An important factor to highlight about their observation is that the conduct of these leaders becomes exposed to the public; the public which comprises many people to which the leaders are accountable. Further, the denial stage gives rise to the question: *what may be the consequences of such behaviour if viewed through the lens of commitment sensemaking?* Although it is noted that pertinent action is ultimately sought, after such strategic moves represented by attempted escape or diversion, what is important to underline is the potential delays related to the process. In addition to publicity, a low tolerance for mistakes in these firms, particularly mistakes which could lead to the demise of the firm, or greater financial losses, must be highlighted as another feature which characterises these organisations. Thus,

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[1] They explain it as a stage at which a firm will become less profitable as a consequence of drastic market changes, which necessitates the "giving away of one type of industry dynamics to another; the change of one winning strategy into another; the replacement of an existing technological regime by a new one." (Burgelman & Grove, 1996, p. 10)
[2] Burgelman & Grove (1996)
[3] Burgelman & Grove (1996, p. 20)

the profiles of incumbents are those which display a greater environment in which commitments should be prevalent, either for rewarding ends or troubles.

The potential for committing behaviour can thus begin with some of the actions already observed so far, which persistently drive their sensemaking into seeing from their environments aspects which confirm the expectations or justifications driving these actions. Weick has especially pointed out that these beliefs (expectations and justifications or justifications) function in the manner analogous to a self-fulfilling prophecy, which means they can become self-confirming. Thus, they drive actions into the direction of the incipient prophecy or expectation which set the action in motion. Alternatively, the need to justify traces of actions may lead people to selectively perceive their environment in ways which drive subsequent behaviour to centre on those justifications, which may in consequence prove that justification as real.

The previously given example on Facit and the next example to follow, about Research In Motion (RIM), exhibit signs of the ingredients for commitment just as discussed. Their usefulness is that they exhibit not only the said requirements for committing behaviour but also, some of the core themes of the current study, and most importantly, representing both the frameworks. The second example is about the reaction of leaders of mobile phone maker BlackBerry (RIM) when an entrant, iPhone (smartphone), emerged as a contender in their industry in 2007.[1] At the time, the BlackBerry brand was a clear leader in the high-end (sustaining) mobile phone market. On the arrival of the iPhone, one of the leaders and a founder of RIM, Lazaridis' appraisals of the phone were derisive, aimed at highlighting only its weaknesses. He went on to exclaim: "Try typing a web key on a touchscreen on an Apple iPhone, that's a real challenge. You cannot see what you type."[2] That challenge he focused on was the iPhone's touch screen feature, which Lazaridis was evidently against. Thus, in his appraisal he "extracted cues" which are analogous to what Christensen regards as defining disruptive innovations. An important reminder is that extracted cues can be viewed as representing the material from which they derive, and thus despite the potential for the phone to have had advantages, it was perceived by Lazaridis as an inferior product overall.

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[1] It remains arguable whether the iPhone was a sustaining innovation or not. Although it was considered by Christensen to be a sustaining innovation, there remain potential challenges, especially with the identification of competitor's offerings as already hinted, but section 4.5 extends this through exemplification.
[2] Gans (2016b, p. 34 *citing* Yarrow, 2011)

The continuing dominance of the iPhone in the mobile phone market led to Lazaridis, along with co-founder, Jim Balsillie to "publicly belittled the iPhone (which had emerged as the market leader) and its shortcomings."[1] Balsillie, who was the head of marketing at the firm, justified this as a public relations effort [manipulation].[2] At this stage, their flagship product BlackBerry was not selling well in the market.

Indeed, a constellation of factors are considered to have led to later decline of BlackBerry smartphone's market dominance. However, some of the core issues have been identified as including the emergence of the iPhone and touch screen phone designs, as well as the advent of Android operating system for mobile devices.[3] For the current debate, it is the conduct of RIM leaders, the public nature of their conduct, including their beliefs, which are useful to understand what may have led to delays in transitioning to the new competitive landscape. As the previous expressed impression by Lazaridis makes clear, he was against the touch screen design for his BlackBerry smartphone. Careful analysis points to issues of commitment just as it points to issues of identity. First, the touch screen phones challenged the core design of the BlackBerry device. The name BlackBerry derived from the resemblance of the device to a blackberry fruit – its tiny buttons are similar to the drupes of the fruit. The device itself thus had design cues resembling the blackberry fruit. Therefore, to change the design of the phone was to move away from its core identity characters, the meaning of which should have been difficult for Lazaridis to let go, which may be because organisational members get emotionally attached to their offerings.[4] This is in particular highly likely, given that he was the chief designer of the keyboard and the brand. Gans notes that "Lazaridis believed that people wanted a tactile response when using a keyboard."[5] Only when the smartphone maker was experiencing troubles as a result to the market shift did they make effort to try and make touch screen phones. Even then, some of these devices combined touch screen with the original keyboard design.[6]

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[1] Schneider (2017, p. 65)
[2] Schneider (2017, p. 65)
[3] Gans (2016b)
[4] Burgelman & Grove (1996)
[5] Gans (2016b, p. 71)
[6] Gans (2016b)

Although in the case of Facit no details were provided by Milliken and Nystrom about expressions external to the organisation, their shared meanings about the electronic calculator being an inferior product signal views which were shared among them as organisational members. The crucial part about this example is that it embraces many aspects of the discussions presented so far. Firstly, Facit was (had just recently become) a global leader in its respective industry (identity/reputation). Secondly, the mechanical calculators it made were sustaining, while the electronic calculators which led to its woes had characteristics of disruptive innovations, at least based on the managers' descriptions of their own offerings compared to those of the entrant (which was proved to be a dangerous bias). [1] Third, Facit could manufacture the electronic calculators but it continued to focus on turning the organisation into financial profitability again (resumption of interrupted project) even when (at least from an outsider's point of view) the problem looked evidently related to the emergence of the new forms of calculators. Fourth, Facit was ultimately disrupted as a consequence of holding to its sustaining innovations and while placing on hold electronic calculators, the latter form of calculators of which supplanted the former. Their plausible belief that mechanical calculators were a passing fad may have been "persistent, and sealed off from refutation."[2] Meanwhile, their drive to remain a global leader, a status which they had just recently achieved and tried to maintain[3] may have functioned as a tool to which they persistently gripped until their fall.

4.6 Plausibility and Disruption

A focus on the rationality or irrationality to explain incumbents' challenges is one salient feature in debates of disruption.[4] To present organisational members as faced with a dilemma mirrors this point — the presumption is that incumbents can clearly distinguish sustaining from disruptive innovations, make a clear assessment, from which (rational/irrational) choices follow. Hence, to assess the outcomes of organisations we can go back to the point of deciding, or analyse the decision-making processes to see where the problem lies. In so

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[1] This will be expounded on later in discussions of plausibility. It will be argued that incumbents should be biased towards seeing competitor's offerings as inferior compared to their own.
[2] Weick (1995, p. 84)
[3] Starbuck & Nystrom (1997)
[4] Henderson (2006); Christensen & Bower (2003); Christensen (1997[2016)]

doing, faults such as irrationality, or intention which were guided by rationality can be pointed out to explain why certain conduct led to certain outcomes. This view is however premised on an accurate perception of the environment by the decision makers.[1] The operating assumption is that of some ability for organisational members to accurately perceive cues of disruptive innovations and because "different types of innovation require different strategic approaches",[2] follow a necessary strategic recipe for responding.

The suggestion that incumbents tend to respond to disruptive innovations too late, at which point, as Christensen observes, entrants have already mustered a first mover competitive advantage, implies that early detection of disruptive innovations is required in order for early response to take place. That is, one of the core challenges incumbents confront in dealing with disruptive innovation include the identification of these innovations *ex ante*, and taking the necessary steps to respond. Christensen has defended against criticism from scholars who hold the view that the model can only describe disruptive innovation *post ante,* offering examples of firms or products for which positive prediction was made by him or followers of his model.[3] Nevertheless, he acknowledges that "identifying true disruptive innovation is tricky",[4] which follows an analysis of Uber as, according to him and associates, incorrectly categorised as disruptive despite that being incorrect.

A reasonable place to start is to highlight that scholars themselves wrestle about the definition of disruption innovation,[5] just as Christensen acknowledges the difficulty with which it becomes to identity true disruptive innovations. It is arguable that organisational members are not immune to the same challenge scholars confront. In other words, the continued challenge to accurately define and predict disruptive innovation innovations extends to organisational members under investigation by scholars. One example which stands out in this regard is how Christensen used the theory of disruptive innovation to identity as sustaining innovation, and predicted the fate of the iPhone when it was introduced in 2007.[6]

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[1] Weick *et al.* (2005, p. 415)
[2] Christensen (2015, p. 46)
[3] Christensen (2006)
[4] Christensen *et al.* (2015, p. 48)
[5] Weeks (2015); Danneels (2004)
[6] The Apple product became a success, to the contrary. The point here is not to continue to criticise a mistake already acknowledged, but rather to highlight that organisational members are prone to the same limitations which led to Christensen's inability to predict, if not worse. While scholars still have a chance to rectify their mistakes, for organisations it can be too costly to err, as when it results in organisational death.

Following are the remarks Christensen made in this regard:

> The iPhone is a sustaining technology relative to Nokia. In other words, Apple is leaping ahead on the sustaining curve [by building a better phone]. But the prediction of the theory would be that Apple won't succeed with the iPhone. They've launched an innovation that the existing players in the industry are heavily motivated to beat: It's not [truly] disruptive. History speaks pretty loudly on that, that the probability of success is going to be limited.[1]

Indeed, the iPhone was considered not a straightforward offering to categorise in terms of Christensen's sustaining versus disruptive innovation differentiations,[2] but that is precisely the point being advanced. While some innovations may be easily identifiable as sustaining or disruptive some are not. In addition to this, Christensen adds that accurate categorisation is also contingent on relativeness of the innovations to a specific firm. The implication is therefore that a particular observer will either find a specific innovation falling between the two. That, nevertheless, does not exclude the possibility for confusion and inaccurate identification in trying to fit a specific offering between these categories. These latter factors are contingent on such human conditions as biases and bounded rationality, which is what organisational members have to deal with. Christensen's prediction as discussed is a case in point.

Arguably, the identity of the observer will have a greater influence in how the interpretation is made, and in the confidence of the ensuing actions. The organisations under study as incumbents, as previous analysis suggested, should have challenges especially with appraising competitor's offerings, and to recognise an innovation as sustaining may require acknowledging its strengths, which may be difficult depending on who will appraise that acknowledgement as already discussed. Disruptive innovations could be confusing. In addition to the example given about BlackBerry, another dominant mobile phone maker which succumbed following the emergence of the iPhone was Nokia. Pekka Pohjakallio, the Vice President of Nokia expressed that: "They had music, internet, an email deal with Yahoo and a deal with Google, but it is a 2G device, not 3G, which was a surprise to me."[3] That stressing of the 2G was aimed at highlighting that the iPhone was weaker or of lower

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[1] McGregor (2007)
[2] Gans (2016b)
[3] Gans (2016b *citing* Dredge, 2015)

performance as a mode of internet access because it lacked the better performing 3G; a more advanced technology at the time.

Whether the iPhone was disruptive or sustaining innovation relative to Nokia or BlackBerry remains contentious. The cues incumbents' extracted, or more precisely, emphasised, match disruptive rather than sustaining innovation,[1] even though Christensen categorised the iPhone as sustaining innovation. The difference is that organisations' errors, especially with regard to issues like disruption, may have a higher potential for costliness than it is the case with scholars, who may have the luxury of time to at least revisit their models and adjust them accordingly as Christensen has continuously done so for the past 23 years.[2] Further, the systematic observations made by scholars, often in retrospect, may not exactly match the meanings organisational members, who will care less about the stringent accuracies required by paradigms such as positivism on which rational decision-making assumptions rest.

Acknowledging identification of truly disruptive innovations as a core challenge highlights the problem as going beyond just choice, but comprising among other factors, confusion, bias and plain incapacity to have the requisite information about what will enable disruption. People make plausible rather than accurate sense and move on as if they have a good sense of what is going on.

4.7 Interrupted Sustaining Projects

Christensen often argues that incumbents tend to respond to disruptive innovations when it is already late. He also highlights a certain pattern in incumbents' conduct at the initial stages when disruptive innovations begin to affect incumbents by invading their markets. He considers that incumbents tend to "rationally" move to the higher-end tiers to maintain their growth path and defend profit margins. An alternative explanation is provided here through the lens of the sensemaking's interruption model, which in part weaves together the common thread that holds together some of core arguments presented in this chapter (section 4.3 – 4.7). From a sensemaking point of view, the jolts caused by these initial stages of disruption

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[1] Gans (2016b, p. 34) in particular raises the point that incumbents focused less on features considered disruptive-related when the iPhone emerged.
[2] Christensen (2006)

are defined as interruptions. Disruptive innovations emerge as incumbents have different ongoing projects at varying levels of development, which should mostly be embedded with expectations of positive outcomes constructed on the track record of these firms. Expectation of growth has been implied greatly in the theory of disruptive innovation, just as it is beliefs about being excellent and of high esteem. It is also arguable that any firm with the profile of incumbents should have lesser expectations about failing, particularly as a consequence of and dethronement by small firms, which justifies incumbents' focus on competitive wars with their peers.

Thus, a relevant question to ask from a sensemaking perspective is what conduct is expected of incumbents when disruptive innovations interrupt their ongoing projects? It must be recalled that an important feature of stronger expectations is that it leads to perceptual errors, such as increased filtering out of cues that are not in line with the expected. That has been linked to group think among those who share the expectation. Furthermore, interruption was considered to induce emotion and lead to autonomic arousal, which affects complex thought processing as well as narrowing attention. Rare as interruptions are considered to take place at a macro-level, it is arguable that depending on whether it leads to incumbents' failures or not, highly affect their viability or not, or takes a significant portion of their market share, disruptions are likely to lead to interruptions of varying degrees in incumbents.

Figure 4: Interrupted sustaining projects

The interruption model suggests that incumbents' first effort should be to resume the interrupted expectations, which can then be followed by further deliberation or alternative action, *if resumption fails*. Thus, if resumption succeeds ongoing projects are carried on. It is also interesting that as more effort is made to resume the project, performance increases due to an increase in focused attention on the project, whether the project is losing relevance or not to contextual contingencies. Figure 4 demonstrates incumbents' actions within the context of disruptive innovation as per the interruption model. The discussions about identity

construction have demonstrated how organisations are likely to remain tied to established identity meanings. If we consider that the first efforts were driven to uphold their identities, such an explanation fits neatly into efforts for restoration of expectations. Established identity meanings have been demonstrated as stubborn, leading to efforts to restore them when threatened. Also, the balloon model suggested that there should be related efforts to address identity threats and the potential for less impetus for incumbents to invest in identity incongruous innovations. Thus, both the explanations presented organisational identity as having the potential to constrain organisations from moving into new markets. Nevertheless, emerging disruptions are associated with incidents of identity threat as per prior discussions, which should engender efforts for restoration of identity meanings, which is equivalent to resumption as per the interruption model.

Efforts at resumptions can be linked to incumbents' move into higher-end tiers of their markets. That conduct can alternatively be described as holding on to their sustaining innovations thus, which can be interpreted as indicating that these firms make effort to maintain current projects' profitability. After all, that is what these projects were expected to achieve. But that explanation also fits the view that incumbents make efforts to resume interrupted projects and the expectations which colour them. Further, the proposition about serving current customers is equivalent to staying in the same market compatible with the current projects and identity. Efforts at resumption are also represented by discussions about environmental manipulation, such as efforts to "fight" disruption as Christensen has hinted, which illustrate how organisational members make efforts to sustain their ongoing projects. Discussions of enactment may fall within resumption efforts, but they may also extend into commitment escalation, which may be equivalent to further deliberation in the initial interruption model (Figure 4) and currently labelled as commitment to sustaining innovations. Despite often too late, the ultimate adoption of disruptive innovations parallels what the initial interruption model described as taking alternative actions.

Core to this model is commitment to ongoing projects justified by current beliefs. That conduct may either persist until disruption, or a point at which alternative action is taken. Another key feature of the model, as a consequence, is inertial forces which initially lead to a restraint from changing current actions. Thus, despite the diversity of different features of the sensemaking as presented from section 4.3 to 4.7, as well as the current section, a delay as resulting from certain beliefs or actions is the common thread that weaves them all together. A perhaps remarkable feature of these debates as summed up by the model is the fact that

they match with the conduct of incumbents as explained by Christensen's theory. Hence, they serve as an alternative explanation for what may lead to incumbents' difficulties when confronted with disruptive innovations. A further notable feature is that effort at resumption of projects is associated with an improvement in performance, as per the interruption model. That matches Christensen's observation that incumbents' performance tend to increase following an emergence of disruptive innovations.

4.8 Conclusion

This chapter explored organisational sensemaking processes and their potential for shaping incumbents' responses to disruptive innovations. Salient features of incumbents, among which are their profiles, how they relate to the markets within which they operate, conceptualisation of their beliefs, and their actions were brought into view in order to demonstrate how they may contribute to how incumbents respond to disruptive innovations. The concept of identity was demonstrated as pervasive to the degree that it influences human conduct, cutting through the individual and organisational levels. Organisational actions and how their trace may lead to entrapments of commitment to sustaining innovations were brought into view. Then challenges organisational members face in perceiving their environments, which may undermine their timely response to disruption, were looked at. Finally, the interruption model of sensemaking was used to tie together some of the core arguments presented in the chapter.

Chapter 5: Conclusions and Implications

5.1 Summary

The current study has set out to explore the challenges incumbents confront when responding to disruptive innovations. The question was formulated as follows: *in what ways may organisational sensemaking processes shape incumbents' responses to disruptive innovations?* The context of this question was that the theory of disruptive innovation, which borrows its spectacles (including assumptions about strategic rationality) from a decision-making perspective, obscures organisational actions. Organisational sensemaking was presented as suitable alternative perspective to studying incumbents' challenges, in particular because it accounts for organisational actions, but also because it derives from a different scholarly tradition. That latter point gave rise to the prospect that the alternative perspective could offer a novel way to understand the supposed innovator's dilemma. Having given descriptive analyses of the theory of disruptive innovations and organisational sensemaking in the second and third chapters, respectively, the fourth chapter explored incumbents' challenges to responding to disruptive innovation from the sensemaking perspective. The purpose of the current chapter is to present concluding remarks, focusing on the study's significance, limitations, as well as implications for further research.

5.2 Significance of the Study

Research which adopts a decision-making perspective, with its related assumptions about strategic rationality, tends to develop toward a diverging direction in relation to that which takes a sensemaking perspective.[1] The current study has brought into dialogue insights from these antithetic perspectives. That statement is expressed with, in mind, the important consideration that the theory of disruptive innovation is deeply rooted in the former perspective. The alternative perspective of sensemaking offered an opportunity with which important issues regarding the supposed innovator's dilemma, which have nevertheless remained largely ignored by leading scholars on the subject, could be raised and explored. Henderson has pointed out that "popular accounts of Christensen's theories often focus

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[1] Boland (2008, p. 61)

almost entirely on the role of cognitive failures in the senior team as the central explanatory construct",[1] suggesting a competence-based construct, not only as an alternative explanation but as a potentially more central problem. Like the current study, her concern is that a focus on decision-making dynamics is partial, except that a different perspective was adopted. The current study has indeed demonstrated how a focus on decision-making leads to some blind-spots. Nevertheless, it highlighted the significance of a broadened focus on cognition, in addition to a reciprocal effect of interplay between cognition and action, on human conduct.

Consequently, the study achieves its major contributions to debates about the supposed innovator's dilemma though bringing into view organisational actions and their consequences, and yet broadening the view on cognitive dynamics. It thus simultaneously extends the cognitive view which, along with competence-based view, remained a dominant focal point in studies which seek to explain incumbents' challenges in responding to innovation driven discontinuous markets changes. It achieves both by default due to the sensemaking perspective's interweaving of actions and cognitions in its conceptualisation and propositions. Thus, beyond addressing initially notable blind-spots of the theory of disruptive innovation as identified, it also highlights a different feature which remained unchecked by the theory of disruptive innovation. Chiefly, the missed feature is composed of established beliefs or meanings and the embedded expectations as held by organisational members and their observers. Despite in modesty, the study has also highlighted the hand of emotion, as related to both actions and cognitions, in shaping the conduct of organisational members. That is not by accident because sensemaking can be infused with affect as prior debates have pointed out. From here on, the remainder of the section focuses more closely and yet succinctly, on the study's key contributions.

Based on the insights from sensemaking, it is argued that the additional features brought into view are not inconsequential to organisational processes and outcomes given their central position in their shaping of human conduct, whether people are within or outside organisations. Inevitably then, the study brings into question some of the strengths of the arguments presented in the theory of disruptive innovation. The more compelling, if controversial, question to ask in this regard is: *how convincing should the narrative offered in the theory of disruptive innovation to explain the supposed innovator's dilemma be when the*

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[1] Henderson (2006, p. 5)

theory offers only a partial view of what shapes organisational members' conduct? The study made effort to shine more light on the obscured side through the following.

It first recapped the ontological and epistemological of decision-making and sensemaking perspective, demonstrating their contrasting qualities so as to set a stage for directing attention towards the blind-spots of the theory of disruptive innovation, which inherits the imperfections of the former.

The study demonstrated that new markets, which include disruptive innovation segments, may be perceived as identity incongruent by incumbents as a consequence of the difference between the offerings in the new market and what these established firms already offer, and by which they define themselves. That suggests an alternative answer to Christensen's puzzle as to why incumbents tend to be successful at serving current customers (sustaining markets) but fail to address disruptive market. It may be possible for market segments, rather than the value networks as Christensen contends, to build difficult (social psychological) hurdles which constrain incumbents from hopping cross, into the new markets (the Intel example and the arguments built around it offer a compelling reference). The demonstration of the stubborn role of identity to constrain organisations from moving their core businesses, which may in effect suggest "killing" the established identities, gives an added support to the deliberations and explanations provided on this aspect of the study. Hence, it was argued that the upshot of any obfuscation resulting from inconsistent references to lines which demarcate different segments of markets comes in the way of presenting precise references and thus fruitful debates. Such include missing the point that organisations define themselves, in part or wholly, by the segments in which they are actively doing business, and that this aspect of organisations is imperative.

A balloon model, constructed on the basis of three crucial identity needs, pointed to the possibility that the low quality or inferior performance of disruptive innovations, particularly at their initial stages, have the potential to lead to perceptions of incompatibility with the image of prestige of incumbents. Said alternatively, these innovations seem to stand in stark contrast with the backdrop of organisations which are considered in high regard. Therefore, it is viewed that in this way, perceptions of the qualities of current organisational identity may undermine efforts to invest in markets which are perceived to be incongruent with the stature organisational members perceive themselves to embrace or represent. This model extends the theory of disruptive innovation's narrative about asymmetric, which is focused on monetary

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incentives to demonstrate that the impetus or lack thereof, to invest in certain innovations. The alternative view is that such conduct may be under the control of perceptions of congruities, or the lack thereof, between the emerging offerings and current identity beliefs. The work of Tripsas demonstrates the same point.[1]

Although identity is malleable and thus can be changed,[2] the sensemaking perspective suggests that the first attempt organisational members make when it is threatened is effort to remove the threat and thus restate established identity meanings. Hence, organisational identity, especially as rooted in sustaining innovation markets, is viewed in this study as strong pillar to which organisations may be fettered, disabling them from swiftly shifting into the new markets when it is so necessary.

Indeed, identity's role further surfaces at the individual level. Christensen raises this issue by highlighting organisational members' career ambitions, which are viewed as steering innovation projects towards fulfilling professional growth needs, or to preserve their status within organisations. However, he lamentably gives little credit to its contribution to shaping innovation processes and thus influencing how incumbents respond to disruptive innovations. Demonstrations for how powerful individuals may influence processes of organisational change, such as strategic renewal, when it is necessary to adjust to a new competitive landscape were presented. More generally, the challenge may relate to threatened identities as related projects on which these identities thrived become immaterial in relation to disruptive innovation driven market changes.

The study has also interrogated references to loss of leadership positions. It points out that the incumbents' markets may be disrupted and yet remain leaders in their home markets. Furthermore, that transitioning into the new markets does not necessarily translate into incumbents becoming leaders in the new setting, despite chances of success. These points are important to the extent that sometimes Christensen refers to firms which are initially not dominant in the new markets, but only grow to become dominant later, as failures (e.g.

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[1] Tripsas (2009)
[2] Gioia & Thomas (1996)

Seagate).[1] Said alternatively, unclear references to what entails a failure obfuscates improved understandings about incumbents' challenges.

However, the observation that organisational identity may lead to constraints or result in constraints when organisational change is necessary has already received considerable attention from organisational scholars.[2] Helms-Mills has in particular organised her study around identity to study organisational change, demonstrating how discarding established identity meanings or constructing new ones lead puzzles in organisational members. What is important about her study is that it is one among those which studied intended programs of organisational change. Hence, it demonstrates that even when there is a strategic intent to make identity changes, there still remains identity related delays, which could arguably worsen in the context where the need for changing the identity is not yet recognised.

A more related work to debates about organisational identity as presented in this study is that of Tripsas. An important remark she makes is that there is a lack of research on the role of identity when drastic market changes require firms to adopt new technological changes,[3] which highlight the need for further research just as it underscores the contribution of the current study. Despite the relatedness of the challenges, Tripas' work looks at issues of identity from the perspective of a small firm,[4] instead of established firms, as it is the case with the current study. It has also been observed that beliefs about how a strategy which led to consistent success (tool) does result in leaders holding on to (tools).[5] What is novel about the current study, based on the literature consulted, is that it is the first to delve in-depth in the theory of disruptive innovations in order to understand identity's role in shaping incumbents' responses.

The study has brought into view organisational actions and the fate of their residuum in influencing the conduct of organisational members and therefore organisational outcomes. It also highlights the potential problems associated with escalation of commitment, especially drawing attention to the initial action which may seed the eventual escalation.

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[1] Weeks (2015, p. 419)
[2] Maitlis & Christianson (2014)
[3] Tripsas (2009)
[4] Tripsas (2009, p. 442)
[5] Tripsas & Gavetti (2000)

Furthermore, the study highlighted challenges related to limits in organisational members' perceptions, which could hinder timely or appropriate responses to an impending threat brought about by disruptive innovations.

These ideas enhance prior understanding on the supposed innovator's dilemma, including highlighting limitations of and challenging assertions offered by the theory of disruptive innovation.

5.3 Limitations

The understandings of the challenges incumbents face depend primarily on the theory of disruptive innovation, whose assumptions differed significantly with the sensemaking perspective. However, peripheral studies which focused similar or related ideas as those of focus in this study have been helpful, especially by serving as examples which helped in clarifying some of the arguments presented. Although the sensemaking perspective offers a limited attention to power, the modest contributions made so far have been useful in this study, especially in explaining identity construction as it relates to individuals in organisations and the power they muster as they ascend organisational ladders.

5.4 Implications for Research

5.4.1 Implications for Further Research

If we take seriously the argument that from the perspective of incumbents, especially when looked at through the lens of identity, both the low-end and the new-market segments are new, then there remain varying degrees of gaps between the new market (disruptive) and the established market (sustaining). This should have implications for understanding incumbents' responses, which have in part been addressed in this study. For instance, it suggests that the capabilities of incumbents may either be complementary to the new market or the gap may be too wide that these capabilities are mostly not transferrable to the new market. For example,

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mobile phones are said to have disrupted the digital cameras market,[1] which means for digital camera manufacturers to have responded to this impact, it may have required very different skills sets (e.g. making and distributing smart phones) from what the existing, making the responses more difficult. Even further, digital cameras presented a challenge to films,[2] which means the gap became even broader. However, for an established airline which is impacted by low-cost entrant into its market, for example, it is highly likely that the former will have the necessary capabilities, despite the possibility that there may be other factors which shape their response. For example, the current cost model may be incompatible with the new market.

To the extent that identity congruity and incongruity are concerned, the degree to which the gap is narrowed or broadened presents an in intriguing question. Thus, the varying degrees of gaps may induce certain *feelings* of identity incongruity. That is, the new offerings (disruptive innovations) may be *perceived* to be distinct from the form of business incumbents identify themselves as, which may impede earlier recognition of the need to shift into the new market. To revisit earlier example about smartphones and digital cameras, although capabilities may be acquired, for instance through acquisitions or developed through setting up a stand-alone firm, the two products differ considerably that it would require much effort for digital camera manufactures, especially those who are not players in mobile phone manufacturing, to transform themselves into smartphone manufacturers. That could worsen. For instance, if we consider that firms like Kodak, whose business focused on films when it was disrupted by digital photography, would have had to transform from films to digital cameras in order to survive being disrupted. Still, the firm would have to transition into smart mobile phones within a relatively short period of time when smart phones began taking a market share of digital cameras.

The gap between the markets and more so between industries, may be perceived to be greater that it is viewed as presenting higher difficulties for mustering necessary skills. It may also lead to perceptions of high implausibility for success in the views of organisational members, which could hamper efforts to move into the new market. From a sensemaking perspective, whether such effort result in success or not is not of primary concern, given that "people

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[1] Gans (2016b, p. 58)
[2] Dewald & Bowen (2010, p. 197)

know what they have done only after they do it."[1] In other words, it can never be known, until after the fact, if a firm which makes effort to transition into the new market will fail or not. The more general point is that we do not know, beyond the current speculation made in relation to the identified gaps, as to the extent to which they affect noticing and interpretation, [2] and thus subsequent actions. Thus, we need to better understand the degrees to which perceptions about gaps or differences between existing and emerging markets influence early action to make, or delays with, strategic change initiatives in order to respond to the imminent threat.

The multifaceted nature of incumbents' challenges may signal the need to understand contexts within which certain conditions may be more dominant than others. That approach however contradict such positions scholars often take, like this: "I suggest that organizational competence, in the traditional sense of the embedded organizational routines of established companies, may be much more central to established firm failure in the face of disruptive innovation than is generally acknowledged."[3] Whether that is the case or not, what may be more beneficial is to understand the conditions within which different factors, as several scholars raised, will become more dominant given some specified local contingencies to a particular firm. That point is especially important if we consider that organisations face environments which have been enacted by them. It entails some uniqueness of each organisation's environment.[4] Stimpert and associates make the same point when they highlight the core blind-spot of the resource-based view of the firm as "its implicit assumption of interfirm homogeneity."[5] Tripsas suggests that an "important question for future research is whether certain types of identities are better than others and under what circumstances."[6] Both remarks are woven together by the appreciation of inter-firm heterogeneity.

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[1] Weick (1988, p. 309)
[2] Starbuck & Milliken (1988, p. 60)
[3] Henderson (2006, p. 6)
[4] Weick (1995); Weick (1988)
[5] Stimpert e*t al.* (1998, p. 84)
[6] Tripsas (2009, p. 456)

5.4.2 Final Remarks

As an exploratory study, this project did not depart from a specified position in the form of a hypothesis and proceed towards a point of confirmation or disconfirmation.[1] Instead, it explored the terrain first, the outcomes of which lead to a hypothesis on the basis of insights collected or generated along the way. The discussions, deliberations and arguments presented chapter four, give rise to the postulation that organisational sensemaking processes have a critical role to play in shaping incumbents' response to disruptive innovations.

With that observation as the backdrop, it is considered that those organisations whose identity beliefs or meanings are rooted and thus anchored more strongly within certain markets will likely experience challenges in moving into different markets. Such a shift from one context to the next requires a construction of an identity compatible with the new context or market. The strength of the current identity may lead to seeing fewer alternatives because of increased commitment. Disruptive innovation markets have been demonstrated to be inherently different from incumbents' core markets in some ways. Essentially, such a transition threatens the established meanings. Hence, there is an increased likelihood that market leading firms may have their identity beliefs or meanings rooted and thus anchored more strongly within their core markets. The richness or value of these identities meanings could strengthen the grips on current identities when disruptive innovations emerge, leading to delays in necessary efforts to shift into new markets. Such richness may, for instance, be characterised by the ranking of the firm in the market; ongoing projects and expectations embedded in those plans as they relate to these identities (e.g. efforts to achieve or maintain higher ranks); and emotional attachment to current identities and/or their related tools.

These delays should be expected to be rich in justifications directed towards legitimising the grips, with the potential for enactment of environments which become constraints in consequence, which should be associated with heightened chances of commitments. This latter part should be a crucial point to watch in as far as the profiles of incumbents, especially as defined and deliberated on in this study, point to their higher score in the ingredients necessary for stronger commitments, which could undermine efforts to make requisite

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[1] Creswell (2007); Mouton & Marais (1988[1996])

learning, adaptation and alternative actions or choices.[1] It may function is several ways. It may start with actions that need accounting for their outcomes, or the managing of expectations related to their unfolding. It may also begin with beliefs, leading to the enactment of an environment which becomes a constraint. Hence, it may lead to justifications anchored around identity meanings (e.g. we are a camera not a smartphone manufacturer, or ranked the best in our home market) which heighten the propensity for enactment of entrapments of commitment.

That could result in organisations continuing to hold on to sustaining innovation paths despite continuing market shrinkage and related losses. Or it may, for instance, lead to manipulations of the environment as disruptive innovations emerge to defend leadership positions or customer loss, which could also heighten the propensity for enacting entrapments of commitment. The theme which runs through all these demonstrations is the constant highlighting of places which have high potential to lead to *delays* in incumbent leaders' efforts to drop their sustaining innovations (heavy tools), in order to make necessary strategic moves to steer their organisations towards safety.

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[1] In as far as alternative actions and choices are considered, it is worth revisiting and thus drawing some lessons from Weick's concept of a parliament of selves, which suggests that those who have several identities to access may find the situation to be less puzzling as they have an alternative identity to adopt, which should change what they see. The opposite is also true because an organisation which has no alternative identity may find it more difficult to drop the only identity it has. Thus, the dilemma may also be in the form of finding it difficult to drop the only identity an organisation has. Said in the language of this chapter, an organisation which is established in more than one market (i.e. diversified into different markets) may find it less likely that the emergence of disruption leads to an inability to shift its core business into a different market.

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