

Perpetual Betterising: A Grounded Upgrading of Disruptive Innovation Theory Resolving Co-dependent Socio-economic Main Concerns

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Abstract

Clayton Christensen's theory of disruptive innovation has a partial ancestry in classic grounded theory (CGT), anchored in the original methodological ideas of inductive theory-building, categorisation, formal theory, and modifiability. The locus of disruptive innovation theory resides at the nexus of sociology and economics. The inescapable sociological pedigree of this theory naturally lends itself to CGT analysis. Christensen's theory cores out with a variable of perpetual betterising recurrently resolving co-dependent main concerns held by a firm's dominant coalition and the recipients of organisation-created value. Christensen's theory is upgraded by employing reconstructive processes to rid it of margins of error (conceptual-descriptive syncretism) and margins of terror (unintended imposition and pre-conceiving). Perpetual betterising is a multivariatised conceptual model. The categories comprising perpetual betterising lend themselves to threading together by a biological species evolution-invasion theoretical code. Through the lenses of perpetual betterising, this paper explores long-standing and current debates around disruptive innovation.

Keywords: co-dependent main concerns, perpetual betterising, socio-economic locus, CGT ancestry, biological species evolution-invasion, cycle of theory-building in management research.

Introduction

Danneels (2004) and Markides (2006) have lamented that, despite the widespread use of the term disruptive innovation, there seems to be ambiguity over the precise meaning of the phenomenon. Clayton Christensen, the progenitor of the theory of disruptive innovation is on record:

The theory explains the phenomenon by which an innovation transforms an existing market or sector by introducing simplicity, convenience, accessibility, and affordability where complication and high cost are the status quo. Initially, a disruptive innovation is formed in a niche market that may appear unattractive or inconsequential to industry incumbents, but eventually the new product or idea completely redefines the industry. (Christensen Institute, 2015, para. 1)

Christensen, Raynor, and McDonald (2015) pinpointed the brass tacks of disruption:

Disruption describes a process whereby a smaller company with fewer resources is able to successfully challenge established incumbent businesses. Specifically, as incumbents focus on improving their products

and services for their most demanding (and usually most profitable) customers, they exceed the needs of some segments and ignore the needs of others. ... When mainstream customers start adopting the entrants' offerings in volume, disruption has occurred. (para. 7, parentheses are theirs)

The term disruption has grown to mean two things as used by Christensen and Raynor (2003) and Christensen (2006). First, it can be used as shorthand for disruptive innovation. Second, when pre-fixed with "a", for example, "a disruption", it refers to a particular innovation.

Background to the Study

In my quest for a methodology to employ to try and solve the South African mobile money transfer non-adoption puzzle, I applied Carlile and Christensen's (2005) cycle of theory-building approach. From pursuing this approach, I realised that Clark Gilbert's theory of threat-opportunity framing, a variant of disruptive innovation, held the promise to unlock the non-adoption conundrum. I tested Gilbert's (2002, 2005, 2006) model using case data from South Africa and found instances anomalous to Gilbert's theory. Despite a careful study of Christensen's papers, I failed to locate in his treatises a systematic procedure to generate these categories. A closer study showed that Christensen's idea of categorisation had been directly inspired by Glaser and Strauss's (1967) discourse (Christensen & Carlile, 2009; Christensen & Sundahl, 2001). This discovery instigated an in-depth study of Glaser's works, thereby tracing the historical development of his ideas from 1964 to the present. Cycling back to Christensen's cycle of theory-building, I critically evaluated the model through the lenses of CGT. With the newly found methodological eyes of CGT, I began surfacing aspects of Christensen's theory-building cycle that were directly influenced by CGT. I discovered that Christensen's (2006) idea of prescriptive or normative theory was leased directly from CGT's formal theory:

Similarly, Glaser and Strauss's (1967) treatise on "grounded theory" actually is a book about categorization. Their term *substantive theory* corresponds to the attribute-bounded categories of descriptive theory. And their concept of *formal theory* matches our definition of normative theory, which employs categories of circumstance. (p.44, emphasis is his).

Immediately, it dawned that Christensen had misunderstood the fundamentals of CGT. It was apparent that Christensen was not aware of the fact that CGT is non-descriptive through and through, whether at the substantive or formal stage. Another critical misconception in Christensen's understanding of CGT that surfaced is the explicit denial that CGT is a theory. Christensen and Sundahl (2001) are emphatic in this non-theory conviction in the sense of their definition that "A theory is a statement of what causes what, and why" (p. 2). They stated:

In fact, Glaser & Strauss' (1967) landmark work on the development of grounded theory is not about theory at all—it relates to classification. Their use of the term "grounded" reflects their insight that unless a statement of cause and effect is built upon the foundation of a robust classification system, it cannot be useful. (Christensen & Sundahl, 2001, pp. 6-7)

Evidently, Christensen seems to be unmindful of the importance of CGT's central ideas such as theoretical coding and that hypotheses can be postulated based on the apparent

relationships between and among conceptual categories. It became lucid that Christensen had ended his dalliance with CGT with the seminal work of 1967. Subsequent explications of CGT (Glaser, 1978, 1992, 1998, 2001, 2003, 2005) seemed to have escaped Christensen's attention. It also dawned that Christensen's phases of building and improving on disruptive innovation (Christensen, 2006) could be framed as CGT work-in-progress. This presented a very big challenge in that I realised that in my own research, while trying to explain the South African mobile phone money transfer non-adoption puzzle, I had imposed categories. I had yielded to the margin of terror (pre-conception and imposition)—a cardinal sin under the CGT methodology. I decided to place a moratorium on my research effort. However, at the back of mind I was troubled that I had to abandon all the hard work of several years I had put in.

An idea struck me: why not do a study that employs CGT methodology to improve Christensen's theory? I realised that by taking data employed by Christensen in his seminal study, I could subject these data to the full gamut of CGT procedures. It also became apparent that each subsequent study done by Christensen could be treated as a theoretical sample. Christensen's work since 1993 could be viewed as an evolving CGT study spanning several years of patient but rigorous research. It emerged that since "all is data" (Glaser, 2007, p. 1) in CGT, I had already amassed a huge cache of data I could code. Glaser and Strauss's (1967) insight that "When someone stands in the library stacks, he is, metaphorically, surrounded by voices begging to be heard" (p. 163) made me realise that I could profitably use secondary sources to amplify the voices locked up in published works and let the main concern surface. It was very gratifying and liberating to realise suddenly that observations I had made, papers I had read, articles I had penned, videos I had watched, and certain icons I had given passing notice were potential sources of data to be coded and constantly compared.

Methodological Steps

Glaser (2006) alluded to a technique of conceptualising descriptive data derived from case studies: "The latent patterns within the case, as revealed descriptively, are used as a basis for generalizing conceptually" (p. 20).

This technique supplied the impetus to turn the rich data descriptions embedded in text, quantitative figures, and visuals already presented by Christensen on his seminal study of the rigid disk drive industry into conceptual insights.

As a starting point, I revisited Christensen's (1993) paper, a descriptively rich historiography of the evolution of the world's rigid disk drive between 1976 and 1990. I subjected these data to open coding. Open coding is the process of analysing data line-by-line, comparing incident to incident, and incident to category. This is done continually guided by a quartet of questions to abstract above the descriptive level of data: "what category does this incident indicate?", "what property of what category does this incident indicate?", "what is the main concern faced by the participant?", and "what accounts for the continual resolving of this concern?" (Glaser, 1998, p. 140).

Memos were used to record thoughts on emerging codes, conceptual patterns (categories), emerging theoretical codes, and hypotheses.

A few examples of how data were subjected to incident-to-incident and incident-to-category categorisation will be sampled to illustrate how the process of CGT inductive theory-building evolved. The following extract from Christensen (1993) will be considered to illustrate the initial open coding:

Without exception, the start-ups that grew to dominate the world industry were focused exclusively on manufacturing rigid disk drives. . . start-ups that successfully entered in the later period were progressively less vertically integrated than those that had entered earlier" (p. 544).

Coding this block of data yielded the following initial codes: hegemoning and fragmenting (indicated by the phrase "grew to dominate the world industry"), and de-complexed (indicated by the phrase "were progressively less vertically integrated"). Comparing incident to incident, the phrase "were focused exclusively on manufacturing disk drives" was taken as an interchangeable indicator for the code "de-complexing". In Christensen's (1993) historical narrative, reference was made to the mainframe, mini and desktop computers. It was apparent that this was an incident. I coded this incident "compacting". Incident-to-incident and incident-to-category comparison placed this pattern under "de-complexing". An analysis of Christensen's (1993) narration showed a similar progressive miniaturisation of rigid disk drives. A picture of the first disk drive made by IBM in 1956, included in Christensen (1993), in which IBM's engineers are said to have given it the moniker "the baloney slicer" (p. 534), evoked a hidden incident. The sequence of baloney slicer (more than the size of a standard Zimbabwean executive desk); 14-inch disk drives; 8-inch drives; 5.25-inch drives, 3.5-inch drives and 2.5-inch drives confirmed "compacting".

Other patterns and sub-patterns were similarly surfaced.

From coding the qualitative and quantitative narratives from Christensen (1993), Glaser and Strauss' (1967) voices interned in these data were still unclear—the main concern was still elusive. I turned to Christensen and Bower's (1996) paper that dealt with the same rigid disk drive industry for more data to code and constantly compare. In Christensen and Bower, there were additional data comprising analyses that Christensen had made based on interviews which "came from over 70 personal, unstructured interviews conducted with executives who are or have been associated with 21 disk drive manufacturing companies)" (Christensen & Bower, 1996, p. 200). From this paper, I continued open coding of textual, pictorial, tabular and quantitative data.

Core Variable and Theoretical Code Emergence

The incident "forecast profit margins were also lower than established firms had come to require" was coded as "betterising profits". This block of data yielded the first clear indication what was the main concern: the managers were interested in incremental profits. The incident "These (sustaining projects) would give their customers what they wanted, could be targeted at large markets, and generate the sales and profits required to maintain

growth” (Christensen & Bower, 1996, p. 209, parentheses are mine) made it even clearer that incremental growth was the most problematic issue for managers. This indicator was interchangeable for “betterising profits”. It also became apparent that existing and new markets embraced the architectural innovations (disrupting and sustaining) in that these improved their prior consumptive status. Incidents conceptually showing that recipients of firm-created value experienced improvement from a prior value experience ranging from a base of zero formed interchangeable indicators for the coded pattern labeled value-recipient betterisation. Incident-to-category comparison showed that betterisation seemed to relate to all the conceptual patterns that had already emerged. The core variable had emerged. Substantive coding ceased; I embarked on selective coding.

Next, I coded data from Christensen’s subsequent papers and audio-visuals on the U.S.’s steel industry. The U.S.’s steel industry was treated as a site for theoretical samples. Granulated properties of fragmentation emerged from the selective coding and from comparing incidents based on the U.S.’s steel industry. The incidents from the U.S.’s steel industry gave a hint that a biological species-invasion theoretical code could be the unifying conceptual frame for all the categories. Treating the cases from Zimbabwe’s mobile phone money transfer as theoretical samples resulted in further selective coding yielding further properties for the pattern of fragmentation. This pattern of fragmentation was arrived at through conducting six interviews in Zimbabwe, based on a focused question: what led you to open a mobile phone money transfer account? Field notes were taken and incidents were coded. Selective coding avoided data overwhelm since only those indicators that yielded new conceptual properties were subjected to coding and constant comparison. Selective coding continued until no conceptual properties emerged. Each category and sub-category had become theoretically saturated.

It should be noted that renaming conceptual patterns was an ongoing process that sought to capture the best appellation. Thus, some of the codes examined in this section may be different from the ones settled for in the final CGT.

Coding Literature as Data and Memo-Sorting

I proceeded to code literature that seemed to relate to the categories that had emerged. It was at this time when the literature review I had done in my initial, nearly abandoned study became handy. The relevant literature is addressed in detail in the next section where the full CGT of perpetual betterising is presented.

It was now time to sort the memos.

Memo-sorting presented no challenge: category-to-category comparison showed that the earlier indication that a biological species evolution-invasion model could be the integrative theoretical code was confirmed. Thus, this code provided the outline for writing the emergent CGT.

Perpetual Betterising and its Densified Conceptual Patterns

Perpetual betterising is bi-dimensional and resolves two compounded but co-dependent main concerns. The first main concern is business-framed and parallels Prahalad and Bettis's (1986) idea of dominant general management logic held by a firm's dominant coalition (Bettis & Prahalad, 1995). The second main concern focuses on the existing customers' most problematic issue: getting better and better value. Perpetual betterising is not the monopoly of sustaining—a disruptive and a sustaining innovation share a similarity—they each betterise the user and the supplier of the innovation. Betterising economic value is akin to Prahalad's (2004) blinders of general management dominant logic. Economic value is taken to mean a positive change from a prior identified economic position such as profit. At a higher conceptual level, betterising economic value is the quintessential obligatory ritual demanded by the church of capitalism.

Perpetual betterising is knitted together by the following substantive variables: disruptive innovation and sustaining innovation are its twin sub-core categories. Disruptive innovation comprises of the following variables: de-complexed architecture, cost recovery, and superiorising. Cost recovery is granulated into trial, shoehorned trial, blue ocean, terminal disruption, elasticisable disruption, and kindred intermediary. De-complexed architecture is undergirded by compacted architecture and micro-performanced architecture. Superiorisation is underpinned by fragmentation, insistent vertical fragmentation, and horizontal insistent fragmentation. The key driver variable of sustaining innovation is inter-dependenced architecture. Hegemoning is a lower-level theoretical code that links disruptive and sustaining innovation.

Every CGT has an implicit high-level integrative theoretical code (Glaser, 2005). The cored disruptive and sustaining innovation categories and their densified subcategories lend themselves to modeling by a biological species evolution-invasion theoretical code, which can be classed under Glaser's (1978) strategy family of theoretical codes. Four phases provide the superstructure of perpetual betterising: genesis, growth, invasion-displacement, and hegemoning-replacement.

De-complexed architecture and its sub-patterns and part of cost recovery, namely shoehorned trial and kindred intermediary connote the genesis phase of the evolution-invasion typology. Blue ocean makes up the growth phase. It needs to be noted that kindred intermediary overlaps into the growth phase. Superiorising and fragmentation represent the invasion-displacement phase. Insistent fragmentation corresponds to the hegemoning-replacement phase. Thus fragmentation bridges growth and invasion. Insistent fragmentation dismantles the meta-parts of a sustaining innovation, manifesting as serial disruptions capturing a bigger share of available value, which ranges from 50 to 100%. This range of usurped value is what is styled as hegemoning. One hundred per cent fragmentation denotes replacement or the *extincting* [sic] of a sustaining innovation.

A disruptive innovation is like a lower form of evolving life characterised by decomplexity. In sharp contradistinction, a sustaining innovation proxies a higher form of evolution marked by increasing survival knack (hypothesis). The potency of a disruption is

that it evolves from lower life forms to the higher life form and breaches into the typological adjacent colonies, displacing native species due to its genetic potency acquired in the lower life environment combined with its ability to mimic the best qualities of the species in the invaded territory (hypothesis).

The genetic peculiarities of the invading and invaded species are a typology that explains the logic that the management of a disruptive and a sustaining innovation within the same firm requires distinct managerial DNAs (hypothesis).

The apparent respect for territorial integrity of a new species growing in virgin territory is a typology that elucidates why a sustaining innovation initially appears to be immune from an emerging disruption. A disruption camouflages its intention to colonise and hegemonise, imbuing it with surprise-attack potency (hypothesis).

Perpetual betterising will be explained following the emergent sequences of the biological species evolution-invasion theoretical code.

Genesis Phase

De-complexed architecture is the primary pattern that defines disruptive innovation. It is the defining gene of disruptive innovation. Architecture is taken to mean Henderson and Clark's (1990) architecture. Therefore, architecture refers to the way the individual components making up an innovation relate. De-complexed architecture is the deliberate process of creating the basis for betterising by significantly lowering the cost structure of producing and using an innovation that produces the same functionality as a sustaining innovation through the application of technology. De-complexed architecture is directly responsible for enabling the substitution of experts by non-experts by a disruption without compromising minimum customer-expected performance standards. Here, we shall lease the concept of technology from Dosi (1982) to explain de-complexed architecture. Of technology, Dosi argued:

Let us define technology as a set of pieces of knowledge, both directly "practical" (related to concrete problems and devices) and "theoretical" (but practically applicable although not necessarily already applied), know-how, methods, procedures, experience of successes and failures and also, of course, physical devices and equipment. (1982, p.151-152, parentheses are his).

Clearly, Dosi (1982) does not restrict technology to the engineering and technical features of gadgets. Instead, he proposed a novel concept of technology-as-knowledge. De-complexed architecture is instigated by application of technology to replicate the functionality of a forerunner innovation using a different architecture, which architecture dramatically reduces the cost of producing, distributing and consuming the innovation. The knowledge employed to de-complex can be either simple or complex. De-complexed architecture enables a disruptive innovation to mimic the function of a sustaining innovation, but not its architecture and componentry, allowing a comparable performance level to be produced at a relatively low cost. De-complexed architecture is engendered by a

compacted architecture which imbues a disruptive innovation with both low-cost leverage and potential novel utility that can be embraced by potential users.

Compacted architecture seeds a potential disruptive innovation with the capacity to betterise large populations of people who are currently excluded from accessing the core function provided by a sustaining innovation. This is achieved through the scaling down of the physical dimensions of the potential disruptive innovation. Compacted architecture enables a disruption to be geographically dispersed through decentralising to smaller and potentially low-cost centre locations. A compacted architecture imbues portability through enabling miniaturisation. Miniaturisation enables the geographical decentralisation of the compacted architecture, handing the adopters of the compacted architecture control of the locale from which to access a disruption. A compacted architecture brings convenience to the adopters of a disruption by offering the ability to manipulate the timing of access to the disruption.

De-complexed architecture initially results in a micro-performanced architecture (hypothesis).

Micro-performanced architecture is the enabling of a potential disruption to provide a functional performance level that is below the least possible performance level provided by a sustaining innovation. Micro-performanced architecture infuses a disruptive innovation with the ability to betterise users who may need a functional performance level below a sustaining innovation's performance floor. Performance floor is taken to mean the least possible core functional performance level that can be provided by a specific sustaining innovation.

For a micro-performanced architecture to be commercialisable, it needs to first recover the cost of producing that micro-performanced architecture (hypothesis).

Cost recovery is the process of betterising the disruptor by recouping the cost of producing the micro-performanced architecture. This is achieved through offering the micro-performanced architecture to a group of potential users with the economic wherewithal to betterise the introducer of the micro-performanced architecture who can, in turn, be betterised by it. The descriptive identity of who possesses these economic resources is irrelevant. That potential market can be any of the Kim and Mauborgne's (2005) triad of noncustomers or a combination thereof: "*soon-to-be* noncustomers (first-tier noncustomers) (2005, p.104, emphasis is theirs, parentheses are mine)," "*refusing* noncustomers (second-tier noncustomers). . . (Kim & Mauborgne, 2005, p.107, emphasis is theirs, parentheses are mine)," and the "*unexplored* noncustomers (third-tier noncustomers) have not been targeted or thought of as potential customers by any player in the industry (Kim & Mauborgne, 2005, p.109, emphasis is theirs, parentheses are mine)."

The pattern of disruptive innovation mostly taking root in new and peripheral markets is a consequence of the choice of the core functional performance ceiling the disruptor fixes. If the disruptive innovation's core functional performance ceiling is below the sustaining innovation's performance floor, it increases the probability of a disruptive

innovation being embraced by Kim and Mauborgne's (2005) first-tier, second-tier and third-tier noncustomers (hypothesis).

Every disruptive innovation attempts to recover the cost of producing the micro-performanced architecture by the pattern of trial (hypothesis).

Trial is initially coded from a recurring incident in the disk drive industry in which frustrated engineers fissioned out (Zeigler, 1985) from incumbent firms and offered potential disruptive disk drives to incumbent markets (Christensen & Bower, 1996). Trial is the search for potential users who can betterise the disruptive innovator and, in turn, can be betterised by the disruptive innovation proposal. The disruptive innovation proposal potentially betterises Kim and Mauborgne's (2005) noncustomers by replicating the sustaining innovation's core functionality, micro-performanced architecture, and the addition of unique performance benefits wrought by a de-complexed architecture.

Cost recovery first proceeds through rigid behaviour in the form of the pattern of shoehorned trial (hypothesis).

Shoehorned trial is a search for adopters of a potential disruptive innovation driven by the desire to optimise a disruptive innovator's profit betterising at market entry. This optimisation is actuated by offering a disruptive innovation proposal to potential users with the highest perceived economic ability to optimise an entry-economic value betterising. Shoehorned trial is an attempt to optimise debut economic value.

Shoehorned trial has a nuance in the form of a sub-pattern called kindred intermediary.

Kindred intermediary is the adoption of an architectural innovation by the relatively well off, with this innovation being relatively sustaining. These first-adopters in turn influence Kim and Mauborgne's (2005) unexplored noncustomers with whom they have social ties to adopt the same architectural innovation. The same architectural innovation is relatively disruptive to the unexplored noncustomers, making the architectural innovation concurrently sustaining and disruptive. Kindred intermediary is a new property to disruptive innovation. Perpetual betterising reconciles the seeming paradox that an innovation can be simultaneously sustaining and disruptive. More critically, kindred intermediary brings into sharp focus the hypothesis that disruptive and sustaining innovations can be co-dependent.

Kindred intermediary overlaps into the growth phase.

Growth Phase

Every disruptive innovation is conceived in the womb of a blue ocean (hypothesis).

Blue ocean is a nuance of trial. Blue ocean is a search for the alternative users of a disruptive innovation proposal after shoehorned trial fails at cost recovery. Blue ocean occurs when potential users of a disruptive innovation proposal currently perceived to have

the highest economic ability to optimise a disruptive innovator's inaugural economic value reject the disruptive proposal. This rebuff can occur for two reasons. First, it can be actuated by a disruptive proposal's failure to betterise the user when the best performance level offered by a disruptive innovation proposal on the core functionality falls short of the expected performance requirements. Second, it can be instigated when a betterising disruption exceeds the affordability of the current users. Blue ocean, therefore, is a search for the next best economic value betteriser, which turn out to be Kim and Mauborgne's (2005) noncustomers. Blue ocean enables economic value to be betterised from a base of zilch. If blue ocean taps into Kim and Mauborgne's (2005) third-tier noncustomers, these noncustomers are betterised from zippo. Betterising first and second-tier noncustomers is achieved in that a disruptive innovation allows these noncustomers to shed excess core functional performance. This excess relates to the maximum core functional performance needs of noncustomers. These noncustomers have been historically forced to pay for this excess core utility performance offered by a sustaining innovation.

An unsuccessful shoehorned trial makes the refusing market a second-tier noncustomer (hypothesis). The essence of a disruptive innovation is that it always disrupts nonconsumption (hypothesis). If it is not disrupting nonconsumption, then it is not a disruptive innovation.

Shoehorned trial and blue ocean are conceptual patterns supported by extant literature. Kuhn (1970) asserted that researchers in a scientific community invariably assume that their paradigm is accurate, conditioning them to fit nature to their paradigm (nature-to-paradigm fit as opposed to paradigm-to-nature fit). Put differently, Kuhn's (1970) argument is that rigidity in the face of new data is the default response of a paradigm-bounded social group. The nomenclature of Christensen's trajectories is drawn from Dosi's (1982) technological paradigms and technological trajectories. In fact, Christensen's disruptive innovation theory provides empirical grounding for Dosi's conjectured technological paradigms and technological trajectories. Technological paradigm and technological trajectory are respectively paralleled by Dosi with Kuhn's (1970) twin concepts of paradigm and normal scientific research. Perpetual betterising is in essence a particular paradigm held by a firm's dominant coalition and the recipients of firm-created value, embodying the dominant logic of Prahalad and Bettis (1986). The logic is said to be dominant because it trumps all other competing logics (Blettner, 2007), hence flexibility must be preceded by rigidity. The theoretical perspective of situated social practice, commonly known as communities of practice (Lave & Wenger, 1991; Wenger, 1998, 2000, 2009) is similar to Kuhn's scientific communities. Its assertion that a situational practice-bounded social group's main concern is to preserve and perpetuate what they call social competence implies that externally imposed agenda are first processed through the lenses of social competence. This is another way of asserting that rigidity precedes flexibility.

A blue ocean may not have the inherent capacity to grow beyond its inaugural blue ocean cradle (first order blue ocean). Such a blue ocean is the pattern of terminal disruption.

Terminal disruption is a variant of trial. Terminal disruption is a disruptive innovation that fails to betterise users with higher betterising needs on core functionality. Terminal disruption occurs because a disruptive innovation lacks the ability to replicate its trademark de-complexity as it betterises on core utility to match the level of betterising expected by users. A terminal disruption has an inherent lack of ability to superiorise.

Invasion-Displacement Phase

This phase is a sub-stage of growth. Some disruptive innovations have the in-built ability to betterise second-tier or refusing noncustomers located upmarket. This pattern is elasticisable disruption. Elasticisable disruption is a disruptive innovation that can simultaneously replicate its de-complexity as it betterises core functionality. An elasticisable disruption possesses the ability to superiorise. Elasticisable disruption enables a disruption to invade a higher economic value margin blue ocean (hypothesis).

Superiorising is the extending of de-complexity to the current users of a sustaining innovation while replicating the core functionality of a sustaining innovation. Superiorising enables a disruption to out-betterise the current users of a sustaining innovation in that it makes the compacted architecture match the minimum customer-expected core-function performance level previously offered by a sustaining innovation and exceed it by introducing new performance criteria or utilities. At the descriptive level, dumping a sustaining innovation for a disruption might appear as de-betterising. Ironically, the acceptance of a seemingly downgraded performance optimises betterising in that a betterising disruption offers a new set of unique performance advantages in addition to core functionality. This acceptance represents a strategic trade-off of excess core utility performance for low-cost and additional utility. Superiorising gives the adopters of the superiorising architecture marginal cost savings by giving potential adopters the option to shed excess core-function performance.

A combination of superiorising and further compacting is possible and results in increasingly miniaturised, cheaper, and yet increasingly powerful (performance-wise) disruptions.

A disruption succeeds in fragmenting a sustaining innovation only because it superiorises and outperforms a sustaining innovation on an overall performance basis (hypothesis). Successful superiorising instigates the fragmenting of a sustaining innovation. It enables a betterising de-complexed architecture to disrupt what might be called second-order nonconsumption that is resident in refusing upmarket noncustomers.

Fragmentation is an attack on a sustaining innovation's complexity by lopping off parts of the sustaining innovation superiorised by a disruptive innovation. This is what many scholars have in mind when they think of the term disruption. However, disruption as defined in perpetual betterising precedes fragmentation when it establishes its genesis in a first-order blue ocean. The loped-off parts can be segments of a market tiered by economic ability, an integrated service offering (made up of a smorgasbord of services), for example.

Fragmentation occurs because a disruptive innovation is able to inferiorise a sustaining innovation or its meta-parts.

Fragmentation persists as long as opportunities for superiorising more meta-parts of a sustaining innovation are available (hypothesis). This is the onset of hegemoning.

Hegemoning-Replacement Phase

Hegemoning-replacement is a sub-phase of growth. It is the progressive usurpation and transfer of available market value to a disruptive innovation from a sustaining innovation. Hegemoning can reach 100% of usurped market value—this idea is referred to as replacement or extinguishing.

Insistent fragmentation is continued fragmenting driven by perpetual betterising, triggering a new but upgraded cycle, and setting up an upward spiral cycle of superiorising. It is bi-dimensional, with a horizontal and vertical component.

Horizontal insistent fragmentation is a conceptual property that was surfaced by the selective coding of data from the Zimbabwean mobile phone money transfer phenomenon. Horizontal fragmentation is the fragmenting of successive low-end services in response to artificial constraints placed on the elasticisability of a disruptive innovation. These artificial constraints place a legal barrier on the ability of a disruptive innovation to betterise vertically. Perpetual betterising instigates navigating around an artificial performance ceiling by horizontalising fragmentation (hypothesis).

Vertical insistent fragmentation is granulated from the conceptual unbundling of insistent fragmenting and is the serial fragmenting of higher value economic segments. It represents the quintessential upmarket disruption, as articulated by Christensen to date, enabled by the absence of externally imposed core functional performance ceilings.

A victorious disruptive innovation can mutate into a sustaining innovation, raising the probability that a one-time victorious disruptive innovation can become a potential replacement-displacement victim of camouflaged disruptions emerging from first-order blue oceans (hypothesis). This makes perpetual betterising a cycle. In terms of management praxis, it serves well a firm's dominant coalition to be awake to the possibility that users of a hegemoning disruption are a second-order blue ocean relative to a de-complexed architecture being cradled in a first-order blue ocean.

The hallmark of a sustaining innovation is an inter-dependenced architecture. Inter-dependenced architecture is the betterising of a sustaining innovation by adding relatively numerous inter-reliant parts resulting in complexity and a ratcheting up of cost. Inter-dependenced architecture also betterises on core functionality as a springboard to launch perpetual betterising. Inter-dependenced architecture through the agency of complexing loads costs that have to be recovered. In a for-profit organisation, the cost is normally recovered from the users. In quasi-business, part of the cost is typically recovered from a

sponsor. In a not-for profit business, the greater portion of the cost is characteristically recovered from a sponsor.

The stage is now set to tease out the thoughts of disruptive innovation's critics and apologists.

Disruption-Related Polemics Evaluated

Viewed through the lenses of perpetual betterising, disruptive innovation theory carries margins of error and terror stemming from three sources: confusing descriptive categories with substantive categories (margin of error), amalgamating descriptive and conceptual categories (margin of error), and pre-conceiving and pre-framing (margin of terror). Perpetual betterising rids disruption and sustaining innovation of these margins of error and terror. These have already been alluded to in depth in the section on data and methodology as the principal motivations that instigated this study to upgrade disruptive innovation theory. It suffices to highlight that all the criticisms leveled at disruptive innovation have their etiology in these margins of error and terror. Before proceeding to give voice to disruptive innovation's critics and apologists, the role of imposition in the building of disruptive innovation needs to be expanded on. The research stream—namely Dosi (1982), Tushman and Anderson (1986), and Henderson and Clark (1990), in which Christensen located disruption theory—has a documented history of pursuing a research agenda ferreting out the reasons for the failure of incumbent firms in the face of emergent technologies. Evidently, Christensen inherited this research agenda and thus was theoretically conditioned to impose the descriptive categories of incumbents and start-ups on his theory. This unintended capitulation leads to the margin of terror. Multivariatising enables perpetual betterising to build hypotheses based on emergent and fully conceptual patterns and sub-patterns.

Enter the critics.

Disruption's Critics and their Critiques

In true CGT fashion, the sampled critiques and apologies are illustrative in essence since writing in CGT must be kept at a conceptual level. Three critics of disruptive innovation, Constantinos Markides, Charitou Constantinos and Jill Lepore will be treated as sources of a representative range of common polemics surrounding disruptive innovation. Other notable critic-apologists (Chesborough, 1992, 1992b; Danneels, 2004; Gilbert, 2002, 2005, 2006, 2014) simply profit from the flaws inherent in disruptive innovation occasioned by the margins of error and terror.

Charitou and Markides (2003) provided the opening polemic:

Strategic innovation means an innovation in one's business model that leads to a new way of playing the game. Disruptive strategic innovation is a specific type of strategic innovation —namely, a way of playing the game that is both different from and *in conflict with* the traditional way. (para. 4, emphasis is theirs)

Porter (1996) stated that, "The essence of strategy is choosing to perform activities differently than rivals do" (p.64). Disruptive and sustaining innovations, as originally conceived by Christensen (1993), are inherently strategic in the Porterian sense. A disruptive path is innately "in conflict with the traditional way" (Charitou & Markides, 2003, para. 4), a point that is embedded in the very appellations of the disruptive and sustaining categories. Since the work of Charitou and Markides (2003) emerged 12 years after Christensen published his disruptive innovation theory their embellishing disruptive innovation to disruptive strategic innovation is an oxymoron.

Charitou and Markides (2003) committed the error of stretching disruptive innovation beyond its theoretical carrying capacity. This confusion is apparent in the following lines:

As with every disruptive innovation, the innovators did not attack by trying to become better at providing the product attributes that the established competitors (the Swiss) were emphasizing (quality of the movement and accuracy). Instead, they focused on different product attributes — price, features and functionality. (para.28, parentheses are theirs).

What the authors mean by different product attributes is explicated:

The new watch did not pretend to be better than Seiko or Timex in price or performance. Instead, it emphasized a totally different product attribute—style. Instead of responding to the disruptive game by embracing it, the Swiss chose to disrupt it. (Charitou & Markides, 2003, para. 29)

Style is not a necessary attribute of any disruptive innovation. What Charitou and Markides completely missed is that a disruptive innovation has one unchanging feature—de-complexity which granulates into five attributes: low cost, simplicity, compactness, portability, and convenience. What Charitou and Markides (2003) described fits well with a specific blue ocean founded on a new value curve based on the utility lever of fun and image (Kim & Mauborgne, 2005). In the context of this Swiss example, Charitou and Markides exhibit a highly flawed understanding of disruption. To assert that the Swiss disrupted the Japanese watchmakers by focusing on style is faulty. It may be called disruption but it is not Christensen's disruption. Perpetual betterising provides a unique insight into this debate by asserting that disruption is not synonymous with fragmentation—disruption can occur without fragmentation—what is needed is to disrupt nonconsumption through the agency of a de-complexed architecture.

With a highly defective conception of disruption, Markides (2006) ironically prefaced his critique of disruptive innovation, fanned by Danneels's (2004) insinuation that disruptive innovation suffered from definitional ambiguity. Having pointed out that disruptive innovation is an imprecise concept, Markides (2006) proceeded to unbundle innovation into three categories: disruptive technological innovation, business-model innovation, and product innovation. Markides's intention in deconstructing innovation into disruptive technological innovation and business-model innovation appears to be an attempt to quarantine his concept of strategic innovation from Christensen's disruptive innovation.

Though Markides did not employ the term strategic innovation in his three-category granulation of innovation, his business-model innovation concept is precisely his strategic

innovation (Charitou & Markides, 2003). Perpetual betterising rescues the supposed definitional abstruseness raised by Markides and also dismantles his apparent treatment of business-model innovation (his strategic innovation) as being mutually exclusive from disruptive innovation. As per the perpetual betterising, the key distinguishing feature of a disruptive innovation is a de-complexed architecture relative to an existing innovation that offers the same core functionality. De-complexing to achieve low cost, compactness, portability, and convenience is the quintessence of disruptive innovation. De-complexing is precisely how a disruptive innovation manages to "change the rules of the game" (Markides, 1997, para. 11). A disruptive innovation is a game-changer and thus it qualifies as a strategic innovation or Markides's business-model innovation. Markides's unbundling of disruptive innovation from business-model innovation is not theoretically fruitful. Disruptive innovation is a highly focused pattern of business-model innovation. Ostracising Christensen's disruptive innovation from strategic innovation is denying its theoretical kith and kin.

Furthermore, Markides (2006) missed a crucial point that technology is the enabler of every disruption. This calls into question both the theoretic and praxis utility of proposing the category of disruptive technological innovation. De-complexing is invariably enabled by technology. A disruptive innovation that is not driven by technology is like a beautiful car without an engine. As defined by Dosi (1982), technology is simply knowledge sets, comprising embodied and disembodied components. The embodied component of technology is manifested as the physical gadgetry, while the disembodied component of technology comprises the store of such things as experience of past attempts and expertise. Markides (2006) may want to know that even his business-model innovation is enabled by technology too.

Markides seems to have equated disruption with the replacement or extinction of an industry's incumbent by a relatively newcomer to the industry. Disruption is very precise in terms of how it displaces an incumbent. A de-complexed architecture is the prerequisite to an innovation earning the right to be named a disruption. Perpetual betterising makes use of conceptual categories instead of the descriptive appellations of incumbents and newcomers. Under perpetual betterising, what is displaced is the sustaining innovation and not an incumbent to the existing industry. Perpetual betterising is apersonal. The identities of the disruptor and the disruptee are extraneous to perpetual betterising. Perpetual betterising makes the careful distinction between displacement and replacement through the process of hegemoning. A disruption hegemonises along a continuum straddling displacement and replacement. To the credit of Charitou and Markides (2003), they cited cases where their disruptive strategic innovation (an oxymoron for disruptive innovation) achieved what perpetual betterising styles as hegemoning, a continuum straddling the poles of displacement and replacement. Perpetual betterising, through hegemoning, reconciles Christensen's (2006) clarification that disruption is a process with Markides's (2006) criticism that disruption could end without achieving replacement of incumbents to an existing industry. Every disruptive innovation hegemonises—whether at the inception or superiorising stage. Perpetual betterising rises conceptually above both Christensen's (2006) and Markides's (2006) descriptive polemic.

Jill Lepore's Criticism

Lepore's (2014) withering criticism of disruptive innovation theory reflects both a limited understanding of the rudiments and nuances of disruption. Clayton Christensen, in an interview with Drake Bennett (2014) of Bloomberg, cited Lepore's alleged selective scholarship: "And then in a stunning reversal, she starts instead to try to discredit Clay Christensen, in a really mean way. And mean is fine, but in order to discredit me, Jill had to break all of the rules of scholarship that she accused me of breaking. . ." (para. 6).

Lepore (2014) debated: "Replacing 'progress' with 'innovation' skirts the question of whether a novelty is an improvement: the world may not be getting better and better but our devices are getting newer and newer." (para. 10, emphasis is hers). It is not the theoretical capitalist's main concern that rules in CGT (Glaser, 2013); the main concern of participants dictates the research agenda. Perpetual betterising, the core variable underpinning disrupting and sustaining is about improvement resolving an emergent as opposed to an imposed main concern. De-complexed architecture as the formative agent of disruption engenders affordability, compactness, portability and convenience, allowing services and products enjoyed by the skilled and/or the relatively wealthy to be accessed by masses of the unskilled and the less wealthy. Perpetual betterising's sub-pattern of kindred intermediary explains why 5,3 million Zimbabweans (Gambanga, 2015) outsize the count of bank accounts in Zimbabwe by a factor of at least 3 times (Chiutsi, 2014). The world of the unbanked in this part of the world has evidently been betterised. Innovation and progress need not be oil and water as intimated by Lepore (2014).

Perpetual betterising rescues disruptive innovation from two conceptually related diatribes levied by Lepore which neither Christensen in Bennett (2014) nor Gilbert (2014) addressed in their separate defenses. Lepore's (2014) charge list reads: disruptive innovation is derived from handpicked case studies and that the category of disruptive innovation is established from a mere five cases. Perpetual betterising is a CGT. As such, samples and sample sizes are not pre-specified; they emerge through the procedures of theoretical sampling and theoretical saturation. Theoretical significance as opposed to statistical significance is relevant to building a CGT. CGT, through the concepts of theoretical significance and theoretical saturation rescues it from what may be called the quantum-of-cases fallacy held by critics denoted by Lepore's (2014) misreading and hidebound grasp of scientific methodologies at the disposal of management researchers. Coding is not descriptive analysis; it is conceptual. Lepore's (2014) observation that cases from other business sectors from which Christensen drew are inadequate is irrelevant under conceptual analysis of data. Fresh cases from another business area are subjected to constant comparison and the outcome of that analysis is either a confirmation of existing categories or the generation of new categories and properties. Christensen and Carlile (2009) have eloquently argued that every piece of data is a case.

Lepore's grasp of the essence of what makes a management theory predictive seems to be limited to description-based theory-building. The role of conceptualisation of data to

render an emerging pattern atemporal, apersonal, and alocal seems to reside beyond her sentience. In her charge sheet of the perceived infractions committed in building disruptive innovation, she stated categorically: "It [disruptive innovation] does not explain change. It's not a law of nature. It's an artifact of history, an idea, forged in time. . . (Lepore, 2014, para. 36, parentheses are mine)." The clincher: "It [disruptive innovation] makes a *poor prophet*. (Lepore, 2014 ,para.36, parentheses and emphasis are mine)." Lepore (2014) pontificated: "People aren't disk drives (para. 29)." Through the lenses of perpetual betterising, insights beyond Lepore's cognition explain why disruptive and sustaining innovation are transferrable beyond the disk drive industry to other business areas and beyond to quasi-business and to not-for-profit substantive areas.

Disruptive and sustaining innovations are conceptual categories. This conceptualness is what gives disruptive innovation high external validity. A disruptive innovation does not disrupt people as insinuated by Lepore. Disruption de-complexes. Data is only available in the past (Christensen & Carlile, 2009). Ironically, all data are artifacts of history. Thus, every theory built from data is a relic of the past. Theory-building does not need to be cartelised by conjecture; theory can be grounded. What makes disruptive innovation a credible prophet is that it is one of the vehicles through which the main concern of some social groups to get better offerings is recurrently resolved. This resolution, in turn, becomes the basis for resolving the chief concern of a firm's dominant coalition to get better and better pre-specified goals such as profit, quantum of religious converts, for instance. Historical data can stale-date but concepts derived from them sail away from time, place and people. Lepore (2014) may be interested to know that the Early Christian Church experienced explosive growth through disruptive innovation. Disruption has past, present and future relevance beyond business. Though Christensen and Sundahl (2001) argued that external validity is established only through circumstance-based categories, perpetual betterising provides a deeper explication; it underlines the roles of constant comparison and conceptualisation as the bedrock on which external validity and predictability are founded.

Conclusion

Principally, this study, by partly employing Christensen's interpretations of data, could have possibly been contaminated by the very margin of terror (pre-conception) it sort to rid. Mobile phone money transfer has suffered from non-adoption in South Africa despite massive adoption in other African countries. Perpetual betterising and its sub-patterns such as de-complexed architecture and kindred intermediary could be tested in verificational quantitative studies based on data from countries where mobile phone money transfer has failed to gain traction. Alternatively, CGT studies targeted at improving perpetual betterising could be done based on data from diverse substantive areas. A formal theory of perpetual betterising can be crafted through constantly comparing substantive areas in which perpetual betterising is applicable, where growth is paramount such as macroeconomics, church growth, social services improvement, combating crime growth, for instance. The methodological novelty of compounded main concerns can be further developed through empirical studies that focus on different types of compounded main concerns.

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