Chapter 9
Identity Industry

"A style is constant until further notice."
Rudolf Arnheim[1]

"A work can become modern only if it is first postmodern. Postmodernism thus understood is not modernism at its end but in the nascent state, and this state is constant."
Jean-François Lyotard[2]

"In order to be irreplaceable one must be different."
Attributed to Coco Chanel

The current structure of the style system is only temporary. Because the style system does not consist of a sequence of self-restrained styles, but is rather the plaything of syndromic forces that affect cultural selection in the field laid out in Figures 12 and 13.

The media scientist Rudolf Arnheim calls the play of forces in a field *gestalt*. His approach can be applied to style as well. The question is: which forces are changing the current structure of the style system? The *gestalt* of the style system includes style leadership and its followers. But it also includes industry. It is a service provider for the DIY identity of consumers and provides them with inputs in line with the DIY-store principle. This chapter addresses the value chains of fashion, design, lifestyle, music, hospitality, event and media firms, advertising

1 Arnheim 1981, p. 282.

2 Lyotard 2011, p. 361.

agencies, galleries, museums and the commercial part of the education system, all of which are defined here as belonging to the identity industry.

Stylistic *gestalt* differs from conventional approaches. Orthodox economics allows the role of industry to wither to nothing more than an executive hand: it only supplies what autonomous consumers demand. Traditional marketing theory, in contrast, sees industry as a moulding hand: with the right marketing, everything will be purchased, and the new 'nudging' techniques make this moulding hand even stronger. The anti-consumerist stance takes this a step further: industry systematically dumbs down the consumer! In contrast to all this, stylistic *gestalt* in QTC is the combined forces of the productive consumer and industry.

Industrial Revolution

The French Revolution is considered the incubator of the luxury goods industry. Before, the luxury cartel of the nobility stood in its way: in feudalism luxury goods were reserved for the nobility on pain of punishment. Merchants and bankers could be as rich as they wished but were still not allowed to show off with the feathers of the nobility. Social distance between the nobility and commoners was thus cemented. With the French Revolution the luxury cartel fell, and the Paris fashion and pleasure industry could develop, with new consumer goods for everyone who could afford them. This is a popular explanation for the emergence of the luxury goods industry, whose long absence is attributed to the luxury cartel.

I regard the reverse causality as the more plausible one: the absence of a strong consumer goods industry was the cause for the luxury cartel. Where limited choices from the world of things meet an unmatched demand for distinction, the *o/+consumption* forced upon the lower classes remained the most effective way to sustain aristocratic distinction. Had there already been a strong consumer goods industry in feudalism, the nobility could have displayed distinction in the same way that the rich still do today: with expensive things that are out of reach for most. The luxury cartel would have been obsolete. The beginnings of the luxury industry are therefore to be found more in the beginnings of the industrial rather than the French revolution, concomitant as they have been.

This thesis can be substantiated with Norbert Elias' work on European civilisation. Elias brings to the fore the central role of industry in the production of social distance and proximity, despite the fact that it did not yet exist during Elias' period of investigation, ranging from the High Middle Ages to the end of

feudalism.[3] Mannerism – here the constant refinement of behaviour – which Elias identified as the core of European civilisation (seen as a process), had in the pre-industrial era been the social equivalent of today's consumption of things. Because, in the absence of a lavish world of things, little remained in the world of objects for forging the social except patterns of behaviour.

It is therefore no coincidence that Elias ends his investigation with the very beginning of industrialisation (coinciding with the end of feudalism). Because the industrial revolution is the decisive rupture point in European civilisation: in *o/+consumption* moving away from showing and not showing behaviour patterns to showing and not showing things – that is, moving away from mannerism to the material consumerism that only became possible through industrialisation.

This glimpse back into pre-industrial times reveals today's industry's contribution to the DIY of the productive consumer: the provision of the world of things for the sorting plant of culture. The world of objects is large because of industry. Without it, a completely different game would be played revolving around objective function (13): perhaps still with 'object cartels', but certainly with a much stronger display of differing behaviour. It is only due to industry that the world of things is as varied as it is, and it is only thanks to it that social distance and proximity can be produced by DIY in so many different ways.

This is because behavioural patterns cannot be refined at will. The Rococo was not only chronologically the last feudal European style, but it pushed fine manners to a point never reached again. Today, people are once again dining more informally, thanks to the world of things that comes into use elsewhere. Even though postmodernism is conceivable without industry, with the limited stylistic possibilities of mannerism there would be fewer elective affinities. With the many new things of an expanding industry, new elective affinities with new common styles came into being and, within them, more non-rooted individual styles have become possible. Social distance and individuality increased as a result of industrialisation – and so did happiness.

On the demand side, the *Quality Law* (H_5) of cultural selection is based on the objective function (13), while on the supply side it is based primarily on industry, and only to a minor extent on the material DIY of the productive consumer. Almost every new quality is adopted by the market. Industrialisation was thus given a steady boost. But not all new qualities serve the business objective equally well. Entrepreneurship in B2C has become entrepreneurship in the style system, and the identity industry went this way.

3 Elias 1997.

The *Polytomisation Law* (H_9) of cultural selection predicts qualitative differences between objects, that tend to result in uniform lengths of objects in a tree with only one node (Figure 10, right side). However, uniform lengths up to a common node is a dissimilarity-theoretical operationalisation of uniform distances between variants on Lancaster's clock face of product differentiation. QTC thereby offers a different explanation for product differentiation. The orthodoxy must assume for the demand side, heterogeneous preferences with uniform distribution on the clock face. Uniform distances between qualities are then the result of economic competition for market shares in a perfect goods market. In QTC, on the other hand, uniform distances between qualities follow from uniform preferences (13) and endogenous cultural selection (H_9). QTC, unlike the orthodoxy, does therefore not need the auxiliary hypothesis of market perfection. *Culture as a process replaces the market as a process*. The rise of the identity industry was culture-driven, and the market as an institution for the exchange of quantities played a minor role.

In the style system, industry always comes second behind the productive consumer. It is a service provider for cultural selection (H_1 - H_{10}). Which business models will succeed in the style system?

Singularity Mass Production

A longstanding business model of the identity industry is the creation of singletons and their subsequent transformation into extremes in trees. Thereby, first the width (social distance) and then the length (individuality) increases in the style system. Therefore, singletons, as something incomparable in every respect, do not simply disappear (Singleton Law, H_3), but are systematically transformed after their deliberate creation into something comparable. This service is not an abstract idea of QTC. You find it in practice.

The art world provides the blueprint for it: a singleton, say, the first *Readymade* by Marcel Duchamp, is supplemented by more and more objects of a *comparable* kind, so that over time a subset of objects emerges for which the collective term *Dada* will soon be found. The umbrella term standing for the tree of these objects is then placed by intermediary savants (gallerists, curators, critics), in the larger context of a superordinate artistic taxon (*Ordering Law* H_4). *Dada* now becomes collectible in the taxa of Surrealism, and contributes to the individuality of the collector in the elective affinity of Surrealism aficionados.

Haute Couture, the systematic subordination (of the needs) of the body under an artistic concept, came closest to the commercial production of singletons

without ever actually doing so. The carefully cultivated name of the house (*Pierre Balmain*, *Coco Chanel*) made up a tree in which all creations, as unique as they might be, found their place. While Haute Couture is a business model of the identity industry, it is not a successful one, as its industrial insignificance shows today. It lacks scalability in the style system.

Another traditional business model also eliminates singletons, but without having created them in the first place. Wine guidebooks (*Parker*) and restaurant guides (*Michelin*, *Gault-Millau*) offer classification systems by means of which previously unique items can be compared with something else. They are pure service providers in the identity DIY and position themselves as intermediary savants, who know (and reveal) coherencies that were previously unknown to the rest. They offer instructions for the sorting plant of culture on how to integrate singletons into trees in a happiness-enhancing way. The downside of this business model is the dependence on third-party producers of ever more new singletons. The upside of this restraint is the nimbus of independence as a guide. Their capital is their reputation as savants.

There are firms integrating vertically by following this blueprint of the art world. The first *Swatch* was a singleton, the first fashion item with a watch function, incomparable with anything seen before in either the jewellery or functional watch traditions. *Swatch* gradually added similar new objects, amounting to a vast number of them today. This business model is based not only on a steady expansion of the world of objects, but also includes instructions for the sorting plant of culture, with the help of which the set of *Swatch* items from the world of objects is to be sorted into smaller but coherent subsets: vintage and special editions with specific motifs. This paves the way for collectors' affinities and provides them with fresh supplies. Collecting *Swatches* thereby becomes an identity-creating cult. *Illycafé* and *Rosenthal*, with their collector's cups editions, are further examples of this business model. *Absolut Vodka* markets the same product in a periodically changing bottle and label design. All of them, from the postage stamp businesses of the Vatican and Liechtenstein to contemporary art, apply the same business model: industrially created singletons (narrowly speaking) are joined together into comparable subsets of the world of objects by chronological sequences of salvos of similar objects. In this way, collectors' affinities emerge whose members show their individuality through their collections.

The sale of qualities that are difficult to reproduce, for example antique art, antique porcelain, historical stamps, etc., also serves the needs of collectors, but it is not as scalable as the industrial production of continuously new objects. However, their positioning initially as (mass-produced) incomparable singletons exposes them to the risk of oblivion. Yet, the subsequent positioning as a

historical quality of a subset of comparable objects (editions) reduces this risk and opens up the potential as a collector's item, the supply of which is controlled by the firm itself. This business model further avoids the cultural inefficiency of chains. This is because editions create comparability, but carefully avoid dominance by other objects. The most reliable remedy to avoid being dominated is the involvement of different artists in the design of editions, as practiced by *Swatch*, *Illycafé*, *Rosenthal* and *Absolut Vodka*. Andy Warhol's label as the first artist commissioned by *Absolut Vodka* is programmatic.

There are three reasons circulating in science as to why artistic elements should be an integral part of a business model: to onboard cultural trends early on, to create a brand community, or to legitimise one' s own activities as part of cultural production.[4] QTC offers affirmation: cultural trends are the vector components H_1 - H_{10} of cultural selection, in particular the trend towards the integration of singletons into trees, H_4; a brand community is a monopoly on a specific elective affinity; and the art industry produces unique works of art which it reliably places in a context of comparability (as in Table 3 in chapter 3) and to which it thereby confers collectability. Perceived as a part of the art scene, a consumer goods firm can throw new things onto the market without devaluing the old. This industrial, limited-edition business promises the buyer double bliss: first from the one-off piece and then as an element of a subset of comparable qualities. The criterion for success in this business model is that each 'collector's cup' has a fair chance of becoming a supremum in a tree with branches of equal length. The perfect 'singularity mass production' is equally fair to every produced quality in terms of its chance of becoming a supremum (and therefore to every collector). The selection, development and cultivation of the artist/designer network is therefore the most important HR task in this industrial business model.

Mathematically, this success criterion can be operationalised with an ultrametric scale of feature values. Ultrametric scales always provide phylograms or polytomies with branches of equal length. The business model of *Swatch*, *Illycafé*, *Rosenthal* and *Absolut Vodka* is therefore aimed at producing a large number of suprema in phylograms or polytomies.[5]

4 Dell'Era 2010, p. 86.

5 NB, ultrametric scales are used to generate evolutionary trees to express the belief that all live reproductive communities are always equally fit in evolutionary terms (for example, in Figure 1, right side). It may come as a surprise, but collectors' cups are the closest possible approximation of material culture to nature, and the underlying business model is the closest possible approximation of commerce to the biological idea of genetic disparity.

This *production of a history of the unique* by means of industrial editions is a vertically integrated business model in the value chain of the DIY identity. It promises greater profit than the production of the unique alone (artist profession), greater profit than the mere cultivation of history (museums, vintage car workshops etc.), greater profit than the service of intermediate savants and the mass production of copies of a single quality (Henry Ford's *Model T* business model). The *production of a history of the unique* imparts to cultural selection the industrial impulse of mass-produced and – as a result – comparable singularities.

Mass customisation such as of sports shoes and t-shirts by internet configuration is the current best-practice variant of this business model. Here, for sake of simplicity, the *production of history* is dispensed with altogether. Instead, automation minimises the risk of showing copies that reduce happiness. Internet configuration, the scalable accommodation of customers' needs for individualisation, and the mass production of one-offs results in products of almost identical quality. In comparison to the assembly line production of the *Ford Model T* business model, a minimal dissimilarity between qualities is produced *en masse*. Thus, industrial mass singularities find their explication in QTC.

Length Extension

Because length fosters individuality there is a business model that provides the DIY identity with increasingly longer lengths. This is how fashion is accommodated in QTC.

Prêt-à-porter, the greatest possible concession of *Haute Couture* to commerce and the greatest approximation of commerce to *Haute Couture*, delivers the most current fashions twice a year, thus pushing what was previously fashionable into the past. Existing suprema are replaced by new suprema, so that a supremum is now dominated by a new object. In this way, under the guise of up-to-dateness, chronological length is extended further and further. Those for whom the updating costs are low enough will stock up on new suprema twice a year. Luxury brands are in this business (*Akris, Armani, Gucci, Prada*). This DIY is individually scalable if there is a second-hand market for what is no longer current. Suppliers of durable luxury articles take advantage of this with constant new (pattern or colour) variations of basically the same merchandise (*Hermès* ties, *Louis Vuitton* bags). That is how this business model works its way through the available money. Secondary brands of *prêt-à-porter* brands (*Armani Collezioni, Miu, DieselStyleLab*) all the way down to the mass market are all in the length extension business. The 66 week long sheep-to-shop pipeline has now been replaced by

vertically integrated fast fashion (*Benetton*, *Zara*, *Massimo Dutti*, *H&M*). QTC offers a simple explanation for vertical integration in the fashion industry: vertically integrated, length can be extended faster.

Accordingly, retro finds its explanation in QTC in that it is not the ostentatious consumption of the old-fashioned, but rather the postulation of the previously old-fashioned as the new supremum. A dominated object is taken as a blueprint out of its chain and placed at the current end of the same chain, extending its total length. However, industry does not achieve this by duplicating the 'original' old-fashioned item, but rather by modifying stylistic elements, making visible what is new (retro) and what is old (historical precedent). This makes someone who wants to surf a retro wave with dad's original an uncool dilettante. In orthodox logic, the underlying motive for the modification of the original is industry's interest in selling large numbers of specimens. By contrast, in the logic of QTC, modification is necessary to attain the position of the new supremum. That way the original remains where it was and is dominated by retro. Here the two logics complement each other.

Simplification of Thought

A standard claim of critics of consumerism is that it would infantilise consumers. Benjamin Barber provides the following explanation: influenced by consumerism, the fast is favoured over the slow and the easy/simple over the difficult/complex.[6] In other words, consumerism infantilises because preferences shift away from the slow/difficult/complex to the fast/easy/simple. We also find this tendency in QTC. But therein, it has nothing whatsoever to do with a change of preferences (through a manipulating industry) but is the consequence of the invariable objective function (13). Infantilisation – in QTC the term *simplification of thought* seems more appropriate – is demanded by the productive consumer for their DIY identity. Here's the rationale.

Whether the fast/easy/simple is preferred to the slow/difficult/complex depends, as was argued in chapter 8, on the over/undercoding of the objects providing the stimulus. The faster and the easier you can decode their meaning, the more stimulus fluent you are. The longer it takes you for decoding, the less fluent you are. Semiotically, stimulus fluency is a response to overcoded objects and stimulus non-fluency to undercoded ones. Translated into QTC, Barber's statement is therefore this: consumerism creates an overcoded world of objects whose

6 Barber 2008.

stimuli become increasingly familiar to consumers. The world of things and their operating manuals evolve together towards the quickly understood, easily mastered, simply handled. The simpler a thing is, the less complicated the instructions for sorting it need be, and the simpler the instructions the less complicated the initially complicated thing. Consumerism as an instruction manual never confronts consumers with tricky DIY decisions. Over time, it offers increasingly simple instructions for DIY identity and a simpler world of things to choose from.

The issue remains whether and where Barber's thesis manifests itself in cultural selection. You can find it in the *Polytomisation Law* (H_9). The phylogram on the left in Figure 10 is intellectually more demanding than the polytomy on the right. In this sense, the polytomy is fast/easy/simple, the phylogram slow/difficult/complex. The *Polytomisation Law* thus predicts a cultural selection towards a less and less intellectually demanding ordering of the world of objects, towards the undemanding polytomy. In other words, QTC offers the view that productive consumers demand a simplification of thought for their DIY identity, rather than having it foisted upon them by a manipulative industry. In QTC the simplification of thought is a sought-after service. It is yet another business model of the identity industry.

In practice, this thought-simplification business model can be found in mass markets. From the orthodox point of view, this business model rests on scalability and cost reduction. From the point of view of QTC, however, mass products are those with which you have become fluent. As difficult as they were to understand at first and as complex as they appeared, the more often they are shown, the more overcoded they will become. Slow, deliberative thinking, initially triggered by undercoding, is gradually replaced by fast, habitual thinking. Over time, an object, formerly situated in a complex order, finds its new place in an increasingly simple dissimilarity structure. Finally, it ends up in a polytomy alongside many other objects, all of which have become similarly quickly/easily/simply comprehensible.

For example, traditional costumes with their complex historical roots (chapter 1) are no longer maintained and carefully updated in their identity-giving tradition. The traditional costume has disappeared, except in a few rural areas. It has become a history-free fashion item, the fashion *tracht*, that can be shown situationally by anyone. Fashion *tracht* cannot be positioned in the tree of traditional costumes. Features such as colour, pattern or cut stand for nothing but themselves; the different apron knots of the traditional alpine costumes of the widow, married and unmarried woman are, in the fashion *tracht*, three knots devoid of meaning. Different costumes worn at the Oktoberfest are objects in a

polytomy. The fashion *tracht* is mass-market thought simplification, pure and simple.

Intermediary savants prosper with the thought simplification business model. Mass media presents dissimilarity in a trivialising way. Whereas on other topics, for example nature, consumers are required to dig to some intellectual depth, this is (almost) completely absent when it comes to style issues. Fashion and lifestyle magazines, tabloids and celebrity shows on early evening television, dominate opinion on style. Savants, with the possible exceptions in art and literature, encourage fast thinking. For this purpose, up-to-dateness is glorified, the sheer postulation of the new and the hip overrides the argumentative rooting in the old. Star endorsement replaces semiotic reflection. But it still holds true: consumers are not stupefied against their will. Given objective function (13), consumers demand it.

Mass Market and Criticism of Consumerism

In the mass market, mass *quantity* production and mass *quality* production coincide. A trade-off between the two affects happiness. As already discussed, mass quality production (of singularities) improves individuality by reducing the potential for rooting the individual in the common style. But mass quantity production also increases the rooting, because many consumers show only specimens of one and the same object. The mass market thus affects individuality via two opposing effects: the negative effect of large quantities and the positive quality effect of singularity mass production.

Because of this trade-off, criticism of the industry for pushing consumerism demands more differentiated arguments than those given so far. True, it justifiably blames industry for the effect of its mass quantity production on individuality. However, you can only blame mass quality production for its simplification of thought. To this end, however, you must take the meritorious position that slow/difficult/complex is always preferable to fast/easy/simple, and consumers must be forced into happiness with the former.[7] Because the simplification of thought through polytomisation helps strengthen individuality. Whoever accepts individuality as an argument for happiness cannot blame industry for simplifying thought, in the very interest of happiness itself.

Criticism of thought simplification is therefore in need of an explicit affirmation of a third argument in the objective function (13) – aesthetic appeal:

7 It is the very argument with which school classes, rightly or wrongly, are hauled into museums.

$$U_i = U[distance, individuality, aesthetic\ appeal]$$

Aesthetic appeal is itself a function of the over/undercoding of the world of objects with the functional form of a ∩, as explained in chapter 8. Beyond the peak of ∩, in an overcoded world of objects, the aesthetic appeal wanes, and one becomes increasingly bored. The fast/easy/simple, as conveyed by polytomies, still promotes individuality, but due to the third argument of the objective function, it does not necessarily advance happiness. It is QTC, extended to include aesthetic appeal, that lends more clout to the criticism of industry for its promotion of simplification of thought. Simplification of thought only makes people happy within limits, too much of it makes them unhappy.

With this extension, Tibor Scitovsky's *Joyless Economy* can be understood as an anti-consumerist critique grounded in QTC. It is a critique of that vector component of cultural selection that brings monotony and boredom into society.[8] However, QTC also predicts that because of its singularity mass production, the identity industry will not let monotony and boredom rise boundlessly. Thus, the extended QTC offers a more differentiated view of industry than the orthodoxy: as a producer not only of quantities but also of qualities, its effect on monotony and boredom is ambivalent. It contributes to it, but not in an excessive way. Even if it is not a service provider of aesthetic appeal as the art industry is, and only offers inputs to manipulate social distance and proximity, its singularity mass production limits boredom in the mass market.

Fashion

Where the orthodoxy must rely on a number of special assumptions,[9] QTC offers a simpler explanation for fashion: the current fashion is defined by the length of a tree and the next one by the new, longer length of it. Consequently, on the demand side, fashions are not dependent on quantity: You don't have to assume that a trend that is currently followed by only a few will motivate people to jump on (bandwagon effect), and one that has already been followed by many will motivate them to drop out (snob effect), whereby the periodicity of fashion is implicitly seen as dependent on the exogenous reaction time of consumers. In the logic of length extension, you do not have to assume any consumer reaction time.

8 Scitovsky 1976.

9 E.g. Pesendorfer 1995.

Its periodicity depends solely on the speed at which the industry can profitably produce length. And that is solely dependent on vertical integration.

As was argued in chapter 7, the vector component *Destabilisation* (H_{13}) offers a probabilistic explanation for the bandwagon and snob effects at the level of whole elective affinities. From that point of view, mass exodus from an existing elective affinity and mass influx to a new one, are macrodynamic phenomena in the style system; they are due to the striving for social distance (width). Industry is redundant for this. In contrast, in the present perspective, the bandwagon and snob effects are triggered by the length extension business model of industry. Here the effects are microdynamic phenomena at the level of individual styles within the elective affinity of fashionistas. They are due to the striving for individuality (length).

Groupings I and IV in Figure 11 are less receptive to the fashion made by industry than groupings II and III, both of which are therefore the main targets of the fashion industry. Not only because it is big (orthodox argument) is the mainstream the Eldorado of the fashion industry. It is it also because of its stronger preference for individuality, and therefore receptiveness to the business model of the fashion industry (length extension). By contrast, the bandwagon and snob effects are less frequent on the fringes of society (grouping I) and the likewise distance-keeping grouping IV, and only occur there in a weakened form.

Dialectics of Postmodern Business Models

The business models of singularity mass production, length extension and thought simplification are all B2C. Moreover, each is limited to only part of the DIY identity value chain. And they all accept the DIY sovereignty of productive consumers; nudging against the interests of consumers is not part of their strategy. Their central resource is knowledge of cultural selection. They all promote cultural efficiency.

The term *culture industry* is usually reserved for commercial actors in artistic, musical and literary fields. It needs to be given a broader definition in QTC. It must be applied to whatever industry contributes to the work done in the sorting plant of culture. Fashion labels, retailers and the gutter press are as much a part of that industry as opera houses, educational TV programmes and artists. The term *identity industry* covers this idea more broadly and accurately: whatever contributes to improving cultural efficiency belongs to the identity industry.

Postmodern business models make use of vector components of cultural selection. Table 13 summarises their differences. Both singularity mass production

and length extension make use of the *Ordering Law* (H_4): The order shown in the phylogram is superior to singletons and chains. Singularity mass production furthermore makes use of the *Singleton Law* (H_3), following the example of the art world, it integrates singletons into phylograms.

Length extension and singularity mass production collide in the sorting plant of culture. This is because singularity mass production in phylograms exposes their suprema to the danger of being devaluated by length-extending fashion. This business model therefore strives to evade this danger by offering editions. Under the impact of length extension, singularity mass production turns into a risk-opportunity strategy: it exploits the opportunities of cultural selection (H_3, H_4), but at the same time defends itself against the cannibalising effect of the length extension business model, with the continuous production of new qualities. Length extension, on the other hand, can only succeed against whatever already exists with the broadside of continuously new fashions. But with this it also cannibalises the fashion which it had previously put on the market itself. Singularity mass production also confronts the short-lived nature of length extension. Singularity mass production and length extension stand in dialectical opposition.

Table 13: Postmodern business models.

Identity Industry	
Business Model	*Cultural Selection*
Singularity mass production	• Singleton Law (H_3) • Ordering Law (H_4)
Length extension	• Ordering Law (H_4)
Simplification of thought	• Polytomisation Law (H_9)

These counteracting forces push length extension into the niche of short-lived consumer goods with brands such as *Benetton*, *Zara*, *H&M* and singularity mass production into the niche of longer-lasting consumer goods, with companies such as *Swatch* and *Rosenthal*. *Absolut Vodka*, the brand that succeeds with its singularity production (the packaging) amongst a market for short-lived consumer goods (spirits), is the exception to that rule.

Simplification of thought sets in where the other two business models fail to enhance cultural efficiency: at the polytomisation of the world of objects (H9).

Singularity mass production creates knots, length extension perpetuates them. Thought simplification works on this legacy and transforms it.

Culturally Dynamic Time

For the philosopher Jean-François Lyotard, the terms *modernism* and *postmodernism* refer not to the sequence of societal states, but to the state of objects and styles *in* society. An object (which he calls a work) is either in the state of modernism or postmodernism. All objects always change their state of being in the same sequence: from the postmodern state to the modern state. A new object must first be postmodern before it can become modern. Postmodernism, understood in this way, is modernism in the nascent state.

Lyotard's stance is reflected in QTC in Figures 11 and 12 in connection with the concept of over/undercoding. New objects from other style groupings are at first unfamiliar to the mainstream, but end up being assimilated by it as familiar ones. Hence, an object is postmodern in the early stages of its transformation, when it is familiar only on the fringes of society, or also to one of the special groupings II or IV, but not yet to the mainstream. An object is only modern in the final stage of its transformation, when it is familiar everywhere. In QTC, Lyotard's transformation of objects from postmodern to modern is therefore the syndromic effect of their undercoding to overcoding; or, in Scitovsky's view, the change from stimulation and inspiration to monotony and boredom; or, in Barber's words, from slow/difficult/complex to fast/easy/simple; or, from the standpoint of cognitive psychology, from slow to fast thinking.

According to Lyotard, if we distinguish between modernism and postmodernism not at the level of society but within the world of objects, then we always find two types of objects – those in the state of postmodernism and those in the state of modernism. The culture-changing function of industry is to transfer objects from a state of postmodernism to a state of modernism. The work of creative departments and the goal of branding and advertising are directed towards the steady creation of modernism and the elimination of postmodernism. The postmodern industry ensures that Lyotard's modernism does not disappear. It industrialises the process that moves from undercoding to overcoding of objects, from stimulation and inspiration to monotony and boredom, from slow/difficult/complex to fast/easy/simple, from slow to fast thinking.

Time *as such* does not exist. Instead, there only exist alternative time concepts for the before and after. The thermodynamic time of physics regards every closed system as striving towards a state of greater disorder. This thermodynamic time

arrow (the only time arrow known to physics) is matched by QTC's culturally dynamic time arrow. The world of objects strives for ever greater monotony, for what is easier and simpler, so that it becomes more and more ingrained by fast thinking. The industry can do nothing other than be part of this journey and turn it into a business model. This throws new light on the practice of trend scouting: it nourishes culturally dynamic time.

The Ecological Footprint

Besides its infantilising effect, consumerism is also criticised for taking too high a toll on nature. The continuous pursuit of more of everything, or the compulsion behind this, is claimed to harm the biosphere and thus the very existence of human life. The many facets of this criticism can be reduced to a simple thermodynamic effect. Photosynthesis (including its fossil legacy) delays the steady return of solar energy into space by temporarily storing it. This enables the input of physical work which is necessary for the preservation of all life. The biosphere develops and sustains itself by means of this work. Its order, diversity and complexity are a direct result of this entropic delay. The human species uses some of this available physical work for its own sustenance, in competition with the needs of the rest of the biosphere. If the human species claims too much for itself, the rest will suffer. The surface area of the Earth would then have to be larger in order to preserve the existing order, diversity and complexity of the biosphere. The (positive) difference between the necessary hypothetical and the actual size of the Earth is referred to as the human ecological footprint. The criticism of consumerism is directed at this ecological footprint and culminates in the appeal for consumers to exercise self-restraint and reduce their footprint.

This criticism of consumerism broadsides the consumer, as portrayed by the orthodoxy. A utility-maximising positive-quantities consumer strives for ever larger quantities of specimens of all types in their goods basket. The material throughput necessary for *+consumption* and the physical labour required for the production, distribution, consumption and disposal of quantities generate thermodynamic costs at every stage of the value chain, from cradle to grave. The orthodoxy's consumer can therefore be nothing but a thermodynamic cost driver that contributes greatly to the unsustainable human ecological footprint. Does this ecological criticism of consumerism concern the *o/+consumer*? Not to the same extent, at least. It must be qualified for at least three reasons.

First, in *o/+consumption*, relative to other consumers, restraint is just as goal-oriented as augmentation. Only interpersonal and group differences in

consumption matter. The logic of an elective affinity abolishing style peripheries in its common style (*Nucleation Law*, H_{10}) is a winning logic of renunciation. Likewise, an object that is shown in all individual styles of an elective affinity contributes nothing to individuality. In objective function (13) there is a built-in incentive for the qualitative unbundling of individual and common styles. The slackening of stylistic differentiation (H_{17}), promoted by unbundling, is a hypothesis not only on the limits of social evolution but, in its underlying mechanism, also on asceticism: duplication of displayed qualities is not rewarded in the style system. This propensity limits the thermodynamic costs of *o/+consumption* to those physical object specimens (few compared to orthodox consumption) that are still needed to generate the system of social distance and individuality in the style system.

On the other hand, the thermodynamic costs of *o/+consumption* are driven up by the *Quality Law* (H5), because more and more qualities in the style system need a demonstrable specimen. Moreover, the *Up-to-Dateness Law* (H_6) prevents old qualities from being discarded completely. The propensity to asceticism based on quality is counteracted by the equally inherent propensity to limitlessly create more qualities. The goods basket of the *o/+consumer* is thrifty, their goods *type* basket, however, is lavish. This ambivalent effect *of o/+consumption* on the thermodynamic costs is contrasted by the unequivocal cost-driving effect of the more-of-everything propensity of orthodox consumption.

Secondly, in the objective function of the orthodoxy, quantities of material things are the arguments of utility. Each of them contributes to thermodynamic costs. The greater the consumption utility, i.e. the more of everything that is consumed, the higher the thermodynamic costs. In objective function (13), however, there is not a single physical thing. The arguments of happiness – social distance and proximity – are concepts of the inner world of the productive consumer, based on (concepts of) qualitative differences in consumption, which show up in the orderings of the world of objects, $(X, \square)$, that is, in the structures, $\{\circ, |, \Cap\}$, and which are moderated by culture, $\square$. Only in the background does there exist the tangible material (chapter 1), as the only thermodynamically effective 'substance', of which all these 'dreams' are made.

QTC's non-material bias contrasts with the material bias of the orthodoxy. Orthodox theory overestimates the thermodynamic costs of consumption, whereas QTC underestimates them. In reality, where the idea of the ecological footprint takes hold, consumption of quantities and qualities go hand in hand. It is therefore necessary to work out the systematic thermodynamic conceptual differences between the orthodoxy and QTC.

Third, the orthodox theory of consumption is one concerning the relationship between human being and thing, while QTC is concerned with the relationship between humans and humans. The difference is that, in the orthodoxy, communication is a secondary issue, whereas in QTC it is the main concern.[10] In QTC social distance and proximity are communicated by means of consumption and produced by means of communication. The lack of communication in the orthodoxy and its presence in QTC have thermodynamic consequences. The question is whether there are components of communication that do not result in (measurable) thermodynamic costs. At least these components of *o/+consumption* must be spared the ecologically motivated criticism of consumerism.

Mathematician Claude Shannon offers a fundamental proposition to answer this question.[11] Two components of communication need to be distinguished: the engineering component and the semantic component. The engineering component includes the coding of information on storage media, their storage, archiving, transmission and decoding. It is part of the thermodynamic system – all engineering tasks can only be done by the input of physical work. Therefore, they increase entropy. However, the semantic component, the meaning of communication, which follows encoding and decoding, has no measurable thermodynamic costs.

For example, if you heat an oven by burning a sheet of paper (storage medium), it emits the same energy whether it contains parts of the *Canterbury Tales* (meaning) or what you are reading at this very moment. Likewise, the physical work embodied in Gutenberg's lead typesetting is independent of what is communicated by it. If I write you the SMS "Max is sick again" and you receive and read it, the thermodynamic costs of this digital communication are the same, whether you interpret it as an appeal for sympathy or as a warning that that nuisance Max is up to his tricks again. The semantics of communication is situated in the context of the communication, not in its engineering component. Thinking slowly costs a lot of my energy, but it makes no measurable thermodynamic difference which stored memory I recall, what exactly I analyse, interpret, synthesise.

10 Even in orthodox signalling economics, which is the most communication-centred branch of information economics, the communication process is de facto irrelevant. By design, communication is regarded as successful if the signaller has invested sufficiently in signalling. Whether the interpretation of the signal by the addressee coincides with the intended one of the signaller is tacitly ignored.

11 Shannon 1948.

Shannon's epistemological interest was in information theory. Biochemist Antony Crofts applies Shannon's distinction between the engineering and semantic components of communication to the entire biosphere, from DNA to human culture.[12] A distinction should be made everywhere between the engineering and semantic components of communication. And everywhere, the meaning of communication arises solely from its context. For instance, the context of the chemical coding and storage of information in DNA, he claims, is Darwinian evolution.[13] The metabolic synthesis of DNA (engineering component) creates measurable thermodynamic costs. However, these costs are sequence independent. Just as the thermodynamic costs of Gutenberg's lead typesetting are sequence independent. However, it is precisely the sequence of chemical molecules in DNA that encodes a specific semantic content (much like the sequence in lead typesetting). This sequence results in the phenotype of an organism, epigenetically transported and translated. However, according to Crofts, its meaning only arises in the context of Darwinian evolution. Crofts concludes that the semantic component of communication does not in principle – epistemologically, for the time being – result in any measurable thermodynamic costs anywhere in the biosphere, including in human communication.

If you follow Shannon's and Crofts' line of argumentation, you can declare the entire semantic component of the communication brought about by *o/+consumption* as thermodynamically neutral. This part of *o/+consumption* does not contribute to the ecological footprint. The work of the productive consumer done in the sorting plant of culture has as its input the world of objects, X, and the thermodynamically neutral sorting instruction from culture, $\square$. The world of objects thus ordered, $(X, \square)$, in the ordering structures $\{\circ, |, \Cap\}$, is the output from the sorting plant. It is thermodynamically neutral as well. The 'work' done in the sorting plant of culture is physically no work, but culturally essential. Of all the "Yes to this, no to that!" decisions, only the "Yes to this!" decisions, reflected in demonstrable specimens, create thermodynamic costs. For the sake of

12 Crofts 2007. He uses the term 'information' for what is generically better covered by the term 'communication'. Communication requires an active recipient of information, equipped with a degree of freedom in decoding, whereas information does not need this in a narrow (sender-focused) interpretation of the term. However, Crofts repeatedly points out that information also requires interpretation as part of the overall transmission process. He thus uses the term 'information' in the sense of semantically effective communication.

13 Yet, Darwinian evolution is still too narrow a context, even for the semantic component of DNA. It must be extended to the nature-culture context. For example, race is genetically underdetermined, it only gains its meaning in a cultural context (cf. Marks 2013).

completeness, so does the energy consumption of the fast and slow thinking of the productive consumer. Combined with the frugality of their goods basket, but also with the lavishness of their goods-type basket, the productive consumer presents itself as a more complex subject than the one the orthodoxy delivers to the ecologist's pillory.

Brand (Equity) and Ecology

Brand equity is an intangible asset of a firm; inventories, factories and other production facilities, distribution infrastructure, etc., are tangible assets. For some firms, brand equity is the most valuable asset. In QTC it is derived from two factors. First, from the scaling of the market in which the brand succeeds (mass versus niche market), and second, from its brand function and brand position in the style system. (More on this in the last chapter.) In the style system, the meaning of a brand is determined within the context of all other brands. Just as – taking a classic analogy from semiotics – a dictionary entry can attain meaning only relative to all other entries.

In QTC, a brand can be understood in its initial appraisal as another object from the world of objects: as a thing (e.g. a logo) with a meaning that is used for communication. Like any meaning in the Shannon/Crofts sense, brand meaning does not belong to the thermodynamic system. For example, there is no known technical process by which a meaning such as 'advancement through technology' (the meaning proposition for *Audi* by *Audi*, as opposed to BMW's 'joy of driving') could be thermodynamically converted into better acceleration or ultimate speed. This is not a joke! Different brand meanings *per se* simply do not cause different thermodynamic costs, whatever they may be. It is only the engineering component of brand communication that generates thermodynamic costs – construction, design, distribution, promotional material and its coding at customer touchpoints, etc. The ecological footprint of industry is not affected by the meaning of its brands *per se*. In conclusion, it is only the scale factor of brand equity (number of specimens shown, geographical reach of advertising campaigns and presence, number of customer touchpoints, etc.) that influences its ecological footprint.

It can therefore be postulated that, with constant industry scaling, an increase in the brand equity of a company (or industry as a whole) does not increase its ecological footprint. The perception of the ecological responsibility of industry takes on a new dimension in QTC. Not only are ecological responsibility and

corporate success not mutually exclusive in the brand dimension of business, they simply have nothing to do with each other.

The question arises as to how firms can foster this ecological transformation. The following questions outline a path to that destination. What business are we in? When gastro, event, clothing, mobility firms, etc., give the answer "in the style communication services business", they are on the right track. Where in the style system is our brand currently positioned? This question is more comprehensive than the standard question, "Who are our customers?" (the young, elderly, etc.) and addresses more subtle points such as the exact position of the current clients in the style system and their specific communicative environment there. What *local* restrictions does the style system impose there? What are our competing brands *there*? How can we valorise the semantic component of our communication service *locally* in the style system? And what is our optimal *global* position in the overall style system?

Alongside conventional reduction of the thermodynamic costs of the engineering component, the outlined path opens up the potential for systematic, ecologically compatible growth for brands. They only need to know one more thing: what communicative needs do consumers have in the style system? This is the subject of the last chapter.