REMEDIATING SHOPPING CENTRES FOR SUSTAINABILITY

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INTRODUCTION

The modern day shopping centre is so entrenched and so familiar a building form in most countries in the world, particularly the developed nations, it is hard to believe they did not exist in the living memory of those who today are sixty years or older. While this new way of shopping brought convenience, variety, comfort and a new shopping experience, the repercussions from its almost overnight infiltration and takeover from the retail experiences of the past were realized too late.

In the last 20-30 years, there has been a growing concern in regard to mass consumption and its impact on our planet. As temples of mass consumption, will the modern day shopping centre be able to adapt itself effectively for a sustainable future or will it die as swiftly as it appeared?

FIRST THERE WERE STONES, THEN THERE WERE MALLS

The translation of the activity of shopping into a physical form can be traced back to the first ancient Greek markets, where rings of stones were placed outside the city walls marking neutral territory as indicators of trade with other settlements. (McMorrough 2001). The fundamental development of internal shopping spaces grew from marketplaces and bazaars to arcades, department stores, supermarkets and shopping centres and malls – each development separating itself continuously from the connections and limitations of urbanity and the unpredictable nature of climate.

The development of the arcade in Paris in the late 18th C significantly changed retail and shopping in Europe (Chung et al. 2001). For the first time the urban experience was internalized and linked by spaces of consumption (McMorrough 2001; Leong 2001b). Customers were now able to traverse the city in an internalized environment, separated from the noise and grime of the streets to concentrate their attention on shopping (Leong 2001b). This retail form, enabled through new technologies and materials, spread across the globe over the next 100 years, creating architecturally grand spaces for a "…growing middle class that marked itself through conspicuous consumption," (Jayne 2006, p.43).

A reinforcement of this new form of consumerism, was the opening of Bon Marché, the first department store, in Paris in 1869 (Humphrey 1998). These new internalized spaces were dedicated to a new leisure activity, consumption, rather than to the more diverse and productive activities of the markets, bazaars and street shops before them and were the start of the modern culture of mass consumption (Humphrey 1998; Jayne 2006).

The next significant development for retail forms was the supermarket, the first in New York in 1930 (Chung et al. 2001). As these large interior spaces required land, they were settled mainly on the

urban fringes of cities worldwide and their proliferation and impact on the urban landscape was profound (Humphrey 1998; Jayne 2006). By 2008 there were approximately 85,400 grocery chain stores throughout America (Anon 2009b) and in 2007 Australia boasted over 6,000 supermarket and grocery retailers (Lennon 2007).

The department store and supermarket are critical to the development of the shopping centre or shopping mall, each symbiotic with the other. The first enclosed mall[1] came into existence in 1956 in Southdale Minneapolis, U.S.A. the invention of the architect and entrepreneur Victor Gruen. Now shopping was completely internalized. The commercial streets of trade could now be captured within an internal artificially lit and air conditioned island surrounded by a sea of parked cars and asphalt deserts. To be fair to Gruen, his intention was to replicate the community life of markets and town squares and situate the shopping centres with other activities and services such as schools and offices with a diversity of housing and open, landscaped spaces (Leong 2001a); however, the reality became somewhat different.

THE VULNERABILITY OF SHOPPING CENTRES AND MALLS

Shopping centres and malls are accustomed to change but are not always resilient to its effects. Being highly vulnerable to the variances of economy, demographics, local competition and trends, the shopping centre/mall is continually changing its internal environments, along with organisational and technological systems, in order to maintain economic viability and ultimately, to survive (Boeri et al. 2000). However many fail: between 2007-2009 more than 400 of the 2,000 largest malls in the USA closed their doors (Anon 2009c), and the last 'ground-up' mall to be built in the USA opened its doors in 2006 (Anon 2011a).[2]

At the start of the 21st century, industry speculated that the future of the omnipresent shopping mall in the USA, was bleak (Bodamer 2005; Sokol 2003); this was exacerbated in 2008-2009 by the global financial crisis (Misonzhnik 2010; Anon 2009c; Gregory 2009; Benfield 2009). Malls in the USA continue to close at a faster rate than they are now opening.

The economy is the biggest killer for malls and the global financial crisis in the USA has seen many suffer (Hudson 2009). Anchor stores, usually a department store and/or supermarket, provide the traffic flow for the smaller shops within a shopping mall. If an anchor store leaves a mall, the smaller stores suffer and the mall itself falls into decline (Anon 2009c). Other reasons malls have become less popular or failed include: new malls opening in the area; new shopping experiences in other retail outlets; their mammoth size; their artificial interior environments; decreasing popularity of department stores; parking difficulties and online shopping (Misonzhnik 2011).

Conversely, shopping centres in Australia rarely close: the problem of 'dead malls' is seen as an American phenomena, with only pockets of retail closures and inactivity seen in Australia (Productivity Commission 2011, p.245). As Bird (2009) explains, this is likely due to the retail mix found in Australian shopping centres, where general and luxury purchase items, as well as a variety of food outlets, cater for a greater proportion of consumer needs. Ellen Dunham-Jones notes that many malls have also not been in keeping with the changing demographic and lifestyles of those living in the suburbs (O'Connell, A., 2009).

SHOPPING CENTRES AND MALLS AS ICONS OF CONSUMPTION

If as Beth Blostein says, energy as an invisible product of consumption becomes visible through the production of 'stuff' and consumables (Blostein 2010), then shopping centres are one of its greatest manifestations.

The manifestations and growth of the shopping mall/centre have been almost parasitic. The number of shopping malls in the USA in 2005 was 48,685 (Anon 2007, p.661). Australia's shopping centres totalled 1,102 in 2007 (Urbis JHD Pty Ltd 2007, p.1) and in the United Kingdom in 2009 there were 819 shopping centres and 1,340 retail parks with 17% of all retail space dedicated to shopping centres in the UK, the majority being high street or retail parks (Anon 2009a).3

Today, the shopping centre is synonymous with suburban life, where often, the shopping mall is the only civic place for entertainment, social gatherings and cultural activities. "Shopping has become one of the only means by which we experience public activity. It in many cases determines, sustains and defines the identity of an institution, or a city." (Koolhaas 2000)

The 1950s and 60s coincided with an approach to consumption that, according to the marketing consultant and retail critic of the time, Victor Lebow (Lebow 1955), demanded "…that we make consumption our way of life, that we convert the buying and use of goods into rituals, that we seek our spiritual satisfactions, our ego satisfactions, in consumption." Shopping centres and malls were created in response to this dominant paradigm of mass consumption (Bansal & Kilbourne 2001; Lebow 1955; White 2010; Zukin 1998) and continue to survive only because of this.

As the world moves towards a paradigm of sustainability, where mass consumption is seen as one the greatest barriers to a more sustainable future, how will these bastions of the current paradigm continue to survive?
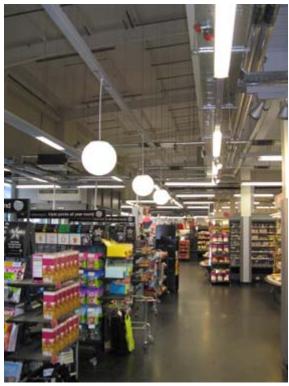
SUSTAINABILITY, RETAIL AND SUSTAINABLE CONSUMPTION

The environmental impact of mass consumables is enormous and would far outweigh the impacts of the buildings they inhabit. Most retailers are now addressing the environmental and social consciousness of their customers, ensuring they provide choices for organically grown, fair trade, low carbon, water and energy efficient and local products. Sustainable products are no longer the domain of specialist eco and healthy living stores of the late 20th C and even the world's largest retailer, Wal-Mart is aware of the buying power of the LOHAS (Lifestyles of Health and Sustainability) consumer, who represents 16-20 per cent of all American consumers (Gwynne Rogers, Lifestyles of Health and Sustainability business director, Natural Marketing Institute 2010). The extent of the environmental and social impacts of consumption is far-reaching and the retail industry has only recently started addressing these issues beyond shelf products.

Energy, mainly from non-renewable and greenhouse gas intensive sources, is used to maintain a constant internal temperature of big box stores and shopping centres, keeping perishables fresh, and light stock to a maximum. Water use dominates in shopping centres (mainly food and beverage retail outlets) for washing, cooking and ablutions. The opportunity for collecting storm water from roofs is lost, or it is polluted from extensive hard surfaces used for parking. Road transport (the most carbon intensive system) is needed to deliver and purchase goods from stores. On average, retail leases within centres and malls change rapidly, in Australia every five years (Anon 2008). These rapid changes, spell the use of excessive quantities of resources and materials and create large volumes of waste. Socially, people can be become ostracised in retail precincts if they are not 'buying customers' and as shopping becomes 'globalised' cultural diversity is diminished.

According to Jones and Comfort (Peter Jones et al. 2005) many UK retailers have been addressing the three 'pillars' of sustainability (Environment, Society and Economy) to tackle these issues. Companies such as Wal-Mart in the USA; M&S in the UK; Woolworths in Australia and global retail chains such as McDonalds and IKEA are global leaders in this area, significantly reducing their environmental and social footprints.

Figures 1&2 Marks & Spencer flagship green store, Galashiels Scotland

While many of the initiatives established by these retailers are pushing the boundaries of 'business as usual', Bansal and Kilbourne (2001) would argue that first we must evolve from the current dominant social paradigm (DSP) in which: economics is formed by market determined prices; technology is focused on expanding productivity and politics is anthropocentric in nature, to a new environmental paradigm (NEP). The NEP in contrast, shapes its economics on resource value, uses technology to improve the quality of life and has a political focus that is ecocentric.

A retail system based on the NEP would be co-operative and community-orientated situating stores within communities themselves, easily facilitating the transfer of goods and services. A greater responsibility to local communities would facilitate employment and support a stable eco-environment. Ecologically efficient technological and management systems would facilitate and encourage the reduction of ecological impacts from economic growth. Finally the merchandising of products would require life cycle analysis and understanding to ensure minimal ecological impact across their entire life cycle (Bansal & Kilbourne (2001).

Figures 3&4 Rouse Hill Town Centre, Sydney Australia

These concepts are explicated by Ezio Manzini in his book "Sustainable Everyday" (Manzini & Jégou 2003). Manzini argues that in order to reduce consumption we need to look at the systems and services we already have in place and use these more effectively. Botsman & Roger's predict a retail future structured around collaborative consumption (2010). They see the future of retail as community-oriented through collaborative consumption, using the internet for information and communication, item reuse and services replacing purchases, such as community car sharing (Botsman & Rogers 2010).

In her article, "2028: A Retail Odyssey", Dennis-Jones (2008) predicts a future of retail where shops are replaced by experiences, essential goods are delivered automatically to households as they are needed and shopping is an emotional experience, including regular activities such as retail theatre cooking demonstrations and fashion shows.

One of the most comprehensive insights into the future of shopping and retail is from Forum for the Future (a UK based NGO), in their 2007 report "Retail Futures – scenarios for the future of UK retail and sustainable development" (Goodman et al. 2007). Here, four scenarios are proposed on how the future of UK retail may look in 2020, taking into account technological, economic, political, social and environmental trends. Within each scenario is a vision of how consumption may change and a proposed timeline of how changes may develop, influencing outcomes.

Predictions of sustainable consumer behavior, technologies and activities from this report provide interesting insights into how shopping could change in the not too distant future including: vertical farming; new smart packaging; a shift in power from large retailers to individual producers; reduced food miles; individually designed products; high tech household products integrated with shopping; nanotechnology; goods exchange, repair and second hand shops; household equipment leased rather than bought; medicines dispensed in products & food; services replacing products; showrooms replacing shops and RFID (radio frequency identification) coded goods for tracking and information.

Figure 5 Finger print payment, REAL Store Krefeld, Tönisfeld, Germany

Sustainable consumption is taking varied and disparate forms as it steers its way through years of conflicting messages and less sustainable practice. The term is multilayered and subject to many interpretations, practices and imaginings involving moral and material issues (Mansvelt 2008). Two issues however are reasonably clear, the consumption of material products needs to be reduced (to what level is arguable) and the environmental and social impacts of the things we consume should be decreased.

REMEDIATING EXISTING SHOPPING CENTRES AND MALLS FOR SUSTAINABLE CONSUMPTION

As outlined above, the future of current shopping centres is of concern, particularly as an increase in more sustainable forms of consumption intensifies pressure to address these issues.

Currently a growing number of retailers and shopping centres are addressing the consumptive output of the buildings themselves, reducing energy, water and material requirements and ensuring waste materials and pollution are dealt with appropriately (Yudelson 2010). However this is only 'band-aiding' a paradigm and built form that is increasingly outdated. While future shopping centres will be able to address this new paradigm of sustainable consumption, how will the existing centres continue to survive?

Due to the 'dead mall' syndrome in Northern America, remediating disused shopping malls and big box retail has been occurring in the USA for a number of years. Julia Christensen (Christensen 2008) provides examples of new and productive uses such as adaptive re-use as churches, schools, libraries and medical centres. Ellen Dunham-Jones in her book "Retrofitting Suburbia" (2011), has documented case studies where entire shopping malls were transformed into living, 'walkable' communities and food courts in vacant interiors are being replaced with quality restaurants, reflecting the new suburban demographic of young professionals and 'empty nesters' (O'Connell 2009).

Retrofitting shopping malls to be places of production rather than places of consumption will be a likely adaptation for a sustainable future. As shopping centres and malls inhabit huge plots of land, their car parks could be more productively used as places of food production, reducing food miles by selling the produce on site and creating alternative occupations for local residents. Roofs of centres and malls have the opportunity to be transformed into green roofs, solar collectors and/or used to capture stormwater for use on the surrounding gardens or distributed to surrounding communities and households, which are also likely to be a part of the new development, increasing diversity. Waste will be dealt with on site as much as possible, particularly via composting which will be the easiest to administer, along with the reuse of items. Some wastes could also form energy for the centre, through biogas, or incineration.

Figure 5 Community Kitchen Garden, Rouse Hill Town Centre, Sydney Australia

Public transport systems and supported alternative private transport such as pushbikes, walking and shared private/semi public systems would be required to supplement the loss of car parking, further reducing carbon emissions and reinforcing a sustainable transport system.

Reusing and adapting goods through repair, swapping, and redesigning will reduce pressure on resources and waste. Existing structures could be transformed into sites for light industry associated with product adaption and repair, continuing the productive output of the new sustainable shopping centre. On-site production and sales will provide local employment within the community, teaching a higher variety of skills.

The interior environments for these shopping spaces are likely to have a stronger connection with climate as air-conditioning, heating and lighting are replaced with passive or mixed mode designs, releasing these former artificial enclosures to fresh air and natural light. These new shopping precincts are likely to contain more diverse and interactive forms of retail, rather than the single mode of exchange familiar today. Interior spaces will therefore need to adapt to these various forms of repair, swapping and exchange, self help, showroom, mail order placements, pickup & delivery (for customers as well as suppliers), interactive and shared services, including the traditional retail exchange.

Figure 6 High Line Park, New York USA a remediated train track

Retail as entertainment is also likely to play a major role in the future of retail. Healthy and sustainable living entertainment shows for cooking, fashion, cleaning, and personal transport are likely to be provided by suppliers or local community groups. Including other entertainment facilities such as movie theatres and restaurants, shopping centres are likely to increase their social and cultural roles, providing more diverse and socially inclusive activities.

Retail interiors will need to be more flexible and less wasteful of their fitout requirements, integrating perhaps 'guerilla- type' short life requirements to 'plug and play' concepts, where pre-formed interiors can be slotted into allocated spaces, minimizing resources and ensuring reuse, recycling or biodegradability at end of life.

The use of technology will play an important role in a sustainable retail future (Goodman et al. 2007) ensuring the most efficient supply and delivery of produce; enabling smart packaging solutions such as self freezing packets; providing detailed information to customers through RFID coding and smart codes and the use of the internet and increased use of nanotechnology to create intelligent products.

CONCLUDING REMARKS

The activity of shopping saw a rapid global transformation in the space of half century, with most particularly, the development of the department store, supermarket and shopping centre or mall, in the wake of an attitudinal change to consumption itself – from necessity to leisure.

In the last quarter of the 20th C and into the 21st C, there has been a growing recognition of and movement towards a more sustainable way of life, particularly within the developed countries, where high rates of consumption outweigh the planet's ability to sustain itself into the future (Anon (b) n.d.).

Modern shopping centres/malls sustain themselves through a continuously growing activity of consumption, without which, as was seen in the 2008-9 global financial crisis, they struggle for survival.

In this climate of uncertainty, it is proposed that shopping centres may find a new lease of life as centres of production rather than consumption. The complexity and variety of sustainable consumption solutions available can create opportunities for change and a more inclusive and beneficial solution than the shopping centres of the 20th C.

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[1] In the USA and parts of Asia the term shopping mall is used for an internal street of shops usually with an anchor store such as a department store. This same form is called a shopping centre in Australia, the UK and Europe.

[2] A website 'deadmalls.com' dedicated to the fall of shopping malls around the country documents this phenomena (Anon n.d.).

[3] A retail park is the equivalent of the Australian Supercentre and the American Power Center – a grouping of many retail warehouses (Anon 2011b) Interestingly in the UK, there is a different dynamic between shopping centres, the high street and retail parks, from that in America and Australia