Play generates creativity was the central argument of an exhibition held at the University of Northampton, England in 2013. Play was shown to be beneficial for everyone, whatever their age or capabilities. In the past the town and surrounding region was a hub for toy producers in the United Kingdom, with firms like Bassett-Lowke, Mettoy and Rosebud Dolls innovating with new materials and processes. Today the area remains at the center of toy and playground design and distribution, with organizations like John Crane, Toymaster, DKL Marketing, MGA Entertainment, Miracle Design and Play and Sue Ryder all based in the region. Industry-linked play linked projects with undergraduate product designers have generated creativity. They have also stimulated exhibitions and collaborations with the School of Education and Northamptonshire County Council and conversations have started with policy makers at the UK Government level and with UNICEF about the creative benefits of play in the future.

The “All Play” Exhibition “ALL work and no PLAY makes you a dull DESIGNer” (Thomas, 2013) was broad in scope but focused on design. It had six themed areas. ‘Toy stories’ about the benefits of manufacturing toys in Northamptonshire; ‘Early Benefits’ showcasing the design work, behind Abbatt, Galt and Page, producing educational toys for children; ‘Caring Connections’ demonstrating how play and toy making can be therapeutic and raise money for good causes; ‘Design Futures’ highlighting how play can have design benefits at University level and encourage innovative design; ‘Global Well-Being’ looking at the design challenges of working in the global toy trade; and ‘Creative Communities’ highlighted how interiors are being designed to allow for play at work in order to increase
creativity in business and also showed how spaces are being set aside where the people of all ages can play with toys and games. Play, the exhibition demonstrated, is beneficial for everyone, whatever their age or capabilities. This paper is just about the toy stories and global connections and how Northamptonshire became an area for innovative toy design.

METHODOLOGY

Play is understood as a cultural (Sutton-Smith, 1984) and social process, similar to the one described Mauss’ gift exchange theory (Mauss, 1954); it occurs in all cultures and societies. Huizinga’s (1998) older definition of ludic play is important as it stresses that play involves the whole community and is not just for children. His notion of providing a place for play is also central to this study.

For academics teaching product design at an undergraduate level, design is often presented as process, rather than a drawing, pattern, or plan. Design is often described as a problem solving activity. In the United Kingdom design is considered a creative industry (Smith, 1998). It is seen to generate intellectual property that can be licensed worldwide. Art and Design Schools are involved with enabling students to be creative, to come up with ‘fresh’ ideas (Hegarty, 2014) and ways of seeing (Berger, 1995). Sir John Hegarty (2014) defines creativity as “the expression of self”. Graduates have to be confident of their abilities and skills. Through our work we have observed that play is beneficial to teaching creative design (Schaber, Turner, & Betts, 2007; Schaber & Turner, 2008; Schaber, Thomas & R. Turner, KTP Final Report, 2010).

If confidence is one key to success, enjoying your work is another. Even more than confidence, the sense of excitement that accompanies being creative will spur you on. Just think of it as playing – you can do anything you want, go anywhere you like. (Hegarty, 2014, p.15)
Today we are living in a connected world, a networked one. The notion of a network (Law & Hassard, 1999) in Bruno Latour’s (2005) Actor – Network-Theory is important as it argues that objects are actors and can effect change. It is evidenced in this paper that materials, processes, and specific toys have influenced a network of toy design businesses in the region. Geographical spatial approaches (Atkins & Bowler, 2001) are also being adopted in order to understand and improve design at a local level. Location, understanding where the designed object or creative person is in a network or space is considered important. The movement of people to and from other areas of toy manufacture and distribution is also significant, so theories that look at the role of diaspora in social change and knowledge exchange need consideration (Braziel & Mannur, 2003; Thomas, 2010). Play, it is argued here, is a creative process, developing a sense of self (Hegarty, 2014) and a notion of one’s place or role (Sutton-Smith, 2001). It is not only valuable to a child’s development (Moyles, 2010) but remains important throughout life. Play encourages design and making things to play with. Like Mauss’s (1954) gift exchange process, it can generate trade, business, and enterprise (Piperoploulos, 2012; Thomas, 1984) and involve a whole community and exchanges between communities and cultures (Sutton-Smith, 1986; Thomas, 2012).

The idea of an exhibition was initially proposed in 2010 as part of a Knowledge Transfer Partnership (KTP) with a toy distributor, John Crane Toys, based in Northampton (R. Turner, KTP Final Report, 2012). Jonathan Thorpe, the Managing Director, suggested that the project’s academic partners should research and record the history and extent of the local toy trade. He highlighted how many toy traders, like John Crane Toys and DKL Ltd., were still based in the area. The Product Design Department at the University of Northampton has led a number of partnerships (Schaber & Thomas, 2008; R. Turner, KTP Final Reports, 2009; 2010; 2012). These are graduate ‘apprenticeship’ schemes backed by government grants, which allow firms to build partnerships with universities. Knowledge and expertise is
transferred both ways with the Associate (a post-graduate) working as a conduit embedding knowledge and expertise in the organizations. Three of the KTPs were about the design of toys and playthings: doll houses for Sue Ryder (R. Turner, KTP Final Reports, 2009) wooden toys for John Crane Ltd. (R. Turner, KTP Final Report, 2012), and air hockey games for BCE (Distribution) Ltd. (R. Turner, KTP Final Report, 2010).

This paper is the outcome of Jonathan Thorpe’s request. It does not attempt to look at all the creative benefits covered by the exhibition but rather draws on the research and publications linked to the KTPs. The task of organizing and curating the "All Play" Exhibition was a research exercise in itself (Thomas, 2013) as it provided an opportunity to go back to the KTPs providing case studies for this paper. Fifty-two firms and organizations involved in designing for play were also contacted. Oral history interviews (V. & A., 2014) capturing first hand accounts from the makers involved in toy manufacturing in the UK as well as additional contributions members of the public who were involved as consumers, employees, and suppliers were collected by Northampton Borough Council in collaboration with staff from the University of Northampton. Some organizations and individuals contributed information that was edited for the display and catalogue and they are credited as “players” (Thomas, 2013). Original toys, catalogues, and designs were studied. The artifacts were lent by designers, manufacturers and toy collectors. There were also visits to collections in museums; including Coventry, Wellingborough, 78 Derngate, Jeyes in Earls Barton and the Mabel Lucie Attwell Museum. The exhibition was first held in a Northampton town center mall, at the Collective Collaboration Gallery in June 2013 (Thomas, 2013) in order to invite a wider community contribution to the research.

In the second venue on Avenue Campus, two play spaces were set out. The Avenue Gallery became a giant playhouse and the corridor outside the gallery turned into a play street (Thomas, 2013). The exhibition was not advertised directly to families and local school
groups, as there were health safety concerns, due to the lack of adult supervision. The audiences were primarily undergraduates, staff from other faculties such as trainee teachers, local companies, and invited guests. It was open to all, but not targeted at children and families. There was a summer exhibition "Batteries not Included" at the Museum of Northampton focusing on the local history of toys planned specifically to appeal to family visitors.

The KTP projects and related reports and publications (R. Turner, KTP Final Reports, 2009; 2010; 2012; Schaber et. al., 2007; Schaber et. al., 2008; Schaber, et. al, 2010) inform this paper as case studies. Trade contacts and evidence were drawn from participant observation undertaken away from the University and through the accounts designers working in the trade (Thomas, 2013). The Museum of Childhood, part of the Victoria & Albert Museum were undertaking a parallel study recording oral histories of key individuals working in the British toy manufacturing industry. These studies have informed this study as will (V. & A., 2014) the Museum’s researchers were limited in the amount of data they could collect and so they were interested in working with a University to gather information about local firms. University staff undertook eight interviews and additional ones by local museum volunteers, using a similar oral history format to the V. & A. (2014) study. These oral histories are to be archived at the Guildhall Museum, Northampton and will be available to researchers once new facilities are complete.

This paper is primarily a design history of the local toy trade in the twentieth century and it asks why Northampton continues to be a hub of the toy trade today. Trade is an important description as it covers a network of exchanges and commercial relationships, not just manufacturing. The paper indicates what we may be able to learn from this history about the possible future for the trade at the local level.
As indicated by some of the terms defined above, it is a cross-disciplinary study drawing on a variety of theoretical approaches, from sociology, social anthropology, history, psychology, educational theory, geography, design management, studies of diaspora, and play theories. The evidence is also drawn from a study of the toys produced and the verbal accounts of those involved in trade past and present.

CONNECTING THE PAST

Northamptonshire is a county in the East Midlands in the centre of the England. Birmingham to the northwest was center of the batch production of small metal goods referred to as the “toy trades” in the 18th and 19th centuries (Thomas, 1985). Northampton’s manufacturing specialism during the 19th century was leather and particularly shoe production but the town also has a history of specialist engineering. This industrial heritage is reflected in the toy trade. Wenham Bassett-Lowke, backed by his father, a local boiler manufacturer, started an innovative model engineering company (Bassett-Lowke, 1999; Fuller, 1984; Vale, 2013).

Before the First World War he was importing and adapting German model train engines and selling them to wealthy individuals who had the money and land to invest in miniature trains. These were toy and playthings for adults. Nuremburg was the European centre of toy production of all kinds, He went there regularly to import engines and components, but he also used other sub-contractors in the town like Winteringham’s (Precision Tools) Ltd. (Fuller, 1984).

Bassett-Lowke was a model maker, an entrepreneur, design promoter and local council member. He bought the newest products such as bathroom fittings from the United States, commissioned modern designers like Charles Rennie Mackintosh and Peter Behrens; and working for the local Corporation he inspired modern buildings such as the public swimming baths. He recorded local industrial production, community history, and play
activities on film (Bassett-Lowke, 1992). He was searching out innovative design and this was reflected in his work and life. He was a key actor in the network that linked German engineering and toy production to the town. The film showed the town using aerial photography and started with a detailed description of its location. It was produced to attract industry and investment in the town, specifically showing it was a good place to work and play. He also had retail outlets in London, Manchester, and Edinburgh and promoted his products extensively with posters and graphics (Fuller, 1984).

Owners of ships and trains used Bassett-Lowke to promote their companies. They were display and demonstration pieces used by governments. Hornby in Liverpool established a lead on Bassett-Lowke’s company in developing toy train sets for children, but as far as model engineering was concerned they had set the quality standard for the U.K. Later, Bassett-Lowke went on to produce the Trix range that competed on scale with Hornby (Fuller, 1984; Vale, 2013).

When toy producers with Northamptonshire trading partners in Germany needed to evacuate from the Nazi regime in the late 1930s, they looked to friends and family in England. W. F. Graham is today a local children’s book publisher, but their founders were toy traders with family in Germany and England. Because of the family’s British connections, they were interred during WWI in Germany. So as soon as a second war seemed likely, they evacuated to England (W. Graham, Personal Communication, May 8, 2014). Philip Ullmann, who owned Tipp & Co, a toy factory in Nuremberg, was aided in 1933 by retailers Marks and Spencer to leave Germany. This is evidence of a Jewish and German diaspora having an effect on the toy trade locally. Bassett-Lowke gave Mr. Ullmann and his partner Arthur Katz space in his premises to set up their new company, Mettoy (V. & A., 2014). They started out producing vehicles made from tin plate. Toy production stopped and war production took over. In 1944 a new factory was set up in Fforestfach, Swansea, to
aid wartime production (Fforestfach, 2012). It was this site that was to become the factory for production of die cast toys and the Corgi brand (A. Fuller, Personal Communication, May 23, 2014; Taff, 2006). Much of the design and development remained in Northampton (A. Fuller, Personal Communication, May 23, 2014; Taff, 2006, Cleemput, 2010). The Taff (2006) account is written based on experience working in Swansea, and illustrates the network of specialist knowledge required to produce the toy vehicles.

The post-war decades were the peak of toy production in Northamptonshire and in Great Britain as a whole. A fuller economic history of UK industry has been researched and published in a series of studies by Kenneth Brown (2011). British manufacturing firms across the country were converting back from wartime production. The War destroyed much of the toy industry in Germany, and it took sometime for production to start in the Far East. This provided a window of opportunity for Northampton entrepreneurs to design, manufacture and sell toys worldwide. Tipp & Co had survived under Nazi owners producing models for the Third Reich, and the Ullman family went back to Germany to reclaim their business (V. & A., 2013). But much of the toy trade was destroyed (W. Graham, Personal Communication, 8 May, 2014) and Nuremberg needed time to rebuild.

Back in Great Britain, Mettoy started to diversify, exploring plastics production in Northampton. This would lead them to be the major United Kingdom producer of plastic footballs, as well as a new toy called the space hopper.

Wholesale traders in London were looking to find new suppliers. The oral history account (J. Orme, Personal Communication, April 1, 2014) and memoires of John Orme (Autobiography, n.d.), a specialist toolmaker based in Rushden, indicate that London based Jewish businessmen initiated product development. Initially they funded expensive tolling for injection-molded plastics. One of the first play products developed for their company was Christal Ware. They also started producing the bucket alongside with other plastic nursery...
items such as baby baths. This was going to change the seaside experience for the next generation of children. Plastics were lighter and considered safer and more hygienic. Once the tooling was paid for the products were affordable.

Just after WWII, Eric Smith opened a doll factory in Raunds, with compensation money provided by the government due to the bombing that destroyed his family’s London factory. This became Rosebud Dolls (British Pathé, 1968). Orme made the plastic injection tools for their doll production (J. Orme, Autobiography, n.d.). Rosebud had started producing dolls using composites. This was a step change in itself and an advance from cloth, wooden, or porcelain dolls. Plastic dolls were revolutionary in that they allowed new forms of play were less likely to break, could be washed more easily and were considered safe, hygienic and affordable. Dolls’ hair could be added by machine, washed, and dressed. This in turn led to later technical advances in dolls (British Pathé, 1968) including: walking talking dolls, like the one immortalized in song by Cliff Richard (Bart, 1959), as well as drinking, crying, and diaper wetting baby dolls. Rosebud produced Beatles Dolls using the standard tooling relying on the clothes designers and distinctive hairstyles to make them recognisable (Hillier, 1965). These toys were designed to have mass popular appeal.

John Orme had trained as an apprentice toolmaker in the aircraft industry from the age of 14 (J. Orme, Autobiography, n.d.). After the war he moved to Northamptonshire to take up a post with a firm supplying equipment to the tanning industry. Although his background and training were based in the local industries, he was to leave his mark as an innovator in tool making for the plastics industry. His role in developing tools for rotary molding plastics drove new product innovation forward.

One day I had a visit from a man who owned a large rubber company in London. He asked if I could make a machine to produce playballs and footballs from P.V.C. Plasto. I knew this could be done, and that the ball would be cheaper and more attractive with bright colors and patterns. So we designed a machine and made the essential moulds which met his requirements. When this became known, I was inundated with orders for machines from toy making companies, plastic moulders and
Sports Equipment firms. At this time I had carried out some toolmaking work for I.C.I., the biggest firm in Britain. As they supplied the P.V.C. Plastol for this new development, they gave me every possible co-operation. (J. Orme, Autobiography, n.d.)

Orme was a key actor and change maker in the history of the local toy manufacturing industry. The rotary moulding machines are still named after his firm and the products such as road cones, plastic petrol tanks, and the space hopper were significant designs that relied on his innovative design. He was a creative designer and loved the innovation process.

Orme thus not only supplied Rosebud Dolls, but the tooling for the space hopper and footballs that became the staple production by Mettoy in Northampton in the 1960s and 1970s. Orme went on to sell the tooling globally and his son said that his father “felt he exported soccer to Africa” (J. Orme, Personal Communication, April 1, 2014) as his machines mass-produced footballs at a price that made them readily available. The Orme rotary machines are central to the history of toy production in Northamptonshire. There was a network of firms all exploiting his innovations. In actor network terms, these machines were actors changing the design history of the toy trade and John Orme (Personal communication, April 1, 2014) would argue also increasing participation in sport worldwide.

Bassett-Lowke, Mettoy, and Rosebud were the major companies in Northamptonshire. Other firms like Avon Cosmetics used the same technology to produce children’s collectible bath toys. Small manufactures such as Tresco based in Earls Barton (J. Osborne, Personal Communication, April 25, 2013) were producing novelties like the toy divers that were shown at the Victoria & Albert Museum in 1946 - proving that “Britain Can Make it”. Burbank was a soft toy company also based in Wellingborough (MACE, 1977), which produced teddies and plush toys. Some toys were made using new synthetic plush and rubber moulded faces. Burbank took on licensed properties such as Disney characters and film properties such as Dr. Doolittle (MACE, 1977)
Neither Rosebud nor Burbank was with the first toy firms to take on licenses. Chad Valley in Birmingham had produced licensed dolls for Mabel Lucie Attwell (Henty, 1999; Thomas, 2013) about the time of WW1 and Bonzo the Dog (Babb, 1988) in the 1920s. In Leicester Alfred Pallet had started to explore plastic in 1919 starting Caselloid Ltd. Like the first companies to use rubber and gutta percha, the precursors to plastic technology, fire was always a danger (Thomas, 1983). In 1925 Pallet produced an innovative celluloid doll, Diddums, modeled in clay by Mabel Lucie Attwell (Henty, 1999). They supplied Woolworths and Marks and Spencer. The company changed names and premises to develop into Palitoy Playthings and a trademark was taken out in 1937. So Northampton was not the first in plastic toy production but the innovators were all in the same Midlands region and by the 1980s Rosebud, Mettoy, and Palitoy and had been bought by Mattel and were producing plastic toys such as Barbie, Action Man, and the Star Wars spacecraft in the U.K. (MACE, 1982; V. & A., 2013).

The Americans were coming and the creator of Barbie in 1959, Ruth Handler, bought out Rosebud for 'a million' according to local accounts (J. Osborne, Personal Communication April 25, 2013). Burbank went the same way. Giving Mattel a base to sell into Europe and the common market in the 1970s. The oil crisis came just as the first sets of entrepreneurs were retiring (Brown, 2011). Ex-employees, that were trained at local technical college (V. & A., 2013) now The University of Northampton, often started new toy companies. A group of employees was formed to start Blossom (Dolls), as they could not buy the Rosebud name from Mattel. To compete with Burbank they bought a small soft toy company Be Be and started Panther Sports to supply footballs and sports equipment. Plastics technology and rotary moulded production were central to their activities (A. Laughton, Personal Communication, September 10, 2013).
Be Be Dolls had been established by Frank and Ernest Popper in about 1948. They had fled from Czechoslovakia in the 1930s. After setting up a toy firm in London they moved the business to Ringstead, in East Northamptonshire. Although, the firm had the word dolls in the company name they specialized in teddy bears and soft toys. The firm was sold to Blossom when the Poppers retired. The new owners started to add rubber faces to some of the toys like monkeys.

By the 1980s all the companies struggled with the cost of raw materials, with cheap production in the Far East and the revival of production in Germany. Volume manufacture started to shift elsewhere. The first set of entrepreneurs were retired and skilled staff who continued to design toys but worked in new company structures with production shifting abroad.

Another factor to be considered is that the products that these Northampton firms produced were not considered “good” design by the government-backed Design Council (Brown, 1998). The Abbatts had campaigned for what we would now call “educational” toys since the 1930 (V. & A., 2013; Thomas, 2013). Their toys were based on education and psychological approaches to child development. The Abbatt story runs alongside the work of designers like Ken Garland who designed for them and later for Galt in the 1960s-1970s (Garland, 2012). Their work was a world away from the wholesale volume business of the Northampton trade. Wood was favored and when that became too expensive they used cardboard (Garland, 2012).

Northampton was well placed to die stamp cards for games and puzzles. Specialist toolmakers could be used to produce the die stamps and cutters for stamping leather and card. There is some evidence that some Northampton tooling and packaging firms diversified from supplying the leather trade with stamping tools and shoe boxes to produce games and puzzles (J. Osborne, Personal Communication, April 25, 2013) and toy boxes which was generally
subcontracted locally by the toy companies (A. Fuller, Personal Communication, May 23 2014). Here again it was tooling and production skills that made a difference.

Hilary Page (1953) was a designer and innovator that had a foot in both camps. He studied European traditional toys like stacking dolls and read the new child psychology to design his Kiddicraft toys ranges. But unlike the Abbatts he embraced plastics for nursery toys. He developed plastic building blocks and invested in their tooling. Unfortunately for him the Lego owners came to the U.K. to buy tools. They wanted to diversify and produce plastic toys. It is said that they approached the same toolmakers that Page had used. Page had only patented his designs as his intellectual property in the U.K. They were able to make changes and a launch their own version on the continent. Orme’s business (J. Orme, Autobiography, n.d.) illustrates the huge investment that was needed for tooling and also the importance of international patent protection, neither came cheap. In Page’s case he was making design innovation and the investment in tooling himself without the backing of a large trader like Chrístal Ware. In the post war decades the government backed the export of machine tools and in doing so also aided the demise of its homegrown toy industry.

In the past toy manufacturing came to the region because of its skilled work force in metal and leather production. A historical study for Dunlop of rubber innovation in the 19th Century has shown that it was leather producers that were forefront of experimentation and exploitation of new materials and technology (V. Thomas, Archive Report, 1983). The machine tools used for processing the rubber were kept secret rather than patented. The role of toolmakers is significant and also how they commercialized their intellectual property. A network of trade and business connections with German toy producer and Jewish enterprises in London and Nuremburg were key to providing local support for these firms to flourish. Rotary plastics molding machines and tools produced by Orme link many of these firms. When oil prices rose and plastics production shifted to the Far East many of these firms could
no longer compete and the emphasis shifted to design and product development (A. Fuller, Personal Communication, May 23, 2014). In export promotional terms, led by organisations like the Design Council, these toys were not considered high quality. But the machines were the creative designs and the expertise and knowledge was exported successfully. John Orme saw the potential of new technology in the transistor (J. Orme, Personal Communication, April 1, 2014) and Mettoy in the computer (V. & A., 2013) but they were too late and not well placed to compete with US, China, and Japan on the next wave of innovation.

CONNECTING THE PRESENT

Today manufacturing may have disappeared and brands merged into larger specialist groups. Yet the area remains a center for toys and playthings through design and distribution, with organizations like John Crane, Toymaster, DKL Marketing, MGA Entertainment, Miracle Design and Play, and Sue Ryder with their head offices and national toy distribution offices based in the region. The University of Northampton grew from an art and engineering college serving local industry to a center of the toy distribution hub (V. & A., 2013). The current Maidwell building at Avenue Campus was purpose built to train engineers and artists to design for the local industry. Its new purpose built campus is featured in Bassett-Lowke’s film of 1930s (Bassett-Lowke, 1991) covering the history of the town, its geographical connections, and its people at work and play. The art students are featured dressed for a theatrical performance or pageant. The Mettoy archive notes that their design staff attended the engineering classes at the college, as it was then, on a day release basis (V. & A., 2013).

The KTP projects brought a new generation of toy traders to the campus and the Product design department’s studios (Schaber, Turner, & Betts, 2007; Schaber & Turner, 2008; Schaber, Thomas & Turner, 2010). The students relaxed and played. They brought in their old toys such as Transformers and relived play experiences by creating marble runs
They were asked to design for a younger generation, so they considered the future and what they thought to be "right" and “good”. They looked at the psychology of play and educational toys. Are the materials safe? Are they sustainable? They seemed to go beyond just researching the developmental benefits of play for children. Sue Ryder (R. Turner, KTP Final Report, 2009) is a charity wanting to create exclusive designs for their retail outlets. They wanted different products. So intellectual property had to be considered. Students and the associate had to appreciate and design for global ethical production. They also had to understand the products were also there to raise funds for the therapeutic work of the charity. The consumer for the fantasy castles and stools that resulted from the KTP were often sold to the over 50 age group. The designs had to be beneficial on a number of levels.

Playground design should not be overlooked in developing an understanding of play related business in the region currently. Miracle Play and Design is a company originating in the United States of America, employing two graduates for the Product Design course. The play equipment they design fits with the landscape and indicates new emphasis on what is considered good design for play. Wicksteed Park is a theme park in the region but also has a linked playground equipment company. The product design department only this year has been involved with designing themed bins for the park – typical of the rotary produced products still produced today using Orme's technology.

Ravensden (M. Pape, Personal Communication, March 15, 2014) is a toy and gift company based in Rushden. They are a family firm of specialist traders and they supply primarily animal themed toys and gifts. Barry and Susan Pape started as suppliers of live animals to theme parks and developed into supplying the parks with income generating merchandise. They have long established relationships with suppliers of soft toys in South Korea and Indonesia and export the products they have designed to other similar attractions worldwide.
Travis Designs Ltd. and GSC Ltd. are children’s costume companies based in the region. Both produce role-play outfits for the toy trade and educational markets. They also compete to supply the Disney theme parks and other visitor attractions. Designing for licensed merchandise continues to be an important part of the regional industry. It started with Diddums (Henty, 1999) and Bonzo (Babb & Owen, 1988) through to Disney, Star Wars (MACE, 1982) and James Bond (Taff, 2006) franchises to promotional merchandise. Fleming’s (1996) book dealing with toys as popular culture explores the whole rise of toy merchandise and their links to popular culture in far more detail than is possible here.

Adrienne Fuller (Personal Communication May 23, 2014) in her account of product development in the collector’s die cast commented how important television programing from Morse (ITV, 1987) to Only Fools and Horses (B.B.C., 1981). Toys and play are now vital to marketing campaigns. Ravensden have produced soft toys as marketing incentives; toy monkeys for Barclay Card and plush meerkats for Compare the Market.com.

Licensed merchandise links the toy trade into a much larger global network of business. It affects creativity, Jim and William Osborne (W. Osborne, Personal Communication, April 25, 2013); local toy retailers argue that this has lead to "lazy design". The same products are just redesigned for the next film or craze. Not true innovation but often just surface changes occur. But successful licensed ranges can earn huge sums for the manufactures and make industry-changing sum for the property owners. Star Wars merchandise is estimated to have made $66 billion and changed the funding of films (Fleming, 1996). Osborne Toy & Sports (W. Osborne, Personal Communication, April 25, 2013) sell to the model train enthusiast, but also sell large quantities of models following in the footsteps of Airfix – being plastic – but now part of fantasy worlds created by Games Workshop – Warhammer. Oxford Miniatures, producers (A. Fuller, Personal
Communication, May 23, 2014) of die cast road vehicles, are suppliers to the adult modeling enthusiast producing the cars to the same scale as the train set. Playing by creating and organizing miniature worlds continues a long tradition that pre-dates Bassett-Lowke (Fuller, 1984; Fleming, 1996; Sutton-Smith, 2001).

DKL and John Crane are also importers and toy distributors. In contrast, they do not rely on licensing. DKL is a family firm founded in March 1989 by the Hawaleschka family. DKL’s name originates from family names Dorte, Kai, Lise and Kai Hawaleschka (Managing Director). They have been in toys for most of their lives having an interest sparked by relatives who owned toy factories in Sweden and Denmark (Thomas, 2013). They supply educational and craft toys primarily. Like Mettoy they gave space to John Crane Toys (Tuner, 2012) when they set up in the early 1990’s. They are a second-generation toy trade family choosing to be based in Northampton.

Today John Crane Toys’ own ranges are along the lines of those backed by Abbatt and Galt in the 1960s. They want to design quality products in the U.K. to meet the demands of educational and retail buyers such as the John Lewis Partnership, but also develop new products to sell through newer on-line channels. They heard about The University of Northampton's work in the toy field, so live design projects with students resulted and led to the KTP (R. Turner, KTP Final Report, 2012).

Independent toyshops through Toymaster can buy both DKL and John Crane’s products. Traditional town center toyshops are currently under threat by the supermarkets diversifying from food and the Internet. Toymaster is a buying group based in Northampton allowing small shops to come together to buy in volume and thus compete on price. Toymaster is a key actor in the local network although they do not design or produce toys. All these companies benefit by Northampton’s geographical location, local road networks
and the collaborative business network or cluster that still exists in the region (Piperopoulos, 2012).

MGA Entertainment is one of several distribution companies based in the new town of Milton Keynes just south on Northampton. Although an American company its roots are firmly fixed within the regional history. Andy Laughton is Sales Director and son of Don (A. Laughton, Personal Communication, September 10, 2013) who originally trained as a chemist at Rosebud Dolls. When the company was sold to Mattel, he was one of members of staff that went on to start Blossom.

Don Laughton (A. Laughton. Personal Communication, September 10, 2013) developed a styling head doll that exploited the plastics doll technology and started to work with German suppliers of similar products, Zapf Dolls. Today MGA distribute Zapf Dolls and also Little Tikes out door play equipment. This was rotary molded locally for many years using Orme machines and local expertise. Blossom, Panther and Be Be were later bought by Chettes an animal products company producing lines such a animal based glues, one could say dealing with by-products linked to the leather trades. The links to the traditional local leather industry are still in evidence. Galt was bought out by the U.S. owners of Elmer’s Glue, coincidentally, originally an animal by-product too (Thomas, 2013).

Sue Ryder’s (R. Turner, KTP Final Report, 2009) roots are different but relate to different beneficial aspects of play. Sue Ryder is a charity providing care homes for those living with a disability. They own a string of retail outlets raising funds through toy sales. Their KTP with the University of Northampton generated an estimated $1,275,000 from toy sales, during the partnership, for their therapeutic work (R. Turner, KTP Final Report, 2009). By the "All Play" Exhibition in 2013 this income was $1,500,000. A section of the "All Play" Exhibition looked at the design of toys for disability and for therapeutic play environments
Like Bassett-Lowke products Sue Ryder doll houses are bought by adults for themselves or bought to give to their grandchildren. Jonathan Thorpe (R. Turner, KTP Final Report, 2012) argues that John Crane toys are not purchased because of children’s television or pester power but by an older over fifty generation. There is an exchange of knowledge and experience between the generations through play and shared hobby activity.

The Sue Ryder case study also shows how toys are being sold to fundraise for charities and organizations. Design work is being done to generate income for all sorts of good causes. In the exhibition we included examples of work done in hospitals, toy libraries, and pet charities (RSPCA) as well as for UNICEF (Thomas, 2013) and Sue Ryder (R. Turner, KTP Final Report, 2009). Good toy designs today have to be “good” on more levels. DLK has designed a green doll house that won the Slow Toy Movement Award. The Slow Toy Movement was initiated by Thierry Bourret, of Asorbi Toys who is trying to set new standards (Thomas, 2013). John Crane Toys, like all the manufacturers, have to meet improving European toy safety standards. The materials such as wood, like foodstuffs, increasingly have to be traceable to where the trees are grown. Local soft toys wholesalers, Best Years have been distributing knitted soft toy from Northampton for twenty years. They have to meet all the safety standards but also stress that their toys are ‘fairly traded’.

Recycled toys are being sold to adults and others are being made from recycled materials, like plastics, but testing is strict. Some argue (R. Turner, KTP Final Report, 2012) that the safety standards are so high that they have now become restrictive. Few children are now hurt and that with risk removed so has some of the play benefits (Boesveld, 2014). Toys now have to be green and need to be seen as green. Batteries are not included or required. Being a good toy designer is a complex creative requirement.

Today, the toy trade is still in the Northamptonshire. The geographical advantages
remain. The regional skills remain in engineering, leather, and plastics tooling. Connections to the global toy business have remained strong. Products are designed and distributed in the region but they are now made in India, China, South Korea and Eastern Europe. The U.K. retail markets for toys are changing. Toymaster based in Northampton is assisting with the survival of the independent toyshop. Toys are now being designed and distributed directly by retailers, be it Sue Ryder, John Lewis, Disney, or the major supermarkets or leisure companies. The product design team at the university through its KTPs and exhibitions has a role to play. They have an ongoing role to play in encouraging students to create innovative toy designs and by working in partnership with the local toy trade.

CONNECTING THE FUTURE

The "All Play" Exhibition in October 2013 coincided with a gathering of teachers for a conference featuring a guest speaker from UNICEF. The exhibition included a timeline from Plato to today, showing how play had grown in importance in educational pedagogy. There was an assumption made by the curators that all accepted the educational benefits of play. But the conference delegates and the UNICEF speaker stressed that these ideas, central to educational toys and play, are being challenged by current U.K. government policy with play being devalued in the curriculum. Other countries in the Far East were being cited as examples, where play is considered a distraction.

The UNICEF speaker also argued that the importance of play is often been undermined or devalued in disaster or emergency situations. The charity had gone to great efforts to include playthings, toys and school materials to be stock piled ready when a response was needed. The educational and therapeutic benefits of play, so actively encouraged at the end of the twentieth century, are also being challenged. In contrast the WeKIDS Educational Organization, based in Taiwan are looking to import Northampton educational expertise, in teaching through play. They want to design and produce toys and
playthings for nurseries all over China, as they are learning the benefits of play to children's education,

A visit to the "All Play" Exhibition encouraged the local Borough Council Museum staff to record the local industry and extend a planned toy exhibition, "Batteries not Included" to reflect its role as ‘Toy Town’. Fifty percent of the display area was dedicated to the local toy trade and the rest reflected on community’s memories of play. The long-term plan is to build up the play and toy archive and have a permanent toy trade display.

Collaborations with the School of Education are going to develop into an exhibition proposal on the development of educational toys in school and at home, exploring their continued importance in the U.K. and also researching what knowledge is being exchanged with China. The 3-D department is also being asked to collaborate with universities in Beijing, helping to educate their designers so that they can work in the new global market.

The final part of the "All Play" Exhibition looked at play interiors being created in commercial premises such as Pixar and Google. Play was seen as important in the workplace. Enlightened factory owners favored sports clubs in the nineteenth century. Northamptonshire firms like Bassett-Lowke (1992) valued sport too. Now it seems to be play as you work. The 3-D department educates interior designer and architects. The design of playful spaces is seen as important not just for creative business, schools and hospital but also when we retire – play in the third age (Thomas, 2013). Creating a space for play is starting to be valued by all.

The future is likely to see further growth of computer and screen-based technologies. The products may not be manufactured in the U.K. much of the design development and software has links with creative companies based in the U.K. and in the East Midlands. A computer games design course is now a key part of the 3-D Department. We are working with local intellectual property owners Trumpington. They are owners of three children’s TV
shows, from 1970s - 80s, and are seeking help to adapt their content for Apps. Games, books, films, television, theme parks, and marketing campaigns are all integrated on a global level. Toys are designed in a connected playful world.

What is the future of the Northampton trade? The key is networking and connectivity. It is important to have research about the local history in order to understand the legacy on toy design and distribution globally.

CONCLUSIONS

The Northamptonshire toy trade is based on its location of major communication routes. It is one of a collection of Midland towns that developed as specialist production centers during the industrial revolution. Northampton specialism was in leather and shoemaking. Tool making and specialist engineering made it possible for firms to adapt and exploit new plastic materials. The role of tool makers like John Orme were important in attracting firms to the area but his rotary plastic machine tools made toys like plastic dolls and footballs available worldwide.

WWII closed the major toy production area in Germany and even took production away from Northampton when Mettoy moved its die-cast toy production to Swansea. Pre-war connections through trade and family brought German and Jewish entrepreneurs from Germany and London to the region. For the decade or so after WWII Britain led the world in toy production. Other countries bought new machinery as they rebuilt after the War. Innovators in the U.S. brought in new forms of toys such as Barbie and they continued to exploit valuable intellectual property generated by books, film, and then television. Whilst British toy design saw designers, like Ken Garland, focus on educational toys and quality batch production, firms like Mattel invested in Northampton’s successful volume toy producers. This move opened the European market to them. A decade later with rising petrol
prices internationally and quality plastic production opening in the Far East, particularly in
Hong Kong, production shifted away. For Mettoy’s Corgi Brand

The Company had recognized that the market for die cast cars was a changing, new
electronic based products were the craze, the new age range that now bought die-cast
had contracted. The company embarked on the introduction of radio-controlled
products, which was disastrous as most of them didn’t work correctly and the battery
life was very poor. (Taff, 2006 p.28)

Mettoy continued to innovate and saw their future in computing. They launched the Dragon
32, but technology was changing too swiftly for them to compete. In 1983 Mettoy closed and
production ceased in Swansea and Northampton.

By the 1980s the area was a location for design, development, and distribution. Many
original entrepreneurs had retired, so there has been some urgency in recording their accounts
of the industry. In several instances family members are still involved and in addition
employees they have trained by the first generation are still part of the toy trade network. The
staffs, trained at Mettoy have continued to work together. Now Oxford Miniatures are selling
vehicles to adult train enthusiasts at a scale to match their vintage toy trains (A. Fuller,
Personal Communication, May 23, 2014). Adults continue to play and require toy design.

The toys produced in Northampton have always appealed to the adult purchaser. From
expensive toy trains for their own use, through innovative cheap fun plastics for their children
to educational toys having an extra perceived value. Today the focus is on global well being,
this means that toys have to meet a whole new set of criteria to be considered worthwhile.
The local firms based in Northampton have set out to meet those challenges.

Technologies are changing once again. The Internet and screen technologies are
altering the focus of the trade once again. The Northampton firms have not always been
successful in adopting new technology. They could not compete with the Far East on the
transistor or computer. But they do not face the new challenges alone. Toys, as we have
seen, are now part of a much wider global culture and market place, filled with publishers,
film companies, computer games companies, television, social networking, and the Internet. The University in Northampton is preparing to support and encourage creativity as there is a new shift in skills and the global trade requires expertise.

Toy trading and playing in Northampton continues to connect the town as it did in the past. Its legacy of design, innovation, and distribution remain an important strength and vital to its ability to be player in the global trade.

REFERENCES


Hill.


