

**Building model trains and planes : an autoethnographic investigation of a human occupation.**

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Building model trains and planes: An autoethnographic investigation of a human occupation.

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Modelling appears to be a largely uninvestigated human occupation (Pollard & Carver, 2012) which has begun to arouse interest in a range of disciplines, for example in cultural history (King, 1996), geography (Yarwood & Shaw, 2010) and social history (Harrington, 2012). King's exploration (1996) suggests that model making is ubiquitous through human society, in evidence as an occupation since prehistoric times. He described it as "constructing, collecting and operating tiny models of larger prototypes ... generally but not always smaller and usually of materials different to those of the original" (p. 3). In modelling a prototype is the original object being modelled. The term 'model making' refers to different activities including building without plans from raw materials ('scratch-building') through to the assembly and modification of mass-produced kits using individual scratch-built parts made from recycled, junk or preformed items (King, 1996). King (1996) suggested that model-making is a craft based leisure occupation, using varied tools and materials in periods of spare time. Model making may commonly include representing everything from vehicles to historical figures, from individual buildings to complete landscapes, using a wide variety of materials.

Although ubiquitous the nature of modelling has changed over time. Notably the technologies which facilitated the injection moulding of plastics enabled a mid-20<sup>th</sup> century boom in the affordability and availability of kit models (Pollard & Carver, 2012). In 2013, a key model manufacturer, Hornby PLC, reported a turnover of

£43.135m in the UK alone. Although models are available in a variety of scales, the most common were 1/72<sup>nd</sup> scale for aircraft and 1/76<sup>th</sup> and 1/87<sup>th</sup> (referred to as OO/HO as both run on the same track gauge) for trains. This means that most such models are under a foot (or 30cms) in length, a size which can be accommodated in most domestic spaces. Although there are well documented exceptions, it is generally asserted that most such model making is performed by men (Pollard & Carver, 2012). Our study provides an insider perspective on this form of modelling. More specifically it focuses on the building of static scale aircraft (as opposed to, for example, cars or flying model aircraft) and the construction of working model trains and their layout (as opposed to static models of trains).

Model making corresponds to Riley's (2011, p. 323) account of craft as an occupational form through construction and "bodily interaction" with materials, and her account of doing as an occupational performance. Nelson (1988, p. 633) described occupational form as having an objective set of physical and sociocultural characteristics which are "independent of the individual who is engaged in the occupation". The occupational form in this form of modelling arises from such pre-determined structures as preformed kits or the choice of particular materials which define its performance, as for example has been identified in occupations such as textile making (Nelson & Jepson-Thomas, 2003; Riley, 2011). In addition our exploration of the modelling of aircraft and railways will recognise its historical and socioeconomic context (or "domain", Dickie, 2003, p. 121), as well as its meaning to modellers. This also reflects the increasing study of occupations concerning their broader social contexts rather than as individual activities, in which their purpose,

meaning and goals are located in particular times, cultures and places (Dickie 2003; Dickie, Cutchin & Humphry, 2006; Hocking, 2008a; 2008b; Riley, 2008).

Authors such as Suto (1998), Howell and Pierce (2000) and Horghagen, Josephsson and Alsaker (2007) have described a significant history of interest within both occupational science and occupational therapy concerning hobbies and craft based leisure occupations. Crafts are important aspects of individual and cultural expression in changing economies (Dickie & Frank,1996), even where makers are following kit instructions (Pöllänen, 2015). Some craft hobbies and activities, such as quilting (Dickie, 2003; Howell & Pierce, 2000; Riley, 2008, 2011; Riley, Corkhill, & Morris, 2013), have enjoyed a particular focus in this literature.

This study of model making may be significant because there appears to be a greater engagement in leisure pursuits than ever before. Within the UK alone, adults doubled their spending on leisure between 1976 and 2002, when it became the largest area of household expenditure. This disposable income is spent on the products of a considerable leisure industry catering to a plethora of specialist interests including modelling (Office of National Statistics, 2012; Pollard & Carver, 2012).

Baby boomers, those belonging to "the unusual demographic blip of babies born ... between 1945 and 1965" (Harkin & Huber, 2004, p.11) in particular have returned to products and pursuits from their youth, which Harkin and Huber (2004, p. 37) described as "down-ageing". Lauwert (2008, p. 233) noted a phenomenon of these "adults staying younger longer". This group is collectively both in possession of the

disposable income and time necessary to facilitate these interests, both important factors in the economy of leisure occupations (Huang & Shi, 2015).

In addition there is increased recognition that wellbeing and identity can be expressed through diverse leisure activities and hobbies as much as through other occupations (Caldwell, 2005). This applies whether they are socially organised in craft guilds and networks (Riley, 2008, Pöllänen, 2015) or, like fishing, participated in by solitary individuals (Bull, 2009). There is also a growing discourse around the value of leisure within healthcare in general (e.g. Royal College of Psychiatrists, 2010; Clatworthy, Hinds, & Camic, 2013) and occupational therapy (Suto, 1998; Pollard & Carver, 2012). Wellbeing studies of quiltmaking (Burt & Atkinson, 2012) and women textile craft makers (Pöllänen, 2015) draw extensively on occupational science and therapy sources. Although Caldwell (2005) has recognised that the mechanisms through which leisure is therapeutic have not yet been fully addressed, there is agreement that it can have benefits for "physical, social, emotional and cognitive health" (p. 15).

Modelling has not featured in these discussions. The research literature on modelling is sparse. One exception is King's (1996) study of model making in general, which includes some casual interviews with model makers. More recently, Yarwood and Shaw's (2010) investigation used 22 semi-structured interviews with railway modellers (i.e. people who specifically model railways) in an 'attempt' "to listen to the stories that railway modellers tell..." (p. 431). There is no parallel study of the building of static model aircraft.

Most of the existing literature on building models is produced by the modelling community itself (e.g. Pearson, 2007, Stanton, 2002). It is primarily concerned with modelling techniques and mainly consists of 'how to' guides, but there is also an emerging genre of nostalgic literature describing iconic models and manufacturers such as, in the UK, Airfix <sup>TM</sup> and Hornby <sup>TM</sup> (e.g. Ward, 1999; 2004; 2009). This literature in itself may be said to represent some of the preoccupations of the baby boom generation.

**Aims**

This research responds to Dickie's (2003) call to, "first to describe the occupation, and second to attempt to understand the process, outcomes, and experience of the occupation" (p.120), in this case the adult hobby of building models. This study begins to address the lack of empirical work on modelling as a human occupation. The broad aim was to explore the experience of modelling as a purposeful, meaningful and health giving occupation from the perspective of the modeller as an adult. However, we acknowledge that any discussion of models must also recognise that this practice may begin in childhood (King, 1996; Pollard & Carver, 2012). A secondary aim, therefore, was to explore our recollections of childhood modelling. Following other studies (e.g. Riley et al., 2013), we wished to both explore the process of production (in this case, modelling as an occupational form) and the meaning of the product itself (in this case, the model an outcome of occupational performance).

**Method**

Given our aims and interests we selected an autoethnographic approach which is a pragmatic and convenient qualitative method that enables researchers to critically explore their own experiences (Muncey, 2010). Methodologies that contain both personal and academic elements, such as auto-ethnography, are of increasing interest in the field of qualitative research (Burnier, 2006). This approach is not without its critics, and there is recognition that some have found it difficult to accept as a credible research method (Foster, McAllister, & O'Brien, 2006). This is partly because of its embrace of subjectivity. To be effective, auto-ethnography requires a disciplined and rigorous approach to produce a narrative which is meaningful to others, rather than merely for oneself. Here rigour and discipline entail transparency and clarity with regard to the subjective elements of this approach and the particular nature of individual narratives (Ellis, Adams, & Bochner, 2011). Lapadat (2009, p. 967) described an approach to autoethnography, which she termed "collaborative autobiography", involving several authors interpreting both their own and others' accounts. In this case the two authors were the sole participants.

Collaborative autobiographies allow the researchers to retain their separate identities (Lapadat, 2009). Given the differences and similarities in our backgrounds, we felt that this approach would best suit our purpose. In addition we felt that the following biographical factors enabled us to produce authentic accounts of our modelling: Firstly, both of us were actively engaged in modelling (one with an interest in planes and the other in trains). Secondly our initial discussions showed that as children we had both engaged in model making. Thirdly, we are both baby boomers who began modelling in late 1960s Britain as children and, now in our 50s, had the income and the time to engage in this leisure form. Finally, our backgrounds in mental health settings, Neil as a nurse and Nick as an occupational therapist, and in research have



necessitated reflexivity in both writing and interpersonal contexts and "make visible the beliefs and values" present in our narratives (Foster et al., 2006, p, 46).

Within collaborative autobiography there can be an emphasis on the deeper understanding of self as a goal in itself (Lapadat, 2009; Lapadat et al., 2010). For us, this personal understanding was secondary to our goal of investigating modelling as a human occupation per se. The following is an account of our investigative process.

*Step 1*

We agreed we would each would keep a diary for a 6 month period from a given start date, to keep the study within a reasonable time frame. The diary was to contain free text concerning current modelling experiences and related reminiscences. We were free to make diary entries when we felt fit.

*Step 2*

Each of us read each other's diary. We also checked our shared understanding of the content and isolated significant themes.

*Step 3*

These themes were then subjected to "interpretive discussion" (Lapadat, 2009, p. 969) and when agreement was reached were grouped and 'collapsed' into what we felt to be the most significant major themes. Throughout steps 1-3 we were continually engaged in a "recursive dialogue" (Lapadat, 2009, p. 958), discussing our own and each other's experiences. We also continued to read and share literature related to model making.

## Ethics

Discussion with a representative of the university ethics committee suggested that we did not need to gain formal ethical approval, because we both consented to share our data. It is worth noting however that there can be ethical concerns in such autobiographical work, for example the lack of anonymity of the researcher subjects (e.g. Lapadat et al., 2010) and what we might reveal about other people in our personal lives (Freadman, 2004). Although we felt that there was little of contention in our disclosures, we continually monitored them and did not identify any concerns.

## Findings

Each of our diaries ran to over 90,000 words. The following sections summarise our findings under major themes, the first of which corresponds to occupational domain issues, while the remainder combine aspects of occupational performance and occupational form. We have used the collective first pronoun to refer to shared findings, and our own names to identify individual experiences.

### *Socialisation*

We both described early childhood interests in trains (Nick) and aeroplanes (Neil) and recollect that at the time (in the 1960s) our parents, particularly our fathers, took us to preserved or 'heritage' railways, airshows, or air and railway museums. In addition, some of Nick's relatives had worked in the railway industry and shared their experiences with him. We actually began building models in the years approaching our teens. In both accounts of building models in our childhoods our fathers featured significantly and the positive encouragement from them seems to have reinforced our engagement in the occupation.

For Neil, the modelling of aeroplanes eventually became a significant aspect of relating to his father and became a shared indulgence. As an adult this afforded Neil a means of maintaining their male relationship in an almost completely female family, even beyond his father's death:

Dad built for me, we built together, he and I built a little on our own, I built for him and now I have begun to build just for me ... the activity connects me with my youth and warm memories of parents (particularly dad).

Nick tried to share his adult enjoyment of modelling with his son and daughters, although his son took more active interest. Neil had no sons but never thought to involve either of his daughters in building models.

Neither of us built models from scratch; those that we described making were commercially available kits. Neil's father however did have skills in both scratch building and the construction of solid scale wooden planes, hand carved from nothing more than a plan. Neil remembered being encouraged to try and work with wood but never took it up and looked to his father for help in making plastic kits. Looking at the surviving results of these modelling forays, Neil recognised that his father actually had few skills in working with plastic, which for him would have been a new medium.

*Modelling choices*

Our diaries showed that whether as children or as adults we preferred to model a particular subject, i.e. aeroplanes or trains, rather than taking an interest in the *process* of modelling per se. In addition we were attracted to the models of specific prototypes that we simply liked e.g. the Hawker Hurricane or English Electric Deltic

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3 Diesel. While we both recognised that as adults we could have purchased finely  
4 detailed ready-made models of these subjects, Neil described preferring to build a kit  
5 instead because it involved elements of self-expression. As he said: "there is  
6 something about being able to say: I built that, even if everyone else has built it in  
7 the same way."  
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11 Our findings suggest that our simple attraction to a particular model was not defined  
12 by conventional aesthetics. For example Neil recognised that the shape of the  
13 Second World War Spitfire fighter aircraft was commonly perceived as beautiful but,  
14 like Nick, described an attraction to less obviously appealing prototypes, e.g. "insect  
15 like" reconnaissance aeroplanes with their complex observation windows and aerials,  
16 models with bright or eccentric paint schemes, or those of unconventional, even  
17 'ugly' appearance e.g. the Westland Wyvern aircraft. We both acquired certain  
18 models because of their 'fit' with others we had already constructed, while other kits  
19 were acquired because of the iconic status and the historical and social connotations  
20 of the prototype (such as the Concorde airliner).  
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24 Our diaries also show that our motivations and choices in modelling changed over  
25 time. At first we were bought model kits chosen by adults as presents, even at an  
26 age where we had minimal modelling abilities (around 7 years). When we were older  
27 (at around 10 years), we were able to exercise our own choices within the limits of  
28 our pocket money. At that time we were considered old enough to "go into town to  
29 the model shop" independently.  
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33 By mid-adolescence (15-16 years) both of us had almost totally abandoned  
34 modelling. As a child Nick thought that modelling was a 'grown-up' activity, but as an  
35 adolescent he felt that modelling was disparaged by his peers: "What adult person  
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lines his living room with model aircraft?" For Neil his growing political awareness as an adolescent and exposure to televised news of the Vietnam war meant he felt very uncomfortable modelling military subjects.

Despite these misgivings we both returned to modelling in later adult life, in our forties. Neil's main motivation was to re-establish a shared interest with his father but he retained an ambivalence regarding military subjects. While Neil encouraged his father to choose kits that they both might enjoy together, he now did all the building. Nick had wanted the justification to resume his railway interest for some years and being able to share building a model railway with his children gave him the necessary justification to recommence modelling. For both of us these initial motives transmuted into genuine interests in their own right.

The findings also showed that both authors modelled simply because they liked it, but there were other emotional and psychological benefits. Neil enjoyed

...the sense of absorption. In a world of build or paint, everything else fades. As an individual prone to worry, that is quite an attraction. There is also the balance of problem solving and creativity. Instructions can be woefully inadequate and patience is required to understand the minimal instructions.

For both of us model building provided a sense of accomplishment. As Neil said: "I am somehow forced to try and get better, or at least till I can say it's good enough... Building models ... has enabled me to take more of a long view - to be patient."

Nick also discovered that he enjoyed endlessly "tinkering with" and modifying his railway models while building them, more than actually finishing them.

*The modelling process*

This section explores findings about the *processes* involved in the model's construction or its occupational form. Our abilities to build models developed as we got older. Neither of us remembered being dissatisfied with our models at the time, however our recollections are that, as children, our finished kits were at first marred by hasty assembly, resulting in gluey thumbprints and messy paintwork. Clearly some of the kits given to us as children may also have been beyond our skill levels. Both of us still possessed later examples of our adolescent modelling which showed greater finesse in completion. Our accounts of more recent modelling projects revealed a more sophisticated approach, and an overwhelming concern with matters of detail and accuracy. Nevertheless, this always meant accommodating technical compromises to produce 'good enough' models. Our accounts described several models which, when finished, were not exact representations of the actual prototype but were still satisfactory. For example, Nick and his son combined a static plastic kit with a recycled chassis. The resulting locomotive, which they found acceptable, nevertheless rode "slightly too high off the track". This would have been a serious design fault if found in the real engine.

Some compromises resulted from the fact that, as Neil pointed out, "some scale details are in fact impossible to model at the correct scale. The rigging on early aeroplanes would be virtually invisible if accurately scaled down". Additional compromises derived from limits in our technical ability, the cost of materials and the availability of time. Neil also noted that some model kits included parts for their interior (such as crew seating) which could not be seen once the model was finished. Nonetheless he spent time and energy in completing these details.

Both of us described modifying kits for a variety of reasons. As Neil said, "any modifications" he would make, however historically inaccurate, would still be

concerned with viewing the plane as representing reality, but hopefully "*more so*". Sometimes *extra* details would be added to make the model "come alive", or to personalise the model. This included fictitious paint schemes or items such as aerals. The construction of the latter could necessitate the use of unusual source materials and the process of scratch building some parts. For example Neil improvised the rigging for an aircraft aerial using his own hair. While this particular technique was advocated by other modellers (Stanton, 2002), both of us sometimes invented techniques. For example, Neil decided to make the seatbelts for a model aircraft, "from a sample of fabric that was once part of a [real] biplane ... - it just seemed to have the right feel."

One aspect of the modelling process which both authors reported might be described as an 'exploratory' phase in the building of any model; between buying a new kit and its assembly. This involved experimentally holding the unglued parts together to visualise the finished product as if in disbelief that the finished kit would actually produce a replica of the prototype. Neil said:

When I try to hold fuselage halves together, well before the point they should be glued, it is to see what it will look like. I am always surprised it looks like, *almost unbelievably*, a scale model of the plane it represents.

*Perceptions of the model*

This section explores entries in our diaries concerning our perceptions of models and their relationship with the spaces in which they are displayed. Both authors remembered that as children they 'played' with their completed models as if they

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3 were toys. As they got older, Neil's finished models became simply objects of display  
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5 while Nick had become interested in working railway layouts.  
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9 As stated in the previous section both authors built kits to be kept, rather than to be  
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11 gifted or sold. Although neither of us describe ourselves as a 'collector', the purchase  
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13 of kits was not random. For example, as Neil said, "a 'collection' has emerged"  
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15 composed of models that he liked and which seemed to follow loose themes (e.g.  
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17 planes in 1930s American paint schemes). As an adult, Neil continued to accumulate  
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19 model kits even when recognising that it would be unlikely they would be built for  
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21 some years.  
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25 This suggests other aspects of modelling that may actually be more valuable to the  
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27 modeller than finishing a model or realising a larger project such as a railway layout.  
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29 Firstly, even anticipating the building of a kit is a pleasurable occupation. Secondly,  
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31 some experiences in the 'doing' of modelling are equally rewarding. After he returned  
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33 to modelling Nick found himself always "doing a bit more" to a model or "messaging  
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35 about" i.e. running trains and "tinkering" with a never-to-be finished diorama, in which  
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37 problems were more interesting than their completion.  
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41 As noted we both valued our models not only as accurate representations of their  
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43 prototypes but also as objects in their own right, a thing-in-itself (e.g. a well-  
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45 constructed model). We both described being able to appreciate the prototype  
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47 through the facility of being able to pick up the model and examine it from different  
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49 perspectives. Nick described how, as a child, he attempted to enter the spectacle of  
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51 his model railway by positioning his eye at the same level as the Airfix <sup>TM</sup> figures and  
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53 toy cars which populated his layout: "I spent a lot of time trying to get an 'OO/HO eye  
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55 view' of the results".  
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We both also referred to our models as if they were animated or alive. For Nick this was in part because his model trains were powered and therefore moved. For Neil the addition of extra details served this purpose, "the bits and bobs, small aerals or small transfers are what often make a model *come to life*" (emphasis added).

The findings also show that, when they are displayed, model trains and planes seem to occupy a figurative space even bigger than the model itself, i.e. a model train only makes sense when displayed on a track. Both of us were drawn to attempting to simulate their prototypes' 'natural environment'. Thus Neil's desire as a child was to create the illusion of the model aircraft flying by suspending it from fishing line or mounting it on a transparent stand. Making Nick's trains appear 'real' necessitated building a more complex and complete diorama with additional scenery that gave them a context.

As children, we both displayed our models in our own bedrooms. However, as adults with homes and families, the spaces in which we displayed our models were negotiated with our partners. Neil's model aircraft occupied a basement and Nick's trains the garage loft. These were personal areas which only interested visitors would see, rather than communal spaces or places. Finally the size of the available space in which to display models has an impact on what is actually modelled. Neil never built models greater than 1/48<sup>th</sup> scale because there was simply nowhere to put them.

**Discussion**

*The experience of modelling*

The findings demonstrate some of the dimensions of a significant leisure occupation, the construction of scale models for children and adults in late 20<sup>th</sup> century Britain.

They detail the modeller's experiential and intimate relationship with the model, both as an object in itself and as a literal representation of the prototype.

Modelling can bestow psychological benefits such as enjoyment, relaxation and a sense of absorption, and as such may contribute to personal wellbeing. These findings concur with King (1996) and more recent research on other adult recreational occupations such as quilting (Burt & Atkinson, 2012) or knitting (Riley et al., 2013) which emphasise the role of these occupations in maintaining personal wellbeing. Adult model making appears to have a place in this growing discourse.

For us, though modelling began in childhood and although we were able to give some recollections of our childhood experiences as modellers, these retrospective accounts are insufficient to capture child and adolescent perspectives. Nevertheless from the perspective of occupational domain we appear to be typical modellers, in that we were members of one of the first generations to have regular access to 'pocket money' in the 1960s economic boom. It was apparent, at least for us, that modelling was one of the ways in which, as children, we realised increasing personal autonomy and consumer skills. At that time buying and making models were activities which might be said to represent a boy's 'rite of passage', sometimes being temporarily abandoned in adolescence and later resumed in adult life. This trajectory is widely recognised by commentators on modelling e.g. Ward (2004, 2009) and in research findings (Yarwood and Shaw, 2010).

Over time, our modelling skills developed and it was apparent that we had both acquired a detailed awareness of the behaviour of materials such as plastics and

also the ability to picture the effect of modifications on the final appearance of the model. Throughout the entire modelling process there appears to be a tension between the modeller's idea of the prototype and the struggle to achieve it in reality. The outcome may be a compromise between desired occupational performance, for example, improving on the original model kit to make an enhanced model, and the constrictions of occupational form arising from limitations in the design of preformed kits, the materials from which they were made, or in their instructions. On the other hand, as children, we had been challenged by the difficulty posed to our level of ability by some model kits.

Some of our reported modelling experiences are much more difficult to explain. These include the sense of "surprise" that models actually do resemble their prototypes, the time and energy spent modelling details that are not visible or accessible in the finished model, and the visual appeal of apparently 'ugly' models. Baker (1997, p. 33), in a literary essay on the model aeroplane described the attraction to modellers of the details sometimes responsible for this ugly appearance: the "rivets, knobs, hulls, wires, hinges, visible missiles, sensors, gun blisters - all those encrustations that ... make imitation ... difficult enough to be worthwhile". It seems here that Baker is suggesting that the attraction of the model is the challenge it represents to the builder, though this did not motivate our purchasing choices.

Another theme, regarding relationships, is more prevalent in relation to adult modelling and concerns how modellers negotiate with partners to accommodate their modelling activities in shared domestic space. In terms of displaying both layouts and completed models the findings revealed how, for us as children, appropriate spaces were determined by parents, whereas as adults we had to agree these spaces with partners. This negotiation is a feature of the literature involving how

possessions are accommodated in domestic space (Csikszentmihalyi & Rochberg-Halton, 1981; Gregson 2007). The issue is also significant in the railway modelling literature (Andress, 1987; Jenkinson, 2001; Simmons 1998) where a layout or a completed diorama has greater permanence. Our diaries were less concerned with where our models were actually built or the interpersonal consequences of, for example, leaving uncompleted kits on the kitchen table. It is possible that one reason for this not being mentioned is that many construction tasks are transitory and may take place when a partner is absent. As a footnote, it is worth noting that modelling literature discusses the importance of safety issues (e.g. ventilation) in the choice of room in which to engage in model construction (Stanton, 2002).

Our findings concurred with Simmons' (1998) suggestion of a variety of spaces which may be favoured and sanctioned for modelling, most commonly basements, lofts, spare rooms, garages and sheds. These have been characterised by Yarwood and Shaw (2010, p. 430) as "marginal spaces", i.e. those not normally visited by people outside the household, except by invitation. The significance of this spatial arrangement is not fully clear, but may be a further manifestation of the ambivalence felt towards adult modelling.

While our models however were not intended for 'public viewing', the literature shows that others are. Our findings revealed that the different subjects we modelled offered very different creative opportunities between the modelling of static aircraft and railway modelling. As Harrington (2012, p. 20) has pointed out, "railway modelling, more than any other form of model-making, allows the modeller to recreate reality in microcosm". Railway modelling, as it requires a layout, offers greater scope for innovation, giving working model trains meaning and context. It is more demanding of space for display than model aircraft. Andress (1987) and Jenkinson (2001)

described examples of modellers whose railway dioramas have spread along the family dining room wall or have overtaken the garden. Neil found it much harder to bring 'life' to his static models even when positioned on a stand as if in flight.

*The social context of modelling as an occupational form*

Other aspects of our findings highlight the social context of modelling as an occupational form. Elsewhere (Pollard & Carver, 2012), we have discussed the widespread perception that modelling is usually a male gendered activity. Our findings do little to dispel this. Firstly, it was our fathers who introduced us, as male children, to modelling. Secondly, as parents, although the range of evidence is limited by the range of actual opportunity, i.e. Neil had no sons, the transmission of skills follows a similar pattern. Nevertheless there are indications in the findings (e.g. Nick did, rather unsuccessfully, share his modelling with his daughters) and in the literature (see Pollard & Carver, 2012), which undermine any deterministic notion that only men are, or could be, modellers.

Although the literature refers to modelling clubs (Yarwood & Shaw, 2010), these were not part of our experiences. For us building models was (and continues to be) a mainly solitary occupation. Nevertheless our model building was influenced by and took place within significant relationships, notably between fathers and sons. This relationship is a consistent theme in a range of modelling literature and advertising, which in part emphasises modelling, construction skills and an interest in prototypes as a vehicle for building positive relationships between fathers and their children (Marriott, 2012; Pearson, 2007; Ward, 2004). As such, the advertising images of the modelling industry often repeat the idea of the all-skilful and knowing father handing

down appropriate skills and values to his children and often represents model-making by as a skilled activity for children (and adults) which is valuable, educative and instructive (Tri-ang Railways, 1962; Ward, 1999, 2004; Alcorn, 2009).

The role that fathers have in transmitting modelling skills can be significant, as both our findings and those of Yarwood and Shaw (2010) demonstrate. However, our experiences, as fathers (in Nick's case) and as sons, show the reality to be more nuanced than the repeated advertising image. For example, Neil's childhood perception that his father was skilled in building plastic kits, was more idealisation than reality. Nevertheless their shared modelling activities undoubtedly played a role in developing their relationship.

Another element of this theme concerns values. While Alcorn (2009) argues that modelling has been a vehicle for transmitting of social values and certain desirable hegemonic attitudes by parents (including our adult selves) as 'a good thing' this does not mean that modelling as an occupation for *adults* is always socially sanctioned. Although there is no research evidence to support this, the idea that adult modelling may be perceived as 'childish' has been asserted by both ourselves (Pollard & Carver, 2012) and Yarwood and Shaw (2010). Neither of us would have revealed our involvement in modelling to each other, but for a chance remark about Pearson's *Achtung Schweinehund* (2007). Pearson's humorous and perceptive autobiographical account of his interest in military models alludes to this discomfort around its appropriateness in adults. It enabled our study by making the subject 'safe' for us to debate. Also, our recollections showed that we both needed a personal justification to re-engage with their childhood activity, which revealed our ambivalence about connotations of 'not having grown up' and anxiety about social disapproval. Although achieving a deeper understanding of ourselves was secondary

to our goal, a byproduct of this study has been that these private anxieties have resolved through our recognition of a shared occupational experience.

From a historical and occupational perspective, our findings mainly discuss modelling from plastic kits and manufactured items supplied with instructions at a time when these products had recently become widely available and affordable. In this sense our modelling reflects the recognised shift from scratch and craft modelling to the purchase and assembly of the model as a commodity (Butsch, 1984). Through this commodification modellers, (mainly males) have become deskilled passive consumers, caught up in a wider capitalist process that has discouraged innovation and disrupted the transmission of 'traditional' and tacit skills such as woodworking (Butsch, 1984).

We consider this thesis to be overstated at least in relation to skill. Our findings show how we frequently made our own, and even invented, modifications of the kits we have bought in an active process rather than passively following instructions. This appears to correspond with some of Dickie's (2003) observations about the ways of learning technique she observed in quilting groups. She identifies "less structured" or less formal ways of learning such as "trial and error" and "figuring things out" (2003, p. 123). However, just as Dickie's quilt makers may have begun with a specific form of quilt and progressed in their learning, it is a form of learning which never stops. The skilled use of convenient or found materials in modelling has been termed "bricolage" (King, 1996, p. 71) and was the aspect of model making which we most valued. Bricolage appears to be well established as an occupational form (Riley, 2011), particularly in the improvised modelling of railway dioramas (Andress, 1988; Simmonds, 1998). The skilled incorporation of found materials into models is a

matter of occupational performance (Nelson 1988), but the possibilities afforded by different materials presented new challenges.

Opportunities for innovation within railway modelling have given rise to the concept of the "craft consumer" who in fact does "both design and make the products" that he himself consumes (Campbell, 2005, p. 24; Yarwood & Shaw, 2010). While it is less clear that the building of plastic kits meets these criteria, we have shown that building preformed kits does not necessarily mean that the modeller-as-consumer is an uncritical 'dupe' (Campbell, 2005) or indeed, totally deskilled.

However, it is undeniable that as children our modelling interests were to some extent determined by the modelling industry as an occupational domain. Our findings show that our early experiences of modelling appeared to be, at least in part, the products of socialisation and also took place at a time in which youth were an emergent market. During this time, model manufacturers rapidly became sophisticated at developing age-specific products to widen the age-range of the market and to socialise people into the hobby as early as possible (Butsch, 1984; Tri-ang Railways, 1962; Ward 1999; 2004; Yarwood & Shaw, 2010). As Butch (1984) might argue, from a Marxist perspective our 'choices' are illusory and could be better described as examples of "pseudo individualisation" (Horkheimer & Adorno, 2002, p. 445) since they ultimately begin with the purchase of a product. In this sense it might be said that while we were making Airfix™ kits, in some small way Airfix™ were also making us.

The occupational forms of model making discussed here have been overlooked by occupational scientists. Occupational therapy is a predominantly female profession in which male gendered activities receive less mention (Angell, 2014; Pierce 2012;



Pollard & Carver, 2012). Given the potential for modelling to be used as a vehicle for men's wellbeing projects such as Men in Sheds (Ormsby, Stanley, & Jaworski, 2010) or similar community based projects. We think there may be worth in further exploring the possible benefits of model-making activities as engaging fatherly occupations.

**Limitations**

This work has several limitations. Firstly, although modelling has been depicted as a wide-spread human occupation (King, 1996; Pollard & Carver, 2012), the particular forms of modelling here are historically located in a specific culture. The authors are products of their time and as baby boomers that time may well have passed. Modelling and its socioeconomic context has changed in many ways since our youth. For example the development of on-line shopping has led in part to the decline of the model shop itself, which has literally, in one case, become a museum piece, as a recreated full-size shop exterior in Scotland's National Museum of Flight.

Many of our experiences seem to show us as 'typical' modellers of this era, particularly in that we are male. On the other hand we are unusual in being able to take advantage of our position in academia to exercise a reflexive approach towards modelling (rather than simply enjoying it). In the tradition of autoethnography we make no claims to generalisability. Further research would need to explore the views of those experiences of people of different ages, gender and cultural backgrounds to meet the parameters identified by Hocking (2009) as necessary for full in-depth description of human occupations.

Finally, as in all autoethnographic accounts, there is the possibility that we may have unconsciously censored our own narratives. Alternatively we may have colluded in

avoiding potentially emotive material or issues that might have affected our relationship or our relationships with others. In retrospect, the involvement of a third party to identify omissions or possible contradictions in our accounts may have been useful.

## Conclusion

While somewhat axiomatic, this article has shown that in any work on modelling the 'devil is in the detail'. While there are similarities in the experience of making static kits of planes and working trains and layouts there are significant differences for the modeller, partly resulting from the nature of the prototype modelled and the fact they are built to be kept. Nevertheless our account of modelling has shown it to be a significant, beneficial occupation to modellers and is a component of their occupational engagement with the world (Rebeiro & Cook, 1999). Like textile crafts (Pöllänen, 2015), modelling merits further exploration alongside other hobbies and leisure activities "that occur, unmonitored, in private spaces" (Yarwood & Shaw, 2010, p. 425). This would increase understanding of both the occupational form of modelling and its potential benefits to wellbeing.

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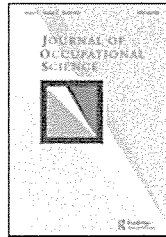
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## Journal of Occupational Science



**Building model trains and planes: An autoethnographic investigation of a human occupation.**

Journal:	<i>Journal of Occupational Science</i>
Manuscript ID	ROCC-2015-0019.R2
Manuscript Type:	Feature (research and review)
Keywords:	human occupation, model building, modelling, hobbies, leisure

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# Journal of Occupational Science

## Preview

**Abstract:** This research paper utilises an autoethnographic method, termed collective autobiography, to explore the nature and meaning of the amateur hobby of building models from childhood to adulthood. Hobbies and leisure activities are areas of human occupation of increasing interest to a variety of disciplines e.g. healthcare. Although model making may concern the miniature representation of any subject, this paper focuses on the construction of model aircraft kits, trains and their layouts. As a complex specific human occupation modelling is revealed as contributory to personal wellbeing, and while the activity may start in childhood its associated motivations and required skills develop over a life time. The findings also reveal aspects of the nature of the relationship between the modeller, the process of modelling and the final product. In addition they also reveal some elements of the gendered nature of modelling, its role within father-son relationships, and the accommodation of modelling activities within shared domestic spaces. The modeller is seen to be a creative individual and a consumer. The specific modelling activities described are recognised as having their origins within the culture of post-war baby boomer Britain, and the socioeconomic and technological environment of that period.

 Close Window

Building model trains and planes: An autoethnographic investigation of a human occupation.

Key words: human occupation; model building; modelling; hobbies; leisure

This research paper utilises an autoethnographic approach which is termed collective autobiography (Lapadat, 2009; Lapadat et al., 2010). Its task is, as Dickie (2003, p. 120) remarks, "first to describe the occupation, and second to attempt to understand the process, outcomes, and experience of the occupation", namely the adult hobby of building models, (p. 120).

Modelling appears to be a largely uninvestigated human occupation (Pollard & Carver, 2012) which has begun to arouse interest in a range of disciplines, for example in cultural history (King, 1996), geography (Yarwood and Shaw, 2010) and social history (Harrington, 2012). King's exploration (1996) suggests that model making is apparently ubiquitous through human society, in evidence as a human occupation since prehistoric times. He describes it as "constructing, collecting and operating tiny models of larger prototypes [...] generally but not always smaller and usually of materials different to those of the original". In modelling, the word prototype refers to the original object being modelled (King, 1996, p. 3). The term 'model making' may be used to describe different activities including building without plans from raw materials ('scratch-building') through to the assembly and modification of mass-produced kits using individual scratch-built parts made from recycled, junk or preformed items (King, 1996). King (1996) thus suggests that model-making is a craft based leisure occupation, through the varied use of tools and materials in periods of spare time activity. Model making may commonly include representing

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everything from vehicles to historical figures, from individual buildings to complete landscapes, using a wide variety of materials.

Although ubiquitous the nature of modelling has changed over time. Notably the technologies which facilitated the injection moulding of plastics enabled a mid-20<sup>th</sup> century boom in the affordability and availability of kit models (Pollard & Carver, 2012). In 2013, a key model manufacturer, Hornby PLC, reported a turnover of £43.135m in the UK alone. Although models are available in a variety of scales, the most common were 1/72<sup>nd</sup> scale for aircraft and 1/76<sup>th</sup> and 1/87<sup>th</sup> (referred to as OO/HO as both run on the same track gauge) for trains. This means that most such models are under a foot (or 30cms) in length, a size which can be accommodated in most domestic spaces. Although there are well documented exceptions, it is generally asserted that most such model making is performed by men (Pollard & Carver, 2012).

Our study <sup>provides</sup> ~~was conducted with the intention of providing~~ an insider perspective on this form of modelling. More specifically it <sup>focuses</sup> ~~will focus~~ on the building of static scale aircraft (as opposed to, for example, cars or flying model aircraft) and the construction of working model trains and their layout (as opposed to static models of trains).

These aspects of model making correspond to Riley's (2011, p. 323) account of craft as an occupational form through construction and "bodily interaction" with materials, and her account of doing as an occupational performance. The occupational form ~~is~~ <sup>define</sup> ~~this form~~ of modelling arises from such pre-determined structures as preformed kits

or the choice of particular materials which define its performance, as for example has been identified in occupations such as textile making (Nelson, & Jepson-Thomas, 2003; Riley, 2011). In addition our exploration of the modelling of aircraft and railways will recognise its historical and socioeconomic context (or "domain", Dickie, 2003, p. 121), as well as its meaning to modellers. This <sup>broad focus</sup> also reflects the increasing study of occupations <sup>in</sup> concerning their <sup>broader</sup> social contexts rather than as individual <sup>pursuits</sup> activities, in which their purpose, meaning and goals are located in particular times, cultures and places (Dickie, 2003; Dickie, Cutchin & Humphry, 2006; Riley, 2008; Hocking, 2008a, 2008b).

Authors such as Suto (1998), Howell and Pierce (2000) and Høghagen, Josephsson and Alsaker (2007) have described a significant history of interest within both occupational science and occupational therapy concerning hobbies and craft based leisure occupations. Crafts are important ~~occupational~~ aspects of individual and cultural expression in changing economies (Dickie <sup>and</sup> Frank, 1996), even where makers are following kit instructions (Pöllänen, 2015). Some craft hobbies and activities, such as quilting (Howell <sup>and</sup> Pierce, 2000; Dickie, 2003; Riley, 2008, 2011; Riley, Corkhill, & Morris, 2013), have enjoyed a particular focus in this literature.

This area of study is becoming significant because there appears to be a greater engagement in leisure pursuits than ever before. Within the UK alone, adults doubled their spending on leisure between 1976 and 2002, when it became the largest area of household expenditure. This disposable income is spent on the products of a considerable leisure industry catering to a plethora of specialist

interests including modelling (Pollard & Carver, 2012; Office of National Statistics, 2012).

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Baby boomers, those belonging to "the unusual demographic blip of babies born in the UK between 1945 and 1965" (Harkin & Huber, 2004, p.11) in particular have returned to products and pursuits from their youth, which Harkin and Huber (2004, p. 37) describe as "down-ageing". Lauwert (2008, p. 233) noted a phenomenon of these "adults staying younger longer". This group is collectively both in possession of the disposable income and the time necessary to facilitate these interests, both important factors in the economy of leisure occupations (Huang & Shi, 2015).

— not just a UK phenomenon

In addition there is increased recognition that wellbeing and identity can be expressed through diverse leisure activities and hobbies as much as through other occupations (Caldwell, 2005). This applies whether they are socially organised in craft guilds and networks (Riley, 2008; Pöllänen, 2015) or, like fishing, participated in by solitary individuals (Bull, 2009). There is also a growing discourse around the value of leisure within healthcare in general (e.g. Royal College of Psychiatrists, 2010; Clatworthy, Hinds, & Camic, 2013) and occupational therapy (Suto, 1998; Pollard & Carver, 2012). Wellbeing studies of quilting (Burt & Atkinson, 2012) and women textile craft makers (Pöllänen, 2015) draw extensively on occupational science and therapy sources. Although Caldwell (2005) has recognised that the mechanisms through which leisure is therapeutic have not yet been fully addressed, there is agreement that it can have benefits for "physical, social, emotional and cognitive health" (p15).

— citations in alphabetic order

(p. 15).

discussions.  
~~Despite the above,~~ M modelling has not featured in these debates. The research literature on modelling is sparse. One exception is King's (1996) study of model making in general, which includes some casual interviews with model makers. More recently, Yarwood and Shaw's (2010) investigation used 22 semi-structured interviews with railway modellers (i.e. people who specifically model railways) in an 'attempt' "to listen to the stories that railway modellers tell..." (p. 431). There is no parallel study of the building of static model aircraft.

Most of the existing literature on building models is produced by the modelling community itself (e.g. Pearson, 2007, Stanton, 2002). It is primarily concerned with modelling techniques and mainly consists of 'how to' guides, but there is also an emerging genre of nostalgic literature describing iconic models and manufacturers such as, in the UK, Airfix™ and Hornby™ (e.g. Ward, 1999; 2004; 2009). This literature in itself may be said to represent some of the preoccupations of the baby boom generation.

## Aims

This research responds to Dickie's (2003) call to "first ...  
begins  
This study ~~aimed at beginning~~ to address the lack of empirical work on modelling as a human occupation. The broad aim was to explore the experience of modelling as a purposeful and meaningful occupation from the perspective of the modeller as an adult. However, we acknowledge that any discussion of models must also recognise that this behaviour <sup>practice</sup> may begin in childhood (King, 1996; Pollard & Carver, 2012). A secondary aim, therefore, was to explore our recollections of childhood modelling. Following other studies (e.g. Riley et al., 2013) we wished to both explore the



process of production (in this case, modelling as an occupational form) and the meaning of the product itself (in this case, the model as occupational performance).

Method

Given our aims and interests we ~~wished to use~~ <sup>selected</sup> a pragmatic and convenient qualitative method <sup>selected used an autoethnographic approach, which is</sup> which would enable us to utilise our own experiences, to explore the potential for a larger scale study and which would generate rich data.

Methodologies which contain both personal and academic elements, such as auto-ethnography, are of increasing interest in the field of qualitative research (Burnier, 2006). Auto-ethnography uses personal narrative to critically explore experiences (Muncey, 2010). This approach is not without its critics, and there is recognition that some have found it difficult to accept as a credible research method (Foster,

McAllister, & O'Brien, 2006). This is partly because of its embrace of subjectivity. To be effective auto-ethnography requires a disciplined and rigorous approach to produce a narrative which is meaningful to others rather than merely for oneself.

Here rigour and discipline entail transparency and clarity with regard to the subjective elements of this approach and the particular nature of individual narratives (Ellis, Adams, & Bochner, 2011). Lapadat (2009, p. 967) describes an approach to

autoethnography, which she termed "collaborative autobiography", involving several authors both interpreting their own and others' accounts. In this case both authors were the sole participants.

For Lapadat (2009) this approach allows the writers to retain their separate identities, (Lapadat, 2009).

Given the differences and similarities in our backgrounds, we felt that this approach would best suit our purpose. In addition we felt that the following biographical factors

enabled us to produce authentic accounts of our modelling: Firstly, both of us were actively engaged in modelling (one with an interest in planes and the other in trains). Secondly our initial discussions showed that as children we had both engaged in model making. Thirdly, we are both baby boomers who began modelling in late 1960s Britain as children, and now in our 50s, had the income and the time to engage in this leisure form. Finally, our backgrounds in in mental health settings with an active interest in therapeutic activities, Neil as a nurse and Nick as an occupational therapist, and in research have necessitated the ability to be reflexive in both writing and interpersonal contexts and "make visible the beliefs and values" present in our narratives (Foster et al., 2006, p.46).

Within collaborative autobiography there can be an emphasis on the deeper understanding of self as a goal in itself (Lapadat, 2009; Lapadat et al., 2010). For us, this personal understanding was secondary to our goal of investigating modelling as a human occupation per se. The following is an account of our investigative process.

#### Step 1

We agreed we would each would keep a diary for a <sup>6-month</sup> six-month period from a given start date, to keep the study within a reasonable time frame. The diary was to contain free text concerning current modelling experiences and related reminiscences. We were free to make diary entries when we felt fit.

#### Step 2

Each of us read <sup>the</sup> each others' <sup>in diary</sup> diaries. We also checked our shared understanding of the content and isolated significant themes.

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Step 3

These themes were then subjected to "interpretive discussion" (Lapadat, 2009, p.969) and when agreement was reached were grouped and 'collapsed' into what we felt to be the most significant major themes.

Throughout steps 1-3 we were continually engaged in a "recursive dialogue" (Lapadat, 2009, p. 958), discussing our own and each others' experiences. We also continued to read and share literature related to model making.

Ethics

Discussion with a representative of the university ethics committee suggested that we did not need to gain formal ethical approval, because we both consented to share our data. It is worth noting however that there can be ethical concerns in such autobiographical work, for example the lack of anonymity of the researcher subjects (e.g. Lapadat et al., 2010) and what we might reveal about other people in our personal lives (Freadman, 2004). Although we felt that there was little of contention in our disclosures, we continually monitored them and did not identify any concerns.

Findings

Each of our diaries ran to over 90,000 words. The following sections summarise our findings under major themes, the first of which corresponds to occupational domain issues, while the remainder combine aspects of occupational performance and occupational form. We have used the collective first pronoun to refer to shared findings, and our own names to identify individual experiences.

Socialisation

We both described early childhood interests in trains (Nick) and aeroplanes (Neil) and recollect that at the time (in the 1960s) our parents, particularly our fathers, took us to preserved or 'heritage' railways, airshows, or air and railway museums. In addition, some of Nick's relatives had worked in the railway industry and shared their experiences with him. We actually began building models in the years approaching our teens. In both accounts of building models in our childhoods our fathers featured significantly and the positive encouragement from them seems to have reinforced our engagement in the activity: *occupation.*

For Neil the modelling of aeroplanes eventually became a significant aspect of relating to his father and became a shared indulgence. As an adult this afforded Neil a means of maintaining their male relationship in an almost completely female family, even beyond his father's death:

Dad built for me, we built together, he and I built a little on our own, I built for him and now I have begun to build just for me. *[...]* the activity connects me with my youth and warm memories of parents (particularly dad).

Nick tried to share his adult enjoyment of modelling with his son and daughters, although his son took more active interest. Neil had no sons but never thought to involve either of his daughters in building models.

Neither of us built models from scratch; those that we described making were commercially available kits. Neil's father however did have skills in both scratch building and the construction of solid scale wooden planes, hand carved from nothing more than a plan. Neil remembered being encouraged to try and work with wood but never took it up and looked to his father for help in making plastic kits. Looking at the surviving results of these modelling forays Neil recognised that his

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father actually had few skills in working with plastic, which for him would have been a new medium.

*Modelling Choices* lower case

Our diaries showed that whether as children or as adults we preferred to model a particular subject, i.e. aeroplanes or trains, rather than taking an interest in the *process* of modelling per se. In addition we were attracted to the models of specific prototypes that we simply liked e.g. the Hawker Hurricane or English Electric Deltic Diesel. While we both recognised that as adults we could have purchased finely detailed ready-made models of these subjects, Neil described preferring to build a kit instead because it involved elements of self-expression. As he said: "there is something about being able to say: I built that, even if everyone else has built it in the same way."

Our findings suggest that our simple attraction to a particular model was not defined by conventional aesthetics. For example Neil recognised that the shape of the Second World War Spitfire fighter aircraft was commonly perceived as beautiful but, like Nick, described an attraction to less obviously appealing prototypes, e.g. "insect like" reconnaissance aeroplanes with their complex observation windows and aerials, models with bright or eccentric paint schemes, or those of unconventional, even 'ugly' appearance e.g. the Westland Wyvern aircraft. We both acquired certain models because of their 'fit' with others we had already constructed, while other kits were acquired because of the iconic status and the historical and social connotations of the prototype (such as the Concorde airliner).

Our diaries also show that our motivations and choices in modelling changed over time. At first we were bought model kits chosen by adults as presents, even at an

age where we had minimal modelling abilities (around 7 years). When we were older (at around 10 years), we were able to exercise our own choices within the limits of our pocket money. At that time we were considered old enough to "go into town to the model shop" independently.

By mid-adolescence (15-16 years) both of us had almost totally abandoned modelling. As a child Nick thought that modelling was a 'grown-up' activity, but as an adolescent he felt that modelling was disparaged by his peers: "What adult person lines his living room with model aircraft?" For Neil his growing political awareness as an adolescent and exposure to televised news of the Vietnam war meant he felt very uncomfortable modelling military subjects.

Despite these misgivings we both returned to modelling in later adult life, in our forties. Neil's main motivation was to re-establish a shared interest with his father but he retained an ambivalence regarding military subjects. While Neil encouraged his father to choose kits that they both might enjoy together, he now did all the building. Nick had wanted the justification to resume his railway interest for some years and being able to share building a model railway with his children gave him the necessary justification to recommence modelling. For both of us these initial motives transmuted into genuine interests in their own right.

The findings also showed that both authors modelled simply because they liked it, but there were other emotional and psychological benefits. Neil enjoyed

...the sense of absorption. In a world of build or paint, everything else fades.

As an individual prone to worry that is quite an attraction. There is also the balance of problem solving and creativity. Instructions can be woefully inadequate and patience is required to understand the minimal instructions.

For both of us model building provided a sense of accomplishment. As Neil said: "I am somehow forced to try and get better, or at least till I can say it's good enough... Building models ... has enabled me to take more of a long view - to be patient."

Nick also discovered that he enjoyed endlessly "tinkering with" and modifying his railway models while building them, more than actually finishing them.

*The Modelling Process*

This section explores findings about the *processes* involved in the model's construction or its occupational form. Our abilities to build models developed as we got older. Neither of us remembered being dissatisfied with our models at the time, however our recollections are that, as children, our finished kits were at first marred by hasty assembly, resulting in gluey thumbprints and messy paintwork. Clearly some of the kits given to us as children may also have been beyond our skill levels. Both of us still possessed later examples of their adolescent modelling which showed greater finesse in completion. Our accounts of more recent modelling projects revealed a more sophisticated approach, and an overwhelming concern with matters of detail and accuracy. Nevertheless, this always meant accommodating technical compromises to produce 'good enough' models. Our accounts described several models which when finished were not exact representations of the actual prototype but were still satisfactory. For example, Nick and his son combined a static plastic kit with a recycled chassis. The resulting locomotive, which they found acceptable, nevertheless rode "slightly too high off the track". This would have been a serious design fault if found in the real engine.

Some compromises resulted from the fact that, as Neil pointed out, "some scale details are in fact impossible to model at the correct scale. The rigging on early

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2Page 13 of 32

aeroplanes would be virtually invisible if accurately scaled down". Additional compromises derived from limits in our technical ability, the cost of materials and the availability of time. Neil also noted that some model kits included parts for their interior (such as crew seating) which could not be seen once the model was finished. Nonetheless he spent time and energy in completing these details.

Both of us described modifying kits for a variety of reasons. As Neil said, "any modifications" he would make, however historically inaccurate, would still be concerned with viewing the plane as representing reality, but hopefully "*more so*". Sometimes *extra* details would be added to make the model "come alive", or to personalise the model. This included fictitious paint schemes or items such as aerals. The construction of the latter could necessitate the use of unusual source materials and the process of scratch building some parts. For example Neil improvised the rigging for an aircraft aerial using his own hair. While this particular technique was advocated by other modellers (Stanton, 2002), both of us sometimes invented techniques. For example, Neil decided to make the seatbelts for a model aircraft "from a sample of fabric that was once part of a [real] biplane [...] - it just seemed to have the right feel."

One aspect of the modelling process which both authors reported might be described as an 'exploratory' phase in the building of any model; between buying a new kit and its assembly. This involved experimentally holding the unglued parts together to visualise the finished product as if in disbelief that the finished kit would actually produce a replica of the prototype. Neil said:

When I try to hold fuselage halves together, well before the point they should be glued, it is to see what it will look like. I am always surprised it looks like, *almost unbelievably*, a scale model of the plane it represents.



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*Perceptions of the <sup>m lower case</sup> Model*

This section ~~will~~<sup>s</sup> explore entries in our diaries concerning our perceptions of models and their relationship with the spaces in which they are displayed. As stated in the previous section both authors built kits to be kept, rather than to be gifted or sold. Although neither of us described ~~ourselves~~<sup>s</sup> as a 'collector', the purchase of kits was not random. For example, as Neil said, "a 'collection' (sic) has emerged" composed of models that he liked and which seemed to follow loose themes (e.g. planes in 1930s American paint schemes). As an adult, Neil continued to accumulate model kits even when recognising that it would be unlikely they would be built for some years.

not sure why you need this?

Both authors remembered that as children they 'played' with their completed models as if they were toys. As they got older, Neil's finished models became simply objects of display while Nick had become interested in working railway layouts. After he returned to modelling he found himself always "doing a bit more" to a model or "messaging about" i.e. running trains and "tinkering" with a never-to-be finished diorama.

As noted we both valued our models not only as accurate representations of their prototypes but also as objects in their own right. In addition we both described being able to appreciate the prototype through the facility of being able to pick up the model and examine it from different perspectives. Nick described how as a child he attempted to enter the spectacle of his model railway by positioning his eye at the same level as the Airfix <sup>TM</sup> figures and toy cars which populated his layout: "I spent a lot of time trying to get an 'OO/HO eye view' of the results".

We both also referred to our models as if they were animated or alive. For Nick this was in part because his model trains were powered and therefore moved. For Neil the addition of extra details served this purpose: "the bits and bobs, small aerals or small transfers are what often make a model *come to life*" (emphasis added).

The findings also show that when they are displayed model trains and planes seemed to occupy a figurative space even bigger than the model itself, i.e. a model train only makes sense when displayed on a track. Thus Neil's desire as a child was to create the illusion of the model aircraft flying by suspending it from fishing line or mounting it on a transparent stand. For Nick's trains to appear 'real', this always necessitated building a more complex and complete diorama with additional scenery that appeared to give them a context.

As children, we both displayed our models in our own bedrooms. However as adults with homes and families, the spaces in which we displayed our models were negotiated with our partners. Neil's model aircraft occupied a basement and Nick's trains the garage loft. These were personal areas which only interested visitors would see, rather than communal spaces or places. Finally the size of the available space in which to display models has an impact on what is actually modelled. Neil never built models greater than 1/48<sup>th</sup> scale because there was simply nowhere to put them.

## Discussion

The findings demonstrate some of the dimensions of a significant leisure occupation; the construction of scale models for children and adults in late 20<sup>th</sup> Britain. They detail the modeller's experiential and intimate relationship with the model, both as an object in itself and as a literal representation of the prototype.

discussion is longer than the findings, and somewhat circular. Please consider my notes and reorganise under at least 2 subheadings - a section on more experiential aspects and one on more societal perspectives of the occupational form of modelling.

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you come back to creativity  
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Firstly, modelling is shown to be a significant occupation to the modeller in terms of the development of ~~performance components~~ cognitive and psychomotor skills and creativity. It also can bestow psychological benefits such as enjoyment, relaxation and a sense of absorption. These findings concur with King (1996) and more recent research on other adult recreational occupations such as quilting (Burt & Atkinson, 2012) or knitting (Riley, et al., 2013). ~~This~~ <sup>The latter</sup> body of work emphasises the role of these occupations in maintaining personal wellbeing. Adult model making appears to have a place in this growing discourse.

you pick up the idea of skill development again at the bottom of the page. It works better there. Suggest delete this

For us though modelling began in childhood and although we were able to give some recollections of our childhood experiences as modellers these retrospective accounts are insufficient to capture child and adolescent perspectives. Nevertheless from the perspective of occupational domain we appear to be typical modellers, in that we were members of one of the first generations to have regular access to 'pocket money' in the 1960s economic boom. At that time buying and making models were ~~activities~~ <sup>occupations</sup> which might be said to represent a boy's 'rite of passage', to be temporarily abandoned in adolescence and later resumed in adult life. This trajectory is widely recognised by commentators on modelling e.g. Ward (2004, 2009) and in research findings (Yarwood and Shaw, 2010). It was apparent, at least for us, that modelling was ~~both~~ <sup>not</sup> enjoyable, satisfying and one of the ways in which we realised increasing personal autonomy and consumer skills.

trajectory

a boy's

benefits.  
/ belongs with paragraph above?

We have also shown that other aspects of modelling may actually be more valuable to the modeller than finishing a model or realising a larger project such as a railway layout. Firstly, even anticipating the building of a kit is a pleasurable occupation. Secondly, some experiences in the 'doing' of modelling are equally rewarding. These, for example, include tinkering and problem solving. Over time, our modelling skills

experiential account  
? belongs in findings

developed and it was apparent that we had both acquired a detailed awareness of the behaviour of materials such as plastics and also the ability to picture the effect of modifications on the final appearance of the model. Throughout the entire modelling process there appears to be a tension between the modeller's idea of the prototype and the struggle to achieve it in reality, which may necessitate compromise between occupational performance and occupational form.

Some of our reported modelling experiences are much more difficult to explain.

These include the sense of "surprise" that models actually do resemble their prototypes, or the time and energy spent modelling details that are not visible or accessible in the finished model, and the visual appeal of apparently 'ugly' models.

Baker (1997, p. 33) in a literary essay on the model aeroplane describes the attraction to modellers of the details sometimes responsible for this ugly appearance: the "rivets, knobs, hulls, wires, hinges, visible missiles, sensors, gun blisters - all those encrustations that ... make imitation ... difficult enough to be worthwhile". It seems here that Baker is suggesting that the attraction of the model is the challenge it represents to the builder, though this did not motivate our purchasing choices.

As modellers we both related both to the model as a thing-in-itself (e.g. a well-constructed model) and as an accurate representation of its prototype. While models are often displayed in purpose-built cases, both of us were drawn to attempting to simulate their prototypes' 'natural environment' e.g. a railway track to run on. This and the addition of detail such as weathering (simulating the effects of use, wear and tear) illustrate a concern with creating an impression that the model has 'life'.

Other aspects of our findings highlight the social context of modelling. Although the literature refers to modelling clubs (Yarwood & Shaw, 2010) these were not part of

experiences, and for us building models was (and continues to be) a mainly solitary <sup>occupation</sup> activity. Nevertheless our model building was influenced by and took place within significant relationships, notably between fathers and sons. This relationship is a consistent theme in a range of modelling literature and advertising, which in part emphasises the <sup>modelling</sup> activity as a vehicle for building positive relationships between fathers and their children (Marriott, 2012; Pearson, 2007; Ward, 2004).

occupational form - social

<sup>As such,</sup> The advertising images of the modelling industry often repeat the idea of the all-skillful and knowing father handing down appropriate skills and values to his children. and often represents model-making <sup>by</sup> as a skilled activity for children (and adults) which is valuable, educative and instructive (Tri-ang Railways, 1962; Ward, 1999, 2004; Alcorn, 2009).

occupational form

The role that fathers have in transmitting modelling skills can be significant, as both our findings and those of Yarwood and Shaw (2010) demonstrate. However, our experiences, as fathers (in Nick's case) and as sons, show the reality to be more nuanced than the repeated advertising image. For example, Neil's childhood perception that his father was skilled in building plastic kits <sup>was</sup> more idealisation than reality. Nevertheless their shared modelling activities undoubtedly played a role in developing their relationship.

commentary on occupational form

Elsewhere (Pollard & Carver, 2012) we have discussed the widespread perception that modelling is usually a male gendered activity. Our findings do little to dispel this. Firstly, it was our fathers who introduced us, as male children, to modelling. Secondly, as parents, although the range of evidence is limited by the range of actual opportunity, i.e. Neil had no sons, the transmission of skills follows a similar pattern. Nevertheless there are indications in the findings (e.g. Nick did, rather

gendered nature of occupational form - should this come before the previous 3 paragraphs? (social context of the occupational form)

unsuccessfully, share his modelling with his daughters) and in the literature (see Pollard & Carver, 2012), which undermine any deterministic notion that only men are, or could be, modellers.

Another element of this theme concerns values. While Alcorn (2009) argues that modelling has been a vehicle for transmitting of social values and certain desirable hegemonic attitudes neither of us were conscious of our parents doing this. However, it is hard to imagine the activity being sanctioned if it was not seen by parents (including our adult selves) as 'a good thing'.

The above does not mean that modelling as an occupation for *adults* is always socially sanctioned. Although there is no research evidence to support this, the idea that adult modelling may be perceived as 'childish' has been asserted by both ourselves (Pollard & Carver, 2012) and Yarwood and Shaw (2010). Neither of us would have revealed our modelling activities to each other, but for a chance remark about Pearson's *Achtung Schweinehund* (2007). This humorous and perceptive autobiographical account alludes to his discomfort as an adult military modeller, and ~~he~~ enabled our study by making the subject 'safe' for us to debate. Also, our recollections showed that both authors needed a personal justification to re-engage with their childhood activity, which revealed our ambivalence about connotations of 'not having grown up' and anxiety about social disapproval. Although as stated a deeper understanding of ourselves was secondary to our goal, a byproduct of this study has been that these private anxieties have resolved through our recognition of a shared occupational experience.

The other theme regarding relationships is more prevalent in relation to adult modelling and concerns how modellers negotiate with partners to accommodate their

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no. that's the nature of hegemonic values - they seem 'natural' - eg models is something males do / prototypes are things men are interested in / I think this comment illustrates lack of the critical exploration - you claimed on p. 6. Better to leave this out.

this paragraph seems closer to your actual experience than discussion on previous and this page. I think it should come before social positioning of the occupational form / advertising

modelling activities in shared domestic space. In terms of displaying both layouts and completed models the findings revealed how, for us as children, appropriate spaces were determined by parents, whereas as adults we had to agree these spaces with partners.

This negotiation is a feature of the literature involving how possessions are accommodated in domestic space (Csikszentmihalyi & Rochberg-Halton, 1981; Gregson 2007). The issue is also significant in the railway modelling literature (Andress, 1987; Simmons 1998; Jenkinson, 2001). Our findings concurred with Simmons (1998) suggestion of a variety of spaces which may be favoured and sanctioned, most commonly basements, lofts, spare rooms, garages and sheds. These have been characterised by Yarwood & Shaw (2010, p. 430) as "marginal spaces", i.e. those not normally visited by people outside the household, except by invitation. The significance of this is not fully clear, but may be a further manifestation of the ambivalence felt towards adult modelling.

While our models were not intended for 'public viewing' the literature shows that others are. Railway modelling, as it requires a layout, is more demanding of space for display than model aircraft. Andress (1987) and Jenkinson (2001) described examples of modellers whose railway dioramas have spread along the family dining room wall or have overtaken the garden.

Our diaries were less concerned with where our models were actually built or the interpersonal consequences of, for example, leaving uncompleted kits on the kitchen table. It is possible that one reason for this not being mentioned is that many construction tasks are transitory and may take place when a partner is absent, but a layout or a completed model has greater permanence. As a footnote, it's worth

noting that modelling literature discusses the importance of safety issues (e.g. ventilation) in the choice of room in which to engage in model construction (Stanton, 2002).

*OK - back to societal view*

From a historical and occupational ~~domain~~ perspective, our findings mainly discuss modelling from plastic kits and manufactured items supplied with instructions at a time when these products had recently become widely available and affordable. In this sense our modelling reflects the recognised shift from scratch and craft modelling to the purchase and assembly of the model as a commodity (Butsch, 1984). ~~Butsch also suggests that~~ through this commodification, modellers (mainly males) have become deskilled passive consumers, caught up in a wider capitalist process that has discouraged their innovation and disrupted the transmission of 'traditional' and tacit skills such as woodworking. *(Butsch, 1984).*

While this thesis has some appeal, we consider that it appears to be overstated at least in relation to skill. Our findings show how we frequently made our own, and even invented modifications of the kits we have bought in an active process rather than passively following instructions. This skilled use of convenient or found materials in modelling has been termed "bricolage" (King, 1996, p. 71) and was the aspect of model making which we most valued. So if some skills have vanished, then new forms of occupation within modelling have appeared.

*Is this consistent with the definition of occupational form given earlier?*

Our findings revealed that the different subjects we modelled offered very different creative opportunities, ~~for example, for bricolage~~. There are significant differences between the modelling of static aircraft and railway modelling. As Harrington (2012, p. 20) has pointed out, "railway modelling, more than any other form of model-making, allows the modeller to recreate reality in microcosm". It is this re-creation *that* of a



layout or diorama that offers greater scope for innovation, giving working model trains meaning and context. Neil found it much harder to bring 'life' to his static models even when positioned on a stand as if in flight.

The opportunities for innovation allowed Yarwood and Shaw (2010) to discuss railway modelling as an activity of the "craft consumer" who in fact does "both design and make the products" that he himself consumes (Campbell, 2005, p. 24). While it is less clear that the building of plastic kits meets these criteria, we have shown that building preformed kits does not necessarily mean that the modeller-as-consumer is an uncritical 'dupe' (Campbell, 2005) or indeed, totally deskilled.

Even accepting this argument, it is undeniable that as children the pattern of our modelling interests was to some extent determined by the modelling industry as an occupational domain. Our findings show that our early experiences of modelling appeared to be, at least in part, the products of socialisation and also took place at a time in which youth were an emergent market. It has been recognised that at this time model manufacturers rapidly became sophisticated at developing age-specific products to widen the age-range of the market and to socialise people into the hobby as early as possible (Tri-ang Railways, 1962; Ward 1999; 2004; Yarwood & Shaw, 2010). In this sense it might be said that while we were making Airfix™ kits, in some small way Airfix™ were also making us.

As adult modellers we have tended to write of our experiences as if they resulted from purely personal choices. However, we also acknowledge, following Butsch (1984), that the range of available choice is determined by the market. It could even be argued that where we have made innovations, such as modification of the diesel model that Nick described, these are only possible because they take advantage of

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with: have given rise to the concept of (Yarwood & Shaw, 2010)

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back to socio-cultural commentary - marketing

socio-political

these what? choices?

manufactured components. Indeed as Butch (1984) would probably argue, from a Marxist perspective our 'choices' are illusory and could be better described as examples of "pseudo individualisation" (Horkheimer & Adorno, 2002, p. 445) since they ultimately begin with the purchase of a product.

This discussion began with a recognition that the occupation of modelling may contribute to personal wellbeing, in the same way as other craft activities such as knitting and quilting have been reconsidered as occupational therapy interventions (Riley, et al., 2013). The occupational forms of model making discussed here have been overlooked in occupational science and in occupational therapy literature.

Occupational therapy is a predominantly female profession in which male gendered activities receive less mention (Pollard & Carver, 2012). We think there may be is worth in further exploring the possible benefits of model-making activities as engaging fatherly occupations. There is the potential for the incorporation of modelling into programmes as a vehicle for including men in wellbeing projects, such as Men in Sheds (Ormsby, Stanley, & Jaworski, 2010), or similar community based projects. This article has provided a description of the activity and its value which may help non-modellers to generate such projects.

### Limitations

This work has several limitations. Firstly, although modelling has been depicted as a wide-spread human activity (King, 1996; Pollard & Carver, 2012), the particular forms of modelling here are historically located in a specific culture. The authors are products of their time and as baby boomers that time may well have passed. Modelling and its socioeconomic context has changed in many ways since our youth. For example the development of on-line shopping has led in part to the decline of the

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model shop itself, which has literally, in one case, become a museum piece, as a recreated full-size shop exterior in Scotland's National Museum of Flight.

Many of our experiences seem to show us as 'typical' modellers of this era, particularly in that we are male. On the other hand we are unusual in being able to take advantage of our position in academia to exercise a reflexive approach towards modelling (rather than simply enjoying it). In the tradition of autoethnography we make no claims to generalisability. Further research would need to explore the views of those experiences of different ages, gender and cultural backgrounds to meet the parameters identified by Hocking (2009) as necessary for full in-depth description of human occupations.

Finally as in all autoethnographic accounts there is the possibility that we may have unconsciously censored our own narratives. Alternatively we may have colluded in avoiding potentially emotive material or issues that might have affected our relationship or our relationships with others. In retrospect the involvement of a third party to identify omissions or possible contradictions in our accounts may have been useful.

**Conclusion**

While somewhat axiomatic this article has shown that in any work on modelling the 'devil is in the detail'. While there are similarities in the experience of making static kits of planes and working trains and layouts there are significant differences for the modeller, partly resulting from the nature of the prototype modelled and the fact they are built to be kept. Nevertheless our account of modelling has shown it to be a significant, beneficial occupation to modellers and is a component of their occupational engagement with the world (Rebeiro & Cook 1999). Like textile crafts

(Pöllänen, 2015), modelling merits further exploration alongside other hobbies and leisure activities "that occur, unmonitored, in private spaces" (Yarwood & Shaw, 2010, p. 425). This would increase our understanding of both the occupations of modelling and their potential benefits to wellbeing.

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