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RETHINKING THE DESIGNER'S ROLE: THE CHALLENGE OF UNFINISHED KNITWEAR DESIGN

OPEN | KNIT | AMATEUR | DESIGN | PATTERNS

ABSTRACT

THE CENTRAL PROPOSITION OF MY PHD RESEARCH IS TO EXPLORE THE IDEA OF OPENNESS WITHIN MY PRACTICE AS A DESIGNER-MAKER OF KNITWEAR. THIS FOCUS DEVELOPED OUT OF MY INTEREST IN THE RADICAL POTENTIAL OF AMATEUR FASHION MAKING AS A SUSTAINABLE FASHION STRATEGY.

While I am exploring the idea of openness on various levels, in practical terms I am designing ways of re-working existing knitted garments. I am testing and developing these methods with a small group of female amateur knitters at a series of discussion and workshop sessions.

Opening up my practice brings into question my role as a professional designer-maker. In this paper, I draw on a range of sources to explore ways in which I might address openness, and discuss their implications.

Using *The Poetics of the Open Work* by Umberto Eco, I compare classical compositions with conventional patterns, and consider the potential of 'works in movement', in which composer (or designer) and performer (or knitter) become collaborators and co-creators. Having considered these examples, I explore whether a designer could offer support but not authorship. We can describe the design of works in movement as designing actions to be taken by others. Re-knitting requires us to extend this: designing actions to be taken by others, which involve those others – amateur knitters – designing.

Several essays in the recent book, *Open Design Now*, offer ways of thinking about this 'metadesign' role. The metadesigner supports the amateur in making design decisions, and developing their skills and knowledge. I describe my experience of working as a metadesigner in the re-knitting project, and the online resource that I have created. I use writing on open source software, a prime example of 'commons-based peer production', to discuss the potential of opening up the re-knitting resource to the knitting community in the future. Finally, I discuss how the metadesign role differs from that of the 'conventional' knitwear designer-maker, in terms of design activities and relationships with objects and users.

OPENING UP MY PRACTICE BRINGS INTO QUESTION MY ROLE AS A PROFESSIONAL DESIGNER-MAKER, IN TERMS OF BOTH THE DESIGN ACTIVITIES IN WHICH I ENGAGE, AND MY RELATIONSHIPS WITH AMATEUR KNITTERS.

INTRODUCTION

As a knitwear designer-maker, I have been involved in the exploration of fashion and sustainability for the last decade. The name of my label, Keep & Share, reflects my interest in longevity and versatility as a means of extending clothing lifetimes. Since 2004, I have designed and made knitwear using craft techniques in my studio; over the years, my practice has developed to encompass hand and machine knitting workshops, community knitting projects and the design of hand knitting patterns.

Through these activities, I have become increasingly interested in working with amateur knitters, and the radical potential of amateur fashion making. If we make and mend more clothes ourselves, it could make fashion slower, more meaningful and more sustainable. However, such practices will only be truly beneficial if we feel happy wearing the clothes we have made. Thus, one aim of my PhD research is to investigate the complex relationships between making, fashion and well-being; I want to find out how making practices affect the process of identity construction through dress.

The central proposition of my research is to explore the idea of openness within my designer-maker practice. This theme emerged from several separate spheres. On a personal level, I realised that many amateur knitters feel hemmed in by conventional patterns and the unwritten 'rules' of fashion. My instinct is that by opening up my practice, I might also help to open the practices of individual knitters, for mutual benefit. Taking a much broader perspective, the idea of openness is being explored in many fields; this 'megatrend … can be labelled the Rise of Open-X' (Avital 2011: 51). Openness involves 'sharing, reciprocity, collaboration, tolerance, equity, justice and freedom' (Avital 2011: 50). I would make a

direct link between openness and participation; participation is regarded as a key characteristic of an ecological paradigm (Sterling 2001), and rated highly in terms of well-being (NEF 2009). Yet another prompt for openness can be found in the changing culture of knitting. Knitters have embraced the potential of the internet for connecting and sharing, and the lines between professional and amateur are becoming increasingly blurred as committed enthusiasts share their designs and expertise online (Humphreys 2009). The emergent culture of indie craft challenges the professionalised, sanctified world of studio craft – in which I would place myself – and questions the importance of its validating institutions (Stevens 2011).

Opening up my practice brings into question my role as a professional designer-maker, in terms of both the design activities in which I engage, and my relationships with amateur knitters. In this paper, I will draw on a range of sources to explore ways in which I might address openness, and discuss their implications.

METHODOLOGY

I have adopted an approach of 'research through design', in which knowledge is produced 'by engaging in the generative, in the act of designing' (Sevaldson 2010: 13). This strategy is informed by recent sustainable design research projects, which have explored ideas identified as 'sustainable' in theoretical terms – such as upcycling or local production – through design (e.g. Earley 2007; Walker 2008). Such research progresses sustainable design knowledge, highlighting issues and opportunities which could not otherwise be anticipated. While I am exploring the idea of openness on various levels, in practical terms I am designing ways of re-working existing knitted garments that can be carried

out by amateur knitters. As I do so, I aim to generate new knowledge that will be of use to others.

The research comprises two phases of activity. The first phase involved independent design research; I worked alone as a reflective practitioner (Schön 1991), developing re-knitting methods through iterative cycles of planning, sampling and reflection. During the second phase, which is currently in progress, I am working with a small group of female amateur knitters, ranging in age from early 40s to mid 60s, at a series of discussion and workshop sessions at my studio in Hereford. This phase draws on work in creative research methods (Gauntlett 2007) and critical making (Ratto 2011); the group and I are testing and extending the re-knitting techniques, but also discussing the broader issues – related to fashion, making and well-being – raised by this activity. At the first session, I talked to the group about their experiences of knitting, using patterns and making adaptations; their comments (shown in italics) are used in this paper.

My research is firmly situated in my existing designer-maker practice. Robson (1993) discusses the advantages and disadvantages of being a practitioner-researcher, '… someone who holds down a job in some particular area and at the same time carries out … inquiry which is of relevance to the job' (Robson 1993: 446). Working in this way offers the benefits of insider knowledge and prior experience. However, the insider vantage point can cause difficulty in maintaining an open mind. As Robson points out, this is a problem for all researchers, and in my situation can only be addressed by adopting a consciously subjective approach and a critical view of the subject. Despite the risks, I feel that it is important to carry out research as a practising knitwear designer.

'The practitioner's perspective… has been largely ignored in the academic development of the field of fashion. Redress of this imbalance can do much to locate fashion practice at the centre of its own academic study, rather than as a subject incidental to others.'

(White & Griffiths 2000: 3)

KNITTING PATTERNS: A CLASSICAL COMPOSITION

In my experience, the vast majority of knitters use patterns which are designed by professionals. Conventionally, a knitwear designer creates and publishes a pattern, which is then followed exactly – or as closely as possible – by the knitter. The pattern lists the yarn and needles to be used and details the fabric gauge which should be achieved, before providing complete instructions in pages of densely packed textual or visual code.

In The Poetics of the Open Work, Eco ([1962] 2006) discusses openness in musical, literary and artistic works. He focuses particularly on the relationship between a musical composer and performer, which offers a useful parallel with knitting.

'A classical composition … posits an assemblage of sound units which the composer arranged in a closed, well-defined manner before presenting it to the listener. He converted his idea into conventional symbols which more or less obliged the eventual performer to reproduce the format devised by the composer himself.'

(Eco [1962] 2006: 21)

We need only to substitute a couple of medium-specific terms in this statement – stitch for sound, designer for composer, knitter for performer – to find a surprisingly accurate description of a knitting pattern, created by a designer and subsequently followed by a knitter.

Although Eco describes this type of composition as finite and prescriptive, and therefore quite closed, he does identify a way in which it could be seen as open: through individual interpretation. Although a knitting pattern is fixed and complete, the knitters creating that item can bring to it their own interpretation and associations, in the same way as '… consumers often remake the meanings of products' (Melchionne 1999: 247).

It could also be argued that, while individual patterns are 'closed', the choice of patterns available is wide open; over 300,000 patterns are currently listed on the database of the knitting website, Ravelry.com. From such a range of options, you might think that a knitter could always find a pattern to suit their requirements. However, my research has shown that knitters are often not content with what is on offer; they sometimes discover mistakes within the pattern, and cannot always find styles that they want to knit:

A lot of the patterns are for ill-fitted, sloppy, shapeless garments, or some ridiculous frill here or something there… stuff that you're never going to wear.

Knitting patterns could be seen as open, given that many knitters do adapt the design to their own requirements. Indeed, patterns often include multiple sizes and sometimes a number of style variations. Knitters frequently venture beyond this sanctioned level of adaptation, by using a yarn different to that specified in the pattern. More experienced knitters might even use a yarn of a different weight, requiring them to recalculate the number of stitches and rows to suit the new gauge, or vary the design, creating a different shape than that suggested:

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I look at things and think, I really like that, but I would make the neck lower, and I'll make the sleeves shorter, and I'll make the body longer ... I'll take this idea, I'll take ninety percent of this pattern, and I'll just do the bits that I want, so that I know I'll wear it and be comfortable in it.

However, such adaptations require a high level of expertise, and many knitters do not have the confidence to attempt them. Even for those who manage it, there is sometimes a sense that their adaptations are remedial, helping them achieve the intended design with a different yarn, for example, rather than delivering creative satisfaction.

Despite having identified several ways in which conventional knitting patterns could be described as open, my conversations with knitters have shown that they want to have more freedom and creative input than can be delivered through this medium:

I don't like using patterns, I don't like being told what to do...

WORKS IN MOVEMENT

Eco ([1962] 2006) discusses a number of contemporary musical compositions by Stockhausen, Pousseur and others, in which the performer has greater autonomy than in traditional compositions. He describes these pieces as 'works in movement', which are open in a much more definite and tangible way than the classic compositions discussed earlier. 'In primitive terms we can say that they are quite literally 'unfinished': the author seems to hand them on to the performer more or less like the components of a construction kit' (Eco [1962] 2006: 22).

This changes the relationship between composer and performer – or, in our case, designer and knitter. In the conventional arrangement, the knitwear designer prescribes and the knitter either follows obediently or attempts to adapt the instructions, without support. With a work in movement, the performer 'must impose his judgment on the form of the piece, as when he decides how long to hold a note or in what order to group the sounds' (Eco [1962] 2006: 20). Without the performer's decisions, there can be no

performance; the composer actively creates the space for the performer to contribute. Henri Pousseur describes his piece, Scambi, as 'not so much a musical composition as a field of possibilities, an explicit invitation to exercise choice' (quoted by Eco [1962] 2006: 20). If we translate this model to knitting, we find designer and knitter becoming collaborators and co-creators. Their relationship is changed, and the implicit hierarchy which places the professional designer above – and distant from – the amateur knitter is challenged.

Are there any examples of knit-based works in movement? We might first consider the designers who offer what we might term 'skeleton' patterns. Perhaps the most engaging is Elizabeth Zimmermann, who offers what she calls 'Notes for Thinking Knitters': detailed guidance on constructing her designs, using the knitter's own gauge and style preferences (e.g. Zimmermann 1974). Similarly, books such as The Sweater Workshop provide patterns without specifics such as yarn, needle and gauge. The author claims that 'the elimination of these restrictions allows you to design a sweater in an atmosphere of creativity, and with a spirit of adventure' (Fee 1983: 1). These resources provide more space for knitters to make their own decisions, and could be described, to some extent, as works in movement.

While hunting for designers employing a playful approach to knitwear design, more akin to the musical examples described by Eco, I came across Nikki Gabriel's Construction project. Each pattern in the series comprises a number of stages, each building on the last to create a new and different accessory or garment. The knitter exercises choice by deciding at what stage to stop knitting and wear the item (Gabriel undated).

Probably the most playful and open example of a knit-based work in movement is 'How To Make A Piece Of Work When You're Too Tired To Make Decisions' by textile artist Freddie Robins (figure 1). Although Robins both composed and performed the instructions, she used an element of chance which mirrors several of the compositions described by Eco.

> *'I used 3 dice, one to decide the colour of the yarns that I would use, one to give me numbers for stitches and rows (3, 4, 8, 12, 15 and 17) and the other to decide the actions ... Each individual piece was made using 10 actions ... The instructions and dice are open to modification should it become necessary or should I feel like it.'*
>
> *(Robins ca. 2004)*

BEYOND THE DESIGNER'S AUTHORSHIP

While works in movement create space for the performer to contribute to their making, it must be noted that the composer still retains authorship. As Eco points out, the performer is invited to make 'an oriented insertion into something which always remains the world intended by the author ... the work in question will still be his own' (Eco [1962] 2006: 36). The options offered are not completely open; the author creates a structure, which involves inherent restrictions and limits the possible outcomes. I am interested in considering how to move beyond the designer's authorship, both as a philosophical exercise in openness, and because I want to help knitters to feel a sense of authorship themselves.

The logical extreme of this exploration is for amateur knitters to design their own items, from start to finish. However, knitwear design can be difficult and time-consuming. The knitted structure imposes restrictions, 'requiring consideration of technical constraints within the earliest design phases and throughout the design process' (Petre et al 2006: 186). As a professional knitwear designer-maker with a decade's experience, I expect to make several versions of a new design before getting it right. Even with careful sampling and calculating, unexpected outcomes occur, and this can be disheartening for time-limited amateur knitters. I would agree that 'one of the differences between a professional and an amateur is that the professional is less afraid of making a mistake' (Nabney 1991: 7).

There are tools that aim to help amateurs, such as stitch dictionaries and books on knitwear design. However, such tools are often so generic, or full of options, that the user can become overwhelmed by the choices available. It seems that it is useful for amateurs to have something more structured to work from, as a visual starting point:

> *I find it's difficult to make [a pattern] up altogether. I've done it, but... it's much better to have something written in front of me and think, I'll just change that a bit, than to start from scratch.*

There is scope for activity between a work in movement and the wide open space of autonomous design. Pousseur describes the choices made by performers of his pieces as 'acts of conscious freedom' (quoted by Eco [1962] 2006: 23); how might we amplify this conscious freedom, and encourage knitters to break out of the confines of the designed 'work'? What will happen if we further disrupt the authority of the professional designer?

Another reason for my interest in this approach, in which a designer offers support but not authorship, is that it is particularly appropriate for re-knitting existing items. When we create a garment from scratch, we are fully in control; however, when we alter an existing garment, we must negotiate with it. Every item of knitwear in our wardrobes has a different combination of characteristics in terms of gauge, structure, yarn, colour, shape and condition; these variables (taken with the assumption that we wish to finish with a wearable garment) largely preclude a prescriptive, or even 'in movement' approach to design.

Designing re-knitting processes therefore presents a specific, and quite unconventional, challenge. Whereas various writers have discussed the importance of designing objects that can be modified and re-used – from houses (Safdie & Alexander 1974) to packaging (Fisher & Shipton 2010) – I am proposing to design re-use itself, by developing transformative processes that can be applied to any existing knitted garment. We can describe the design of works in movement as designing actions to be taken by others. Re-knitting requires us to extend this: designing actions to be taken by others, which involve those others – amateur knitters – designing.

THE METADESIGN OF RE-KNITTING

For the re-knitting design project, I have developed a range of options for re-working any weft knitted garment, whether hand or machine knitted, one-off or mass-produced. I am developing the treatments to include instructions, often in the form of step-by-step photos and stitch patterns. In some cases I am creating new material; for many I am gathering relevant pre-existing information from books and websites. Contemplating the potential size of the whole resource is rather overwhelming; gaining an understanding of how to negotiate this mass of information has been the central challenge of the project. I want to offer knitters as many re-knitting options as possible; however, I am acutely aware that too much choice is stifling.

Jos de Mul's essay in a recent book, *Open Design Now*, offers a useful way of thinking about this challenge. He argues that the database – an open resource with an almost infinite number of combinations – has become the central metaphor of our era. In his opinion, 'open, database-mediated design ... calls for a new role for the designer ... he should become a metadesigner' (de Mul 2011: 36). The metadesigner helps the amateur move through infinite combinations, mediating and enabling their experience. This role involves two interrelated tasks: limiting the overwhelming array of choices, and providing a supported pathway to follow.

Considering the first of these tasks, de Mul explains that 'the designer's task is to limit the virtually unlimited combinational space in order to create order from disorder ... most of the (re) combinations of design elements will have little or no value' (de Mul 2011: 37). In the case of my re-knitting project, I have certainly felt the need to create order, and to eliminate options; however, I am conscious of the question of authorship. If I choose the elements to discount, am I denying amateur knitters the chance to consider potentially valuable options? On what should I base my decisions: aesthetics, technique, tradition?

The answers to these questions have emerged pragmatically through the collaborative testing process. By sharing my decisions with the knitting group, I have developed a tacit understanding of the right balance between choice and guidance. In general, I have prioritised instructions for methods which we, as a group, find most straightforward to execute and which give a satisfying finish; I have eliminated options which are awkward to perform, or create a messy result.

De Mul describes the second metadesign task as 'to create a pathway through design space, to combine the building blocks into a meaningful design' (2011: 36). This seems to link directly to the design challenge I outlined in the previous section, of designing actions to be taken by others, which involve those others designing. De Mul, like many of the other writers included in *Open Design Now*, envisions a user who has no design experience, no making skills and no time for the trial and error of playful development. In contrast, I am seeking to engage with a group of keen knitters, who have a desire to gain greater control over their activities through designing. Therefore, I want to encourage knitters to actively adapt the contents of the resource to suit their own aesthetic taste, and the specifics of the garment they are altering.

As I explained earlier, knitwear design is inherently complex; with the further complexity of personal adaptations, the need for a pathway – a supported route through the jungle of possibilities – is even more apparent. In a situation like this, with diverse options and many factors to be considered, 'most of us are not born with sufficient imaginative capacity to fully utilize the potential ... most of us need help' (Rijken 2011: 155). After each workshop session, I have reflected on the needs of the group and written guidance accordingly. Over time, this guidance has developed into a staged re-knitting pathway (figure 2) and advice relevant to each stage and treatment.

De Mul's metaphor of a database has helped me to tame the initial mass of information into a structured online resource, hosted on my website (www.keepandshare.co.uk). I had not planned to work in this way; it emerged as I developed the instructions, patterns and guidance, and needed to share them with the group. I have built, organised and re-organised the resource in the open, working at all times on the live version of the site. This is a new, yet liberating, approach; in the past, I have always refined any output – garment, image, promotional material – before releasing it into the world.

DESIGN LITERACY

The re-knitting project will culminate in the participants altering a knitted item from their own wardrobes; this task requires them to make complex design decisions. Two other essays from Open Design Now offer useful ways of thinking about how to support amateur design activity. Rijken (2011) describes the mix of knowledge and skills needed for amateurs to design as 'design literacy', a concept with three interacting levels.

> *'These are the pillars of what we can call 'design literacy': the development of vision (strategic), the formulation of a design (tactical), and technical production (operational).'*
>
> *(Rijken 2011: 156)*

As a professional designer, it can be difficult to contemplate how to encourage design literacy in amateurs. While in principle I subscribe to the view that design is a universal human activity (Papanek 1984), knitwear design involves many creative and practical skills. It is difficult to know how to pass on such skills in a meaningful way, particularly as my own experience stretches over many years of higher education and professional practice. Rijken is encouraging, arguing that professional designers have the expertise to pass on design literacy.

> *'They can be heroes when their high-quality designs inspire eager amateurs. They can produce examples to be shared on online platforms that can be used, modified and re-distributed. They can explain how they work.'*
>
> *(Rijken 2011: 157)*

I have tried to address all three levels of literacy identified by Rijken in the re-knitting workshops. As the online resource has developed, I have realised that its design will shape how – and whether – it is used, by both the group and outsiders. In designing the resource, I have found it useful to draw on Avital's directives for creating material which supports amateur design and making. He suggests that this supportive infrastructure should be inspiring, engaging, adaptive and open (Avital 2011). Accordingly, I have tried to make the online resource friendly, self-explanatory, visual and easy to use, and have included images and descriptions of the treatments I have done to my sample garment (figure 3).

OPEN SOURCE

Avital's final directive brings us back to the idea of openness. We have travelled far from the conventional situation, in which a professional designer creates a 'closed' pattern to be knitted by an invisible amateur. The metadesign approach gives room for the knitters to make their own design decisions, with support; however, there is one further step towards openness that could be taken. In the re-knitting project, I am creating a resource to be used by others, but the entire content – at present – is written or gathered by me. The logical progression is for the content to be collaboratively created by a community of re-knitters.

'In today's society, individuals often collaborate in producing cultural content, knowledge, and other information, as well as physical goods. In some cases, they share the results and products, the means, methods, and experience gained from this collaboration as a resource for further development; this phenomenon is referred to as commons-based peer production.'

(Troxler 2011: 88)

As Troxler explains, the area in which commons-based peer production is most widely practised is software development. The open source operating system, Linux, is a prime example. This world-class system is designed by thousands of voluntary part-time developers, connected only by the internet (Raymond 1999). Linus Torvalds, the originator of Linux, blurred the boundary between user and designer, and thus 'ensured that the purpose and functionalities of Linux would now emerge from the efforts of multiple contributors' (Garud et al 2008: 357). It is important to note that the embracing of multiple contributors does not just share the workload; it opens up the project to the desires and interests of the community, rather than a single owner or author.

The success of commons-based peer production is generally attributed to the widespread availability of digital information technologies (Troxler 2011). Communities are now able to use the web to share their collaborative efforts, for example digital product designs (Thingiverse) and instructions for a range of projects (Instructables, iFixit). The knitting community has embraced the ability to share projects and problems via the internet, connecting through their niche interests. Ravelry offers an interesting example of peer production; members of the site regularly post images of completed projects, meaning that popular patterns are accompanied by multiple interpretations, with details of yarns used and adaptations made. A similar resource could be developed, over time, for re-knitting.
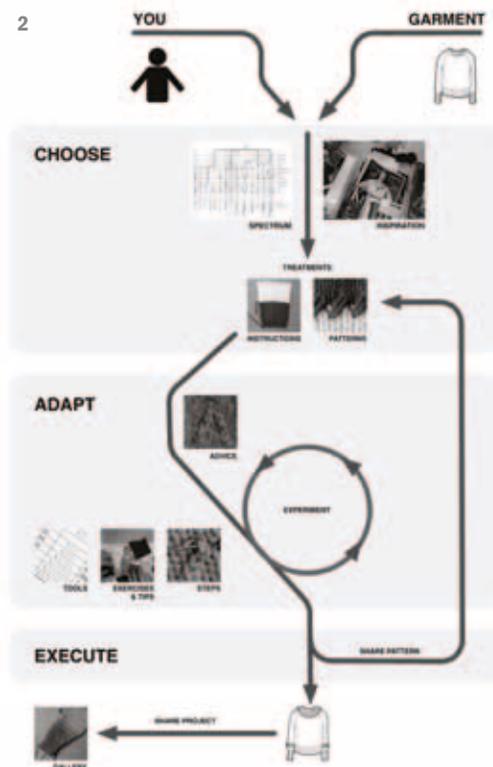
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Knitters would benefit from a gallery of examples to inspire them, created by the community. With this in mind, I will be asking my research group to share their altered garment projects on the online resource.

It is interesting to consider whether knitters might be interested in working more collaboratively: contributing to the instructions and patterns within the re-knitting resource itself, rather than just sharing their completed projects. Considering the commitment and enthusiasm of many amateur knitters, I believe that this may be the case. The Queen Susan Shawl project provides one inspiring example of knitters working together collaboratively. A highly complex Shetland lace shawl pattern was created by members of the Heirloom Knitting group on Ravelry in a matter of weeks. One member posted a picture of a shawl on the group forum, unwittingly initiating 'a mammoth project involving more than 30 people and hundreds of hours of charting, swatching, proofing, writing, editing, and layout' as the group sought to reverse engineer its pattern (Fleegle 2009). These knitters were connected only via the internet and worked

together in a similar way to open source software developers; as one of the group described, they were 'a far-flung band brought together by technology and a love of this craft' (Shieladeedee, quoted by Fleegle 2009).

THE ROLE OF THE METADESIGNER

Having settled on the role of metadesigner for my re-knitting project, and acknowledged my aspirations to open up the resource as a collaborative endeavour in the future, I will conclude with some thoughts about how the role differs from that of the 'conventional' knitwear designer-maker.

As Atkinson (2011) points out, in open design the designer's role does not disappear, but changes. My activities have certainly changed; rather than designing 'closed' patterns for knitted garments, to be produced either by me or by amateurs, for this project I have been designing fragments of knit processes and gathering and developing instructions and advice. I am designing information: writing, drawing and photographing as well as knitting. If we consider the activity of managing an open source resource, the activity becomes even more 'meta'; designing the structure in which others create content to help others design and make. There is also a change in my relationship with finished objects. When I design and make, I have the satisfaction of holding a new garment that I have constructed. When metadesigning, I 'might never see or even be aware of the results of [my] endeavours, changed as they will be by users to suit their own needs' (Atkinson 2011: 30).

It is worth considering: will this new role satisfy me as a designer? I think so; Atkinson encourages designers to see open design as an opportunity

to become more closely involved with making. I like this approach; it reminds me that by supporting and influencing the work of amateurs, my efforts can have a far greater impact than would be possible by making alone.

Becoming a metadesigner involves a change in my relationship with amateurs, with a significant shift towards collaboration. For me, this is positive; it presents me with a new way in which to interact with others, beyond selling products or teaching skills. Jones (1991: 205) describes this new role in a particularly engaging way: 'his role, once he'd given up part of the design function to his clients, became, as he said, that of professional encourager.'

Finally, I would like to take a moment to consider whether amateur knitters benefit from openness, and whether they feel able to embrace the opportunity to design for themselves. As Jones (1991) describes, it can be difficult for amateurs to 'imagine otherwise'.

> 'It's so hard to unlearn, and unlearning is the essence of designing. To share the design process with users is not as easy as it sounds. It needs a change of roles, of self-images, on both sides.'
>
> *(Jones 1991: 205)*

Furthermore, while the knitters I speak to express a desire to design and to be creative, I am aware that in the ambivalent world of fashion, the sanctioning influence of the 'professional' designer may ultimately provide confidence and comfort. The tension between all of these factors is fascinating; I intend to examine the knitters' experience of the project – and of design – when the workshops are completed.

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FIGURE CAPTIONS

Figure 1: 'How To Make A Piece Of Work When You're Too Tired To Make Decisions' by Freddie Robins.

Figure 2: The re-knitting pathway.

Figure 3: Sample garment with three re-knitting treatments.