Research Article

Co-creating and Bricolage Among Mask Stitchers in the US Pandemic

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Abstract.

Stitchers, both trained and untrained in the design process, made tens of thousands of cloth masks during the COVID-19 pandemic in the US. In doing so, they demonstrated how collaboration takes place, shaping relationships between diverse people as well as the way the pandemic was experienced. This chapter is based on an ethnography conducted between 2020 and 2022 where the different working processes and exchanges of skills and knowledge between designers and non-designers were observed. A shift in identity was apparent with formally-trained designers from the costume, theater, and film industry learning to work with uncertainty and lack of material inventory. Simultaneously, those stitchers who lacked formal design training were exposed to it by working with designers. That is, during a time of crisis, designers' *bricoleur* capacities were apparent while their collaborators became quasi-designers. Such processes were co-creative means of leveraging solutions for unprecedented problems.

Keywords: bricolage, co-creation, collaboration, masks, pandemic

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1. Introduction

Design engages with the world from a certain socio-cultural position and takes one towards a future location, one whose spatiality and materiality can be explored through anthropological reflection on design thinking. Indeed, the pre-figurative power of design has long been acknowledged [1], [2], [3]. Everybody can design, as long as design is approached as a capacity for sociality that is to be developed through co-creation and materiality.

Designing new ways of living and relating involves practices as material and embodied sites of knowledge-making, organization, and innovation. By focusing on practices as (responses to) events that generate further possibilities, anthropology, specifically material culture studies, provides avenues for studying sociality via actions and effects.

When the world is viewed as “things in motion”, in relations of constant objectification and (dis)incorporation [4], collaboration is a useful starting point to explore co-creation.

The case study explored in this chapter is based on my ethnography [5] of US mask stitchers during an early period of the pandemic. It reflects on co-creating as a process of collaborative making and making do in response to crisis and heightened uncertainty. Here, mask designers/makers could be regarded as co-creators, connecting their problem-solving capacities through relationality and materiality.

2. Methods and Equipment

This chapter discusses excerpts from my ethnography of pandemic mask makers in the US, previously placed in dialog with anthropological literature on sociality, materiality and design [5]. Data was collected in a sustained manner over 2020-2021, through emailed surveys, Zoom and phone calls, and face-to-face discussions. About 20 stitchers from the costume, film, and theater design world in various parts of the US were interviewed over a period of a year with subsequent follow-up conversation with a smaller group. In addition, I interviewed 4 stitchers who were non-designers, including people with some prior sewing experience, such as quilting, as well as those who learnt to use a sewing machine during the pandemic. For the purposes of distinction in this chapter, mask stitchers are referred to as (formally trained) designers and (untrained) makers/non-designers.

3. Results and Discussion

Interviews with stitchers in the US during the pandemic indicated a section of the population that thought about masks in a sustained manner, helping explore how pre-existing practices could be attached to objects and adapted for new purposes. The US was a nation lacking a widespread culture of cloth masking and where face coverings were often viewed suspiciously. Influenced by a host of socio-political factors, masks quickly became a political issue rather than a public health protocol.

As an activity that spans the subjective and objective, and art, craft and science, design’s shifting relationship to protocols and new epidemiological data was particularly noticeable during the pandemic. In some ways, stitchers were susceptible to knowledge gaps in the Covid-19 pandemic. This included being part of the lay public, and accessing the same scientific conclusions and health policy advice as well as being restricted in

material inventory. Feelings of concern, fear, and anxiety around viral spread data also indicated that the uncertainty was not just a cognitive entity but a social one. Stitchers bridged information gaps and restricted mobility through personal networks, skills, and training as well as relying on emotions and feelings for risk calculation and decision-making [6], [7].

While notions of problem solving may be common to creative processes, here the quintessential use of the concept was in the identification of a need and development of a solution through a fabric mask. By comparing design frameworks to scientific processes, we can understand how they vary in their goals [8]; "science brackets out events…to arrive at the essentials and primary qualities" while design as bricolage incorporates contingent events to create an artifact or structure [9]. That is, science uses the structure of theories and hypotheses to arrive at results whereas making do creates structure out of constraints and uncertainties. During pandemic crisis, designers were found to rely both on their training as well as willingness to works as *bricoleurs*, responding to limitations and creating emergent identities.

The early period of mask making was one of experimentation and adaptation since nobody knew how a protective cloth mask was "supposed" to fit. Peoples' first response was to adapt their experiences with masks in woodshops and dyeing labs, making cloth masks as close to the N95 style masks as possible or envisioning how the form of a plastic chemical respirator could be made in fabric. In the months between March 2020 and June 2020, things seemed to change on a weekly basis with discussions about the various types of fabrics, home science experiments to discern filtration, and a "rush" on quilter's cotton. There was debate about the best kind of filter and how to add pockets for filters, whether it was another layer of fabric, folded paper towels, tissue, soft craft paper, coffee filters, or vacuum cleaner filters. As they read and learned more from news and social media, designers gravitated toward the patterns released by hospitals and websites created by fellow makers. Makers, many of whom had just started sewing during the pandemic, also got their guidance in the form of websites, social media, and videos from US fabric stores and clothing pattern manufacturers.

In translating Centers for Disease Control and Prevention's mask recommendations in the US into a design principle, sewing a mask became a problem of balancing the type of cloth, say, a 100% cotton with a tight weave, and the number of layers to get the best filtration without too much air resistance. While none of my interlocutors cited mask filtration rates or specific scientific studies, they did speak in terms of material choices, for instance, using words such as "quilter's cotton" or "batik cloth" to indicate

sources of tightly woven cotton. These kinds of decisions were examples of a mentality of what was viable rather than what was ideal, bridging gaps between different types of knowledge discourse and what could be realized in an artifact.

As a process of tinkering, making do or bricolage [10], precipitated by pandemic uncertainty, mask stitchers in the US were found to use abductive reasoning as they experimented, developed prototypes, and tested ideas. In doing so, they acted as "wayfarers" [11], navigating their way through the world and responding to the possibilities afforded by their milieu. Part of this navigation involved working with others who approached stitching differently, that is, as a collaboration between those trained in the design process and those who became acquainted with it because of their contact with designers.

While techniques in traditional societies are strictly governed by rules of how they may be accessed or acquired, in modernity, techniques have become something that can be acquired through education and, in times of crisis, collaboration and exchange. Power is implied in the hierarchy of knowledge in terms of who imparts and who receives. Part of the reason why a person follows a particular technique is the confidence felt in those who have authority because they can successfully perform something. For instance, patterns generated by, or advocated by, hospitals were the first to be adopted by designers, reasoning that if hospitals used them then they were probably the best.

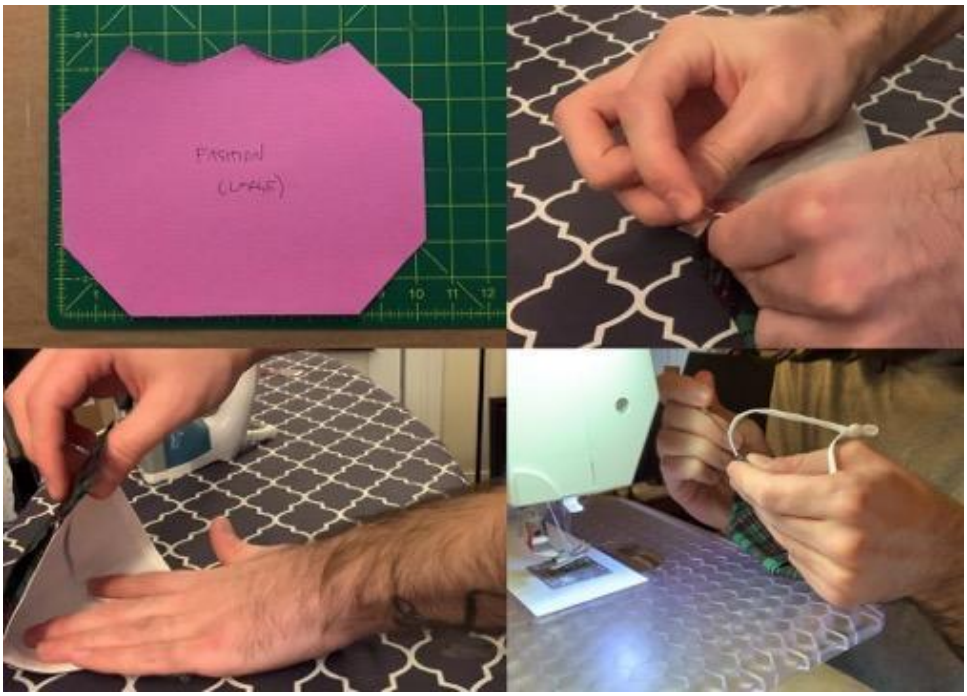

Figure 1: The different kinds of skills and knowledge that come together while sewing a mask. January 2021.

Certain moments stand out in the sewing process for a “3D mask” pattern as observed through video recordings made by Vinnie, a trained costume designer from the theater world. In the collage in Figure 1, the visual knowledge contained in the grid is translated into the pattern template, and from there into various actions, incorporating the whole body as well as an array of tools. To focus on the grid as the starting point of a visual structure, its power is wielded as part of the resources that make up possibilities, providing a double movement that connects idea and matter, the abstract plan and the tangible result. To return to the mask-making process, after cutting the fabric for an inner and outer layer according to a template, Vinnie sews the edges of a batch of masks together in one long continuous movement, a technique borrowed from quilt makers. When turning a sewn mask inside out, he uses a sewing pin to tease out the cloth from a seam and ensure a crisp edge. Such gestures are vital for fit, ensuring that the inner and outer layers of fabric are aligned before further sewing. In the last step, he adds elastic ear loops using a pointed metal tool; by introducing a different type of action elastic bits are inserted into seams and then sewn.

Much of this work may be attributed to the care that the designer demonstrates in making the mask, something we may also identify with the affective side of skill. Vinnie has a graduate degree in costume production, and experience in designing and sewing garments, supplemented by what he sees on social media. The skills he uses in mask making are those he has used before in other situations, a practice in the sewing world where “we all riff off of each other and things we see someone else doing to make things work best for us.” The smooth and flexible movement of fabric under the sewing machine needle is accompanied by his use of his hands, touching the fabric repeatedly to feel whether the inner lining is lying flat and taut (Figure 1, lower left- hand corner). Vinnie labels this his “perfectionist mind” but this is also part of a “muscular gestalt” [12] that responds to situations.

From a phenomenological perspective, events project a “double horizon,” of the past and future around the present but in the case of the pandemic, movement was also interrupted or brought into question. People experienced a time warp through curtailment of activity and a loss of the hold that one’s senses have on temporality as the passage of something. This awareness of not having an optimal grip on the situation created tension, and finding an impetus to make do and move despite the imposed stasis also became a pandemic phenomenon. Searching for “maximum grasp” [13] could be regarded as a spatio-temporal phenomenon through which the perceiving body is able to grip objects in space and sense time so that flow is possible. This act

of gripping happens literally when a tool such as the stiletto operates as an extension of the fingers, holding fabric in place as it is fed under the presser foot of a sewing machine. By looking at how these small actions are performed and tools used, the power of making as a technique of "ongoing mastery"[12] is revealed.

As Manzini [2] notes people work like bricoleurs when a collaborative organization is put into practice for the first time, putting things together in diverse ways to fit a new purpose. In this case, designers adapted during the pandemic to act as *bricoleurs*, combining their knowledge of the design process with what was at hand. Bricolage was also a social process when designers and makers collaborated in mutual aid groups. During crisis, exchange took place through collaboration, blurring the boundaries between trained and untrained, and sometimes revealing differences. For instance, a costume designer reflected on her collaboration with a non-designer within a group. She noted that both of them worked well together but were "paying attention to very different things". While her own concerns with fit and longevity were adapted from her previous experience with costumes, the non-designer evaluated her work in a different way. The trained designer cited her attention to details, and her ability to realize durability and comfort as "qualities" in her masks. For the non-designer, the issue seemed to be productivity and the ability to sew large quantities of masks to meet urgent needs, also making her feel more valued in the group. This situation also invokes the social value of professionalization and how trained/untrained were perceived in this group but such a discussion is beyond this chapter's scope.

Based on this one cannot generalize about how co-creating takes place or conclude that non-designers are less concerned with production quality. However, this brief overview indicates the existence of different approaches to innovation based on prior experience and knowledge, and different goals depending on one's position in a socio-cultural context. This chapter has aimed at proposing the importance of an anthropological perspective on co-creating, and gestured at the types of sociality and materiality engendered. As such, design is a socio-cultural activity and stitchers used techniques assembled by, and for, types of authority. Costume designers and technologists, drew upon their identities as "trained professionals" during the pandemic. Simultaneously, makers who worked alongside designers were exposed to the design process.

4. Conclusion

During the pandemic, designers did not simply navigate a pre-determined world but actively made knowledge that helped contain the uncertainty of the pandemic as well as created new narratives around masks as protective objects. Problem solving emerged as the process of containing diverse tensions and entities, ranging from a lack of information to working with people who emphasized different things. While certain abilities, skills, and knowledge from pre-pandemic times were used as a starting point to assess needs and identify resources, developing a structure within which to act and move forward was a unique challenge.

A shift in identity was apparent with formally-trained designers learning to work with uncertainty. Simultaneously, those stitchers who lacked formal training were exposed to different processes and concerns by working with designers. Problem solving was not the resolution of contradictions but the feeling of viability and completeness with what was at hand; during a time of crisis, designers became *bricoleurs* while their maker-collaborators became quasi-designers.

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