Discovering the Familiar: Exploring Everyday Practice in the Design of Tools and Artefacts

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Abstract

The design of everyday objects and artefacts, tools and technologies can prove particularly challenging for design. Their very pervasiveness, ease of application and seeming simplicity can mask the complex array of human practice, knowledge and skills that enables their use posing serious implications for critical design research and practice. In this paper, we discuss an undergraduate programme: the Anthropology of the Object developed to encourage and enable students to explore and analyse the complexities that underpin the use and application of everyday tools and implements, the tacit knowledge, reasoning and practice on which participants rely in accomplishing routine actions and activities. The programme includes fine-grained field studies, naturalistic experiments, individual and group projects, to have students both alone and in collaboration with others to begin to discover and analyse the complexities of the commonplace to explore and reflect upon their import and implications and inform their design practices.

Keywords

ethnomethodology, everyday practice, experiments, field-studies, multimodality

Introduction

It has long been recognised that the (re)design of familiar objects and artefacts, tools and technologies poses particular challenges (Norman 1988; Luff *et al.* 2000;

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Szmanski & Whalen 2011). As pervasive features of our everyday activities, their application and use remain largely unproblematic and unchallenged. Their very familiarity masks the complexities of their application and use. In this paper, we discuss a distinctive approach to exploring and rethinking the familiar. It involves fine-grained, video-based, field studies of everyday situations, studies that examine the taken-for-granted practices, the tacit skills and reasoning on which people rely in the deployment and use of everyday objects and artefacts, tools and technologies (Polanyi 2009). The approach draws on analytic developments within the social sciences, namely ethnomethodology and conversation analysis. It resonates with cognate developments such as participatory design, activity theory and co-creation, but prioritises the ways in which participants themselves use objects and artefacts in the production of social action and interaction. The approach provides distinctive resources with which to examine, analyse and reflect on the *complexities of the commonplace*, and develop new and distinctive solutions that are sensitive to users, their circumstances and their cultures of practice.

(Dreamson & Khine 2022). It forms part of a programme of study that seeks to encourage, to draw on Malloy & Thomson (2023), exploration, interpretation and reflection—the collaborative development of insights, ideas and design.

The approach developed over some years for design students has emerged in part in the light of initiatives undertaken with regard to a rather different field of application, namely the development of advanced technologies. There has been a growing interest amongst both academic and industrial researchers in drawing on qualitative methods, in particular various forms of field study and ethnography, to inform the design of complex, interactive systems, an initiative that arose in part as a result of the growing dissatisfaction with more traditional requirements analysis and its difficulty in developing solutions that resonate with everyday practice and circumstance (Jirotka & Goguen 1994; Randall *et al*. 2007; Reeves 2011; Brown & Juhlin 2015). Our own programme is primarily concerned with enabling students to analyse and understand the complexities of familiar objects and artefacts, to explore how the application and use of everyday tools and implements relies upon a complex body of knowledge, skill and reasoning. Our interest is in enabling students to discover for themselves how the design of familiar objects and artefacts features in the practicalities of accomplishing everyday actions and activities.

The programme is broadly titled 'The Anthropology of the Object'. It is taught in the first year of the undergraduate degree in Product and Furniture Design and is concerned with encouraging students to adopt an analytic standpoint to towards everyday tools and implements, to examine their qualities, characteristics and complexities of use. The programme consists of a series of phases in which students undertake, both alone and in collaboration with others, field studies, 'naturalistic' experiments and the design and assessment of objects and artefacts, tools and implements. In this paper, we wish to introduce the approach and methods that form the foundation of the programme, its overall organisation and the individual and collaborative activities undertaken by students. We wish to discuss how particular forms of field study coupled with playful naturalistic experiments, provide the resources to enable students to explore and discover the complexities of the commonplace and reflect upon the ways in which the analysis of everyday practice is critical to design and developing an understanding of the needs, constraints and circumstances of users.

In recent years, we have witnessed a burgeoning interest in developing new and distinctive approaches to design and design methodology, developments that have sought to prioritise such matters as user needs, materiality, function and the interrelationship of natural and digital systems. Papanek's (1985) *Design for a Real World* was critical in this regard and has had continued influence on the emergence of a range of distinctive approaches including, for example, speculative design, interspecies design, co-design and participatory design. In various ways, these approaches reflect conceptual distinctions and debates within the social sciences and draw upon particular methodological concerns and commitments. Qualitative methods, very broadly defined, have proved of particular importance in this regard and provided the resources for many of these new and distinctive approaches. Alongside the more traditional 'techniques' such as in-depth interviews, focus groups and perhaps to a lesser extent field studies, we have seen the emergence of new methods that in some cases seek to reconceptualise phenomena and explore previously disregarded interdependencies and futures (Dunne & Raby 2013). Consider, for example, the pervasive influence of various forms of network analysis that seek to critically rethink the interrelationship of humans and objects, planetary organisms, resources and species (Latour 2005; Malpass 2019; Roudavski 2021) or, with a more empirical focus, sensory ethnography that has extended field work into immersive active research that directs attention to touch, smell and sound (Pink 2009). Whilst general debates on design practice and theory influence the structure of teaching delivery, some specifically target design research thinking in students (Hertzum 2014, Lees-Maffei & Houze 2024, Gal & Ventura 2014).

Our own approach also draws from developments in the social sciences, namely ethnomethodology and conversation analysis, in particular the growing corpus of research concerned with the multimodal interactional accomplishment of social actions and activities in everyday life (Goodwin 2017, Mondada 2021, Nevile *et al*. 2014, Heath 2013). It drives analytic attention towards practices and knowledge, the methods and reasoning, on which people rely in the production and recognition of social action and interaction, including the ways in which objects, artefacts, tools and technologies feature in the concerted accomplishment of ordinary, everyday activities. It is concerned with the fine-grained analysis of human conduct and interaction, the embodied, spoken and material action as it is accomplished within ordinary, everyday circumstances.

Exploring the tacit: fine-grained field studies

Our approach begins with the recognition that each and every action is unique, that our use of objects and artefacts, tools and technologies like any other action or activity is 'situated' and ongoingly accomplished with regard to the contingencies that arise within the circumstances at hand. The seemingly mundane actions in which tools, implements, objects and artefacts are deployed, rely upon a complex array of skills, knowledge and practice. These practical resources enable participants to produce routine and recognisable actions, to manage the contingencies and demands of at hand, to accomplish everyday tasks and activities. These practices and their discovery, form the initial focus of our programme, they provide a critical resource for understanding tools, implements and artefacts, their affordances and characteristics, their design and development (Figure 1).

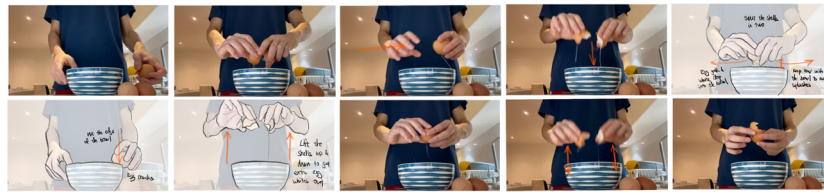

Figure 1
As the First Step of the Research, I've Recorded and Analysed Ways of Breaking an Egg. Through Constant Observation, I've Noticed That I Tend to Hit Eggs on Edges, Either of a Bowl, a Pan or the Kitchen Bench. This Action is so Common in Our Daily Lives That it is Almost Becomes an Instinct. Image: Y. Wang 2022.

However, discovering, explicating, revealing these 'mundane' practices poses a significant challenge. The skills and knowledge on which we rely when undertaking everyday actions and activities, including our use of objects and artefacts, tools and technologies, are as Garfinkel (1967) suggests, taken for granted, 'seen but unnoticed', tacit, disregarded resources that underpin and enable practical action. Indeed, as we become familiar with the use of any tool or implement, be it handling cutlery, driving a vehicle or playing a musical instrument, we disregard how it is done and the skills and practices through which we accomplish these routine actions and activities (Figure 2). It is surprisingly difficult, often frustrating, for people to recover or describe the taken for granted knowledge and skills they rely upon in accomplishing their everyday actions and activities (Goffman 1967, 1969). Questionnaires, interviews, focus groups and the like can prove fruitful and raise important issues, but rarely touch more than the surface when we seek to discover the skills, knowledge and reasoning that underpin our everyday actions and activities, — how people make, to borrow from Sacks (1992), objects and artefacts, tools and technologies 'at home' in their everyday lives.

Elsewhere we have touched on lessons that can prove helpful to students in the social sciences concerned with the fine-grained analysis of multimodal social action and interaction (Heath *et al*. 2010). For students of design, developed a

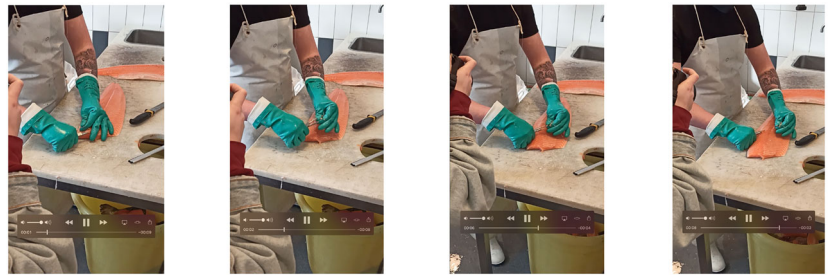

Figure 2
The First Process I Analysed was the Salmon; the Fish and the Surfaces Are Hosed Down; the Salmon is Then Washed and Descaled. Then the Head is Cut Off and the Fish is Sliced in Half Lengthways. He Then Carries on Slicing it Lengthways Into Thinner Layers and Occasionally Sharpens the Knife. Finally, He Uses a Fishbone Tweezer to Debone it. I Filmed Both the Descaling and Filleting Processes. The Video Demonstrates the Skill of the Fishmonger as the Processes are Done at a Very High Speed. Image: C. Hamilton 2021.

distinctive programme, a programme that draws attention to the importance of everyday knowledge and practice in understanding how tools and implements are used and their relevance to the development of new and distinctive ideas and 'solutions'. The programme is *project based* and collaborative, it includes fine-grained, field studies, experiments and the analysis, design and development of tools and implements. It involves students both individually and in collaboration with others in exploration and analysis and in presenting and documenting their observations, findings and implementations. The programme consists of a number of interrelated phases all undertaken in the first year of the degree.

- Collaborative and individual field studies & presentations
- Observation, design and naturalistic experiments
- Individual projects: field studies, design & development of tools

Fine-grained field studies coupled with extensive field recording and documentation are a crucial component of each phase of the programme. Beginning with an overview of a particular activity, setting or situation, students are strongly encouraged to focus their field studies on the specifics of how people use particular tools or implements in accomplishing certain actions and activities. They work within small groups of five or six, groups that frequently consist of students from very different backgrounds and cultures. They are required to decide on an area of study and then access a domain or domains in which to undertake their fieldwork. Domains have included restaurant kitchens, railway stations, museums, workshops, households, offices, studios, restaurants, classrooms and bars. Studies have focused on the use of a broad variety of objects and artefacts, tools and implements, including pens, cutlery, tables, chairs, cups, glasses, ticket machines, musical instruments, 'phones, bikes, hammers, doors' and so on. These field studies are undertaken *intensively* over a two-week period, and as they develop their observations and findings, individual students within the groups progressively focus on particular areas and aspects of activity, phenomena, tools and the implements. Working with others, we find students share and discuss their observations, their findings and data and ideas and insights (Figure 3).

In the introduction to the programme and as part of individual and group projects, we discuss the ethics of undertaking qualitative research and the importance of (i) gaining permission from all participants when undertaking field work and (ii) providing participants/subjects with the opportunity to withdraw from the research at any point during individual and/or group projects. If students gain permission to undertake video recording, we also stress the importance of enabling participants to have recorded material destroyed if they have any reservations concerning the research. As part of discussing the ethics of qualitative research in the classes and brief, we also address matters of preserving participants confidentiality, transparency in how the data will be used, and compliance with any local or specific requirements specified by particular participants and organisations. We find the ethics guidelines and procedures for qualitative research provided by the College (University of Arts London) the British Sociological Association (2017), the British Psychological Society (2021) and the UK Statistics Authority (2022) very useful in this regard.

Students are encouraged whenever possible and with the permission of participants to video-record the participants actions and activities, take photographs, produce drawings and sketches to scrutinise and document the fine details of the

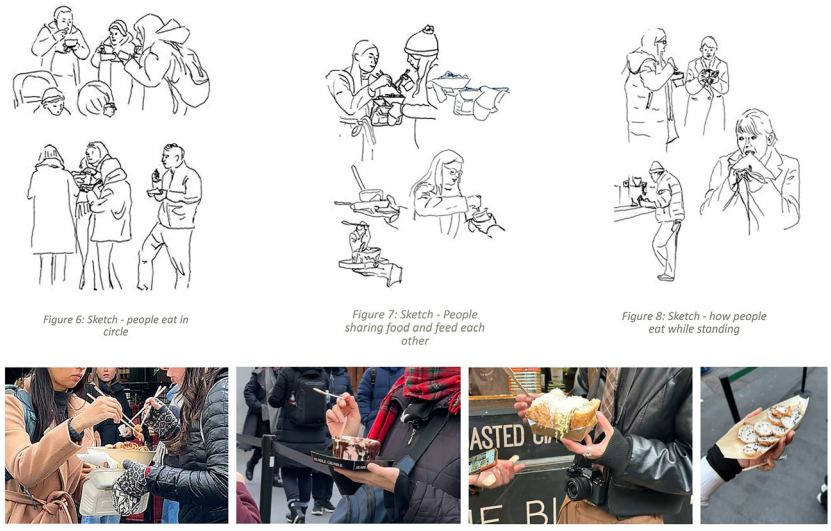

Figure 3
Initial Field Studies Street food. Image: Y. Chen 2024.

participants' actions. Video-recordings prove particularly valuable, providing students with the ability to repeatedly examine how participants use particular tools or implements and to explore how use is shaped with regard to the contingencies and circumstances at hand. Video-recordings provide the resources to explore in detail the sequences of action that enable the application of particular tools and implements, to explore its use with regard to the participant's interaction with others and to progressively identify the skills, knowledge and practice that inform and enable their use. In their initial group project and individual research, students undertake successive stages of field work and come to recognise the *interdependence of observation and analysis*, the importance of progressively focusing on aspects of a tool or implement in use.

From the outset, field notes are treated as an important analytic resource. They provide a location to document and portray observations and findings, to reflect and consider, to focus subsequent phases of fieldwork, and to progressively scrutinise, record and transcribe specific actions and aspects of participant behaviour (see for example Emerson *et al.* 2011). The notebooks provide a resource to develop ideas and insights, to discuss and debate, a means through which students explore and begin to reveal the complexity and character of objects and artefacts and the practices and knowledge on which their deployment relies. They are a resource for *exploration, reflection and imagination*.

Alongside field notes, students are strongly encouraged to transcribe brief fragments from the video recordings they may have been able to collect. Whilst we do discuss the more conventional methods for transcribing multimodal interaction (see for instance Heath *et al.* 2010), the focus on the practical and practiced use of tools and implements frequently demands a very different approach to transcription, an approach concerned with revealing the bodily and physical characteristics of their use and application. Students have proved highly creative in this regard, often seeking to portray the detailed structure of sequences of action through, for example, a series of annotated drawings or diagrams, successive still

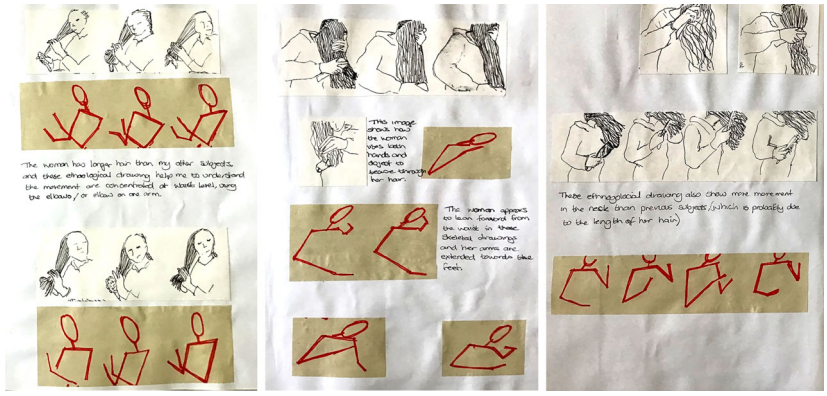

Figure 4
Observation of a Subject Grooming Their Hair. Image: Y. Campbell 2022.

frames or overlaid images. Here, transposition of video stills into drawing allows for both close, careful consideration and an anonymisation of data (Figure 4).

Within 2 weeks, each group makes a formal presentation to students and staff. The presentation places important demands on students, not only to prepare and coordinate a series of interrelated, individual reports, but to expose and reveal the intricacies and nuances that underpin the use of seemingly mundane tools and implements. We find students remarkably imaginative in the ways in which they explore and reveal the complexities of practice, highly sophisticated in the ways in which they produce multimodal, mixed-media representations of action, combinations of drawings, images, video fragments, pictures, diagrams and text in seeking to expose the mundane and its organisation.

Naturalistic experiments: playful disruption

Undertaking the preliminary projects in small groups provides students with the opportunity to begin to explore the everyday use of objects and artefacts and to analyse, share and communicate their observations. To enhance these skills and to encourage students to reflect on the design of tools and implements that underpin their use, the second stage of the programme consists, of for want of a better term, 'naturalistic experiments'. The experiments are undertaken 'in house' in a safe and secure environment. We discuss the ethical issues that arise in undertaking the experiments and the use of data collected by students. The experiments involve students in developing challenging tools and implements that serve to expose the characteristics and affordances of objects and artefacts, their application and use. In one sense, these naturalistic experiments serve, as Garfinkel (1967) suggests, as 'aids to sluggish imagination'. They are playful interventions that enable students to design for experimentation, to explore and have others explore, the ways in which they use incongruent tools and implements.

For the experiments, we focus on situations in which all students can participate and activities that rely upon a range of tools and implements. Over the last 3 years, we have focused on eating and encouraged students to explore the use of the range of tools and implements that enable the consumption of food—knives,

Figure 5
Data Capture Banquet I: Capturing 'Ordinary Affordances' Image: J. Cleverly 2022.

forks, spoons, chop sticks, fingers, plates, glasses, cups, mugs, crisp packets and the like. The experiment consists of two 'exploratory' banquets in which all students participate. At the first experiment, half the cohort dine whilst half observe, taking notes, pictures, sketching and video-recording. This first banquet enables students to undertake field studies alongside others, to study and reflect upon the use and application of these everyday tools and implements as people talk and interact (Figure 5).

For the second banquet, all students are required to develop tools and implements designed to problematise some aspect of the consumption of food or drink. These designs demand students reflect upon their observation and analysis of the use of conventional tools to develop implements that illuminate, indeed challenge the affordances of everyday objects, to throw into relief the practices and knowledge that underpin their ordinary use. As with the first banquet, students are divided into two groups, one dining with their new, distinctive implements, whilst the second group observes (Figure 6).

The banquets have proved popular and rewarding, serving to enrich the students' analytic skills as well as their understanding of the importance of the tacit to reflection, imagination and design. The very opportunity to undertake brief

Figure 6
Data Capture Banquet I: Data Collection and Analysis. Image: J. Cleverly 2022.

intense periods of field observation alongside others, to see and witness how others undertake and portray their observations and findings, facilitates a broader, more flexible understanding of the methods and resources that may be brought to bear in an understanding of the characteristics in the use of a seemingly simple tools and implements. In addition, observation of the deployment of 'disruptive' implements poses some stimulating challenges both for the application of methods and disentangling the affordances of objects and artefacts. Perhaps most critically, developing playful, disruptive tools and implements and using them to undertake a seemingly simple activity throws into relief the complexity and challenges involved in design, a recognition that the use of tools and implements, even the problematic, relies upon the remarkable human ability to make objects and artefacts functional for everyday tasks and activities (Figure 7).

Individual projects: disruption and design

For the final phase of the programme, students undertake an individual project. It involves a more extensive analysis of the use of a particular tool or implement,

Figure 7
Data Capture Banquet II: Naturalistic Experiments With 'Problematic' Tools. Image: J. Cleverly 2024.

often drawing from the earlier research they undertook as part of the group project. They are required to undertake a fine-grained field study to explore and experiment, and consider various ways of representing, interpreting and analysing the complex resources on which the use of a particular tool or implement relies. The principal aim of the project is to provide students with the opportunity of becoming more familiar with the approach and the problems and challenges in analysing the qualities and characteristics of a tool's use. Field observation and analysis, coupled with disruption and exploration, are critical to this process of discovery and encourage students to playfully explore and reflect on the complexities of the mundane.

At this stage of their degree during their first year, where students have relatively little background in design practice and process, we encourage students explore carefully the characteristics and qualities of tools and implements rather than attempt to develop new 'solutions'. Almost all the projects include some aspect of disruptive design: the transformation of tool or implement that attempts to throw into relief its affordances and the practicalities of use. We find that successful disruption relies upon detailed scrutiny of features of a tool's use in particular situations and circumstances and in focusing on particular elements students are able to throw into relief the affordances and quotidian practices that enable its day-to-day deployment. It is worthwhile briefly discussing a few examples drawn from the student reports.

Consider Figure 8, here we see how Maria has developed a taxonomy of kitchen tap use through a series of simplified outline photos. Maria continues to evaluate the mechanism carefully, considering the way in which the tap handle can be manipulated to perform several functions. This kind of exploration might be considered a kind of reverse engineering, allowing an appreciation of the original design and its function. During her research, Maria identified an issue concerning how hot and cold-water taps are generally positioned. Hot and cold water are often fed from different systems, and legislation required hot water taps to be positioned on the left, in part to help the visually impaired. A rule that mixer taps ignore.

Figure 8
L: Common Uses of Taps This image Depicts Most of the Objects That Require the Use of the Water From the Tap. It Helps to Answer Questions Such as 'Why is the Tap This Particular Shape?' or 'Why is it This Particular Size'. R: Tap Disruption Machine. Image: M. Gil 2021.

Building her observations and analysis, Maria then constructed a simple machine that, although allowing the tap to be operated, requires multiple rotations of the new extended handle so that the time taken to undertake an ordinarily straightforward operation is slowed down considerably (Figure 8). This project contributed a systematic understanding of the way in which a designed object functioned in detail, but also raises the possibility of an alternative design, a design that, though problematic for many, might well assist a user who is incapacitated or has restricted movement. Indeed, the project threw into relief how a significant interference in a design might undermine some individuals use of the tap but have a beneficial effect for those with different abilities.

Dalia considered the piano, introducing her study by discussing how individual pianists display idiosyncratic playing styles, whilst at the same time being bound by certain common technical rules usually acquired when learning. Observing how different pianists approached play, she revealed the tacit knowledge, including her own, that underpins certain skills. She started to question issues including hand-eye coordination, muscle memory and attentiveness to the musical score. Dalia goes on to interrogate the anatomy of the hand, the relationship between freedom of movement, fluency and individuality in playing style. Through close analysis of body and hand movement, she was able to communicate specific elements of the practices of piano playing and examine the subtle configurations of pressure and movement that allow music to be played (Figure 9). This knowledge is then exploited to experiment with restricted finger movement that exposes the routine but complex flexibility and biddability of the hand embodied in a player's extraordinary tacit skills. It is by working towards and breaking down movement through disruption that a profound understanding of the physical and emotional action of piano playing is apprehended.

There is not space to describe the broad range of investigations undertaken by students and imaginative ways in which they seek to disrupt and explore ordinary practice. But in passing consider, for example, a study of how individuals hold tea cups followed by the development of a version that problematised grip,

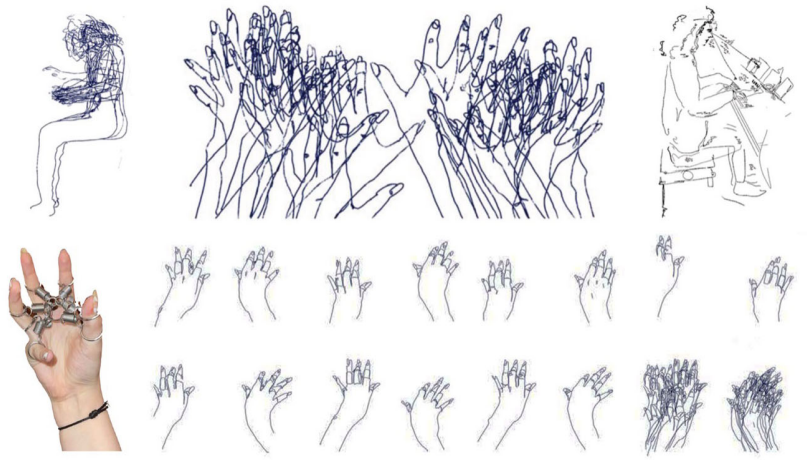

Figure 9
Upper: Observational Drawings. Lower: Piano Playing Successively Hampered by Springs. Image: D. Rasoul 2021.

throwing into relief the skills involved in drinking; a study of card and phone payments that were made problematic through the application of a simple Faraday cage; a typing machine based on a Nepalese loom reversing finger movement, rendering the selection of keys challenging; a kitchen knife that intensifies onion vapour; amongst many others.

Alongside exploring the limits of affordance of everyday tools or implements, several of the individual projects also seek to enhance objects and artefacts or to address problems that they find commonly arise in their use. They include projects that sought to enhance the design of tools that assist the safe disposal of butcher's waste, the holding and consumption of street food, the cleaning of knives and the turning of door keys for people suffering RSI. It is worthwhile considering the following two examples.

An exploration into the practice of using chopsticks revealed structural differences between the designs of the Korean, Japanese and Chinese chopsticks. Data capture and analysis allowed Connor to understand the most comfortable positions for using chopsticks. Building on this, he used the disruptive design approach to develop a novel hybrid artefact (Figure 10). This object is not disruptive but uses the flexibility of the approach to consider ways in which new forms for design might emerge. Had more conventional design requirements been imposed, other than the less pressured and playful methods applied here, then this may have formed, restrictive less confident responses.

Christina spent successive periods of observation in the number of butchers shops observing the preparation of meat, taking time to look at the detail of different knives and their functions. Eventually, she began to focus on knife cleaning, considering the important practice of prevention of cross-contamination in public food service.

There then followed a series of experiments. She prepared meat using the same knife as for onion chopping, making a detailed analysis of the different touch points between hands, chopping boards, cloth, meat and onions. She noticed that

Figure 10
Upper: 3D Print Prototype Spoon Sticks. Lower: Wooden Prototype Spoon Sticks. Image: C. Park 2024.

cleaning knife blades between different uses, though unconsciously conducted, was not always the most sanitary process. A cloth was laid flat on the edge of a table, and the blade was stroked across, removing any debris, this improvised structure was the basis for the development of a device that incorporated kitchen paper towels and an angle, allowing speed and efficiency in removing surface contaminants (Figure 11).

Notwithstanding the insights and observations that emerge within the individual projects and in some cases some remarkable contributions to and reflections on design, their principal purpose is to enable students to become familiar with the practicalities and demands of using a particular approach to discover for themselves the hidden and complex world that underpins the use of tools and implements in everyday life. The aim is to encourage students to draw upon and apply this foundation in subsequent years of the degree when students are more familiar with the range of theories, concepts, exemplars and practice of design. It is worth noting that in major projects undertaken in years two and three, projects that frequently involve collaboration with external organisations and stakeholders continue to undertake fine-grained field studies and small-scale experiments to support their evolving design practice. It reinforces the recognition that for almost any project, fine-grained analysis of the action and activities, the practices of participants themselves are critical to understanding tools and implements to (re)thinking design.

Discussion: learning to engage people and practice

In recent years, we have witnessed a burgeoning interest in applying and developing new and distinctive methods for design. A number of these approaches seek to prioritise the user, user needs and the 'situated' and in various ways seek to reconceptualise the interdependencies of action, actors and objects, the networks that inform our understanding and use of tools and technologies. In this paper, we focus on a particular aspect of these debates, in particular the ways in which we can encourage and enable students to explore cultures of practice (Dreamson & Khine 2022), to document the 'world in motion' (Macken & Harrison 2020) to explore the everyday, the taken for granted (Garfinkel 1967; Sacks 1992). In contrast, at least in part, to methods that seek to broaden the focus of inquiry to

Figure 11
3-D Print Prototype Butcher's Knife Cleaner. Image: C. Kim 2024.

encompass a broad range of social, organisational and environmental issues, in the first instance, we are concerned with driving analytic attention towards the tacit practices, the procedures, knowledge and skills, that inform and enable the contingent use of tools and implements, objects and artefacts in everyday situations. Analytic attention is not primarily concerned with user needs and requirements, but rather the complex, taken for granted resources on which people rely in using tools and implements to accomplish ordinary everyday actions and activities, an anthropology of the ordinary that seeks to prioritise participants' practice.

First and foremost, the programme is designed to provide students with the interest and ability to draw on methods to explore in detail the resources that inform and enable the use of everyday tools, implements, objects and artefacts. Fine-grained field studies, naturalistic experiments, playful interventions and the like, both alone and with others, are critical to becoming familiar with a methods application and in beginning to understand the qualities, characteristics and affordances of objects and artefacts. They also provide students the resources to begin to explore how people skilfully deploy practices and procedure regarding the contingencies and problems that can arise in the application and use of tools and implements, the emerging situational demands that bear upon their deployment. In this regard, playful interventions, subversions, experiments with incongruent 'solutions' are powerful resources with which to explore the limits of affordance, and to explore how people are able to adapt and transform practice to enable the application of potentially disruptive devices. Understanding current practice as well as its adaption is, we believe, an important aspect of discovering and reflecting on, the characteristics of tools and practice and exploring how we can begin to rethink, and redesign, the familiar.

The programme is one of a suite of courses and projects that are concerned with introducing students to different approaches to design, approaches that seek, in different ways, to prioritise users and their circumstances, their practice, experience and engagement. In the second year of the degree course, for example, we build on the Anthropology of the Object to introduce co-design and participatory design to explore a range of different approaches to the design and development of objects and artefacts, enhancements and resolutions. As with the Anthropology of the Object, the critical element is not simply an instruction on method, its concepts and application, but rather the practical engagement of students, both alone and with others. In these projects, they engage closely with users and stakeholders, undertake data collection and analysis and develop situated prototypes in context through sensitive relational and co-design practices. These second-year projects are undertaken with organisations and institutions such as worshipful companies, museums, community centres, residential homes and immerse students in the practicalities of situations and ecologies, the forms of activity and engagement that arise, and the standpoint, resources and practices on which participants rely. Like the introductory programme itself, they also involve teaching staff drawn from a range of disciplines and design practice backgrounds, including craft, material practice, product design and social science. This multi-disciplinary background serves to enrich the student's sensitivities to understanding tools and implements and how an understanding of practice can bear upon design and developing distinctive ideas and possibilities.

Providing a qualitative, systematic approach to active design research and practice, allowing students to develop their own methods, feel comfortable in approaching field studies. Third-year students undertaking self-negotiated agendas

continue to build fine-grained studies into their practice. Initiating situated experiments within various diverse ecologies of action that not only consider social spaces including prisons, schools and libraries but also an interconnectedness with natural and urban systems such as parks, forests, canals and rivers. The engraining and adaptation of these methods, informed by social science, are we believe indispensable and effective tools as part of post-graduate design practice.

Aside from the conventional ways in which students report on and evaluate courses and the overall programme in each academic year, we have not as yet undertaken a more overarching long-term assessment of the impact and importance of encouraging and enabling students to undertake detailed studies of everyday practice. We are particularly keen to explore the extent to which students draw on and apply these resources in the years following their undergraduate programme when many become involved in more formal organisational projects. Informally, alumni have mentioned the importance of the programme to their thinking about design and the design process, but a more formal longitudinal evaluation, albeit qualitative, could be highly insightful. In the coming years, we plan to undertake a more formal evaluation that engages alumni to explore the extent to which the Anthropology of the Object serves as a thought-provoking and insightful introductory programme but provides skills that are of relevance to and applicable to the practicalities of everyday, real world design.

We believe the Anthropology of the Object programme provides a foundation for students to draw on a range of methods, helping them recognise the significance of the design of the most seemingly simple and mundane objects and artefacts, discovering for themselves the remarkable and complex resources that enable people to use tools and implements; an opportunity to observe, imagine and experiment. It demands that students, early in their degree course, can gain access to particular situations, to engage 'users', to begin to explore the world from the point of view of the participants themselves. It helps provide students with both the resources and the confidence with which to begin to undertake studies of everyday life and establish an understanding of the resources and responsibilities of the designer. Perhaps most importantly, we hope that the programme helps demonstrate to students that interesting, imaginative and relevant design evolves through a thorough and detailed understanding of the complexities of the everyday, the resources on which people rely to accomplish tasks and activities with tools, implements and in some cases, technologies.

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References

British Psychological Society (2021) The BPS code of human research ethics. Available from: https://cms.bps.org.uk/sites/default/files/202206/BPS%20Code%20of%20Human%20Research%20Ethics%20%281%29.pdf

British Sociological Association (2017) BSA statement of ethical practice. Available from: https://www.britsoc.co.uk/media/24310/bsa_statement_of_ethical_practice.pdf

Brown, B. & Juhlin, O. (2015) *Enjoying machines*. Harvard: MIT Press.

Dreamson, N. & Khine, P. H. (2022) Abductive reasoning: a design thinking experiment, *International Journal of Art and Design Education*, Vol. 41, pp. 403–13.

Dunne, A. & Raby, F. (2013) *Speculative everything: design, fiction, and social dreaming*. Harvard: MIT Press.

Emerson, R. M., Fretz, R. I. & Shaw, L. L. (2011) *Writing ethnographic field notes*. Chicago: Chicago University Press.

Gal, M. & Ventura, J. (2014) *Introduction to design theory: philosophy, critique, history and practice*. New York: Routledge.

Garfinkel, H. (1967) *Studies in ethnomethodology*. Englewood Cliffs: Prentice-Hall.

Goffman, E. (1967) *Interaction ritual: essays on face-to-face behavior*. New York: Pantheon Books.

Goffman, E. (1969) *The presentation of self in everyday life*. Garden City, New York: Doubleday.

Goodwin, C. (2017) *Co-operative action*. Cambridge: Cambridge University Press.

Heath, C. C. (2013) *Dynamics of auction: social interaction and the sale of fine art and antiques*. Cambridge: Cambridge University Press.

Heath, C. C., Hindmarsh, J. & Luff, P. (2010) *Video in qualitative research: analysing social interaction in everyday life*. London: Sage.

Hertzum, M. (2014) Project designs for student design projects, in J. Simonsen, C. Svabo, S. M. Strandvad, K. Samson & M. Hertzum [Eds] *Situated design methods*. Cambridge, Mass: MIT.

Jirotka, M. & Goguen, J. A. (1994) *Requirements engineering: social and technical issues*. London: Academic Press.

Latour, B. (2005) *Reassembling the social: an introduction to actor- network-theory*. Oxford: Oxford University Press.

Lees-Maffei, G. & Houze, R. (2024) *The design history reader*. London: Bloomsbury Press Ltd.

Luff, P., Hindmarsh, J. & Heath, C. C. (2000) *Workplace studies: recovering work practice and informing system design*. Cambridge: Cambridge University Press.

Macken, M. & Harrison, F. (2020) In-place and in-time, *International Journal of Art & Design Education*, Vol. 39, No. 3, pp. 635–47.

Malloy, L. & Thomson, P. (2023) Research subjects, participants or co-researchers? Extending the involvement of students in art and design research, *International Journal of Art and Design Education*, Vol. 42, No. 3, pp. 353–6.

Malpass, M. (2019) *Critical design in context: history, theory, and practices*. London: Bloomsbury Visual Arts.

Mondada, L. (2021) *Sensing in social interaction: the taste for cheese in gourmet shops*. Cambridge: Cambridge University Press.

Nevile, M., Haddington, P., Heinemann, T. & Rauniomaa, M. (2014) *Interacting with objects: language, materiality, and social activity*. Amsterdam: John Benjamins.

Norman, D. A. (1988) *The design of everyday things*. (Revised and expanded edn). New York: Basic Books.

Papanek, V. (1985) *Design for the real world: human ecology and social change*. London: Thomas & Hudson.

Pink, S. (2009) *Doing sensory ethnography*. London: Sage.

Polanyi, M. (2009) *The tacit dimension*. Chicago, IL, Bristol: University of Chicago Press.

Randall, D., Harper, R. & Rouncefield, M. (2007) *Fieldwork for design: theory and practice*. Amsterdam: Springer.

Reeves, S. (2011) *Designing interfaces in public settings: understanding the role of the spectator in human-computer interaction*. Amsterdam: Springer.

Roudavski, S. (2021) Interspecies design, in J. Parham [Ed] *The Cambridge companion to literature and the anthropocene*. Cambridge: Cambridge University Press, pp. 147–62.

Sacks, H. (1992) *Lectures on conversation*. Oxford: Blackwell.

Szmanski, M. & Whalen, J. (2011) *Making work visible: ethnographically grounded case studies of work practice*, 2nd edn. Cambridge: Cambridge University Press Thames and Hudson.

UK Statistics Authority (2022) Ethical considerations associated with qualitative research methods. https://uksa.statisticsauthority.gov.uk/publication/ethical-considerations-associated-with-qualitative-research-methods/pages/2/