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# Hartland Hanga

## Capturing creative communication of tacit knowledge in printmaking

### **ABSTRACT**

*From October 2021 to July 2022 the author, Wuon-Gean Ho, was invited to work with a printmaking collective called Pine Feroda. Based in the UK, Pine Feroda create impressive large-scale woodblock prints of nature. Using a practice-led approach, the author developed an entirely novel printmaking technique which she named Hartland Hanga. Making audio-visual recordings of the artists working together captured the transmission of tacit knowledge as it emerged in real time. Using elements of conversation analysis from ethnography revealed how this group spoke to each other. The artists used creative strategies such as new phrases, verbal metaphors and gestural analogies to communicate elements of tacit knowledge. It is postulated that humour and creative communication might help the transmission and embedding of tacit knowledge between artists.*

### *Keywords:*

Printmaking, tacit knowledge, metaphor, humour, practice-led research, ethnography.

### **INTRODUCTION**

Printmaking tends to be practiced in community settings, for various reasons anchored in tradition and practicality. For one, big machines require larger spaces which tend to be shared. Moreover, there is a rich legacy of prints being created in collaboration with artists and technical printers. The conjunction of creative forces can result in work that “def[ies] the standards of printmaking” by “undertak[ing] ambitious and never-done-before technical feats” (Davie, 2022). The very nature of rendering the real world in print requires a creative hijacking of the graphic language which naturally occurs in the medium. Techniques often evolve and develop in print studios as a result of the desire to find an optimal way to achieve a certain effect.

The history of printmaking is located in repurposed tools: encompassing a legacy of visualizing a carved line in Renaissance armour in the 1500s; Rembrandt’s innovations with Dutch Mordant in 1600s; Claude Flight in the 1910s recommending V-gouges for carving lino be formed from umbrella spokes ground down and poked into a piece of cork; Edward Bawden printing with his feet in the 1950s

because there was no press large enough for his blocks; Drive by Press (USA) in the 2010s who carve and print from the wooden bases of skateboards and print them with foam blankets; and most recently during lockdown: hardware shop wheels repurposed as rollers, boxes of tricks posted to students, zoom conversations about ink. As a result, the development of a new technique and the questing nature of trying to make it very robust and reliable is not outside of the normal working practice of a printmaking studio group.



**FIGURE 1.** Members of Pine Feroda gathering around the press after making a print. Jan 2022. Photo by Wuon-Gean Ho

It was a fortuitous coincidence, then, that in 2021 I was invited by a printmaking collective called Pine Feroda to work with them to create a new collaborative print. While printmaking is often performed in communal spaces, collaborative groups that make prints together are extremely rare. This group could be thought of as a “community of practice” akin to groups who share expertise and common knowledge to advance a mutual goal (Wenger-Trayner, & Wenger-Trayner, 2015). I thought this invitation could be a good opportunity to investigate how the process of printmaking relates to embodied learning (Kontra et al., 2012) and whether the transmission of gestures, movement and intentions that constitute tacit knowledge (Mukerji, 2014) could be recorded as it emerges in real time.

Using a practice-led approach, and as a participant observer, I developed a novel printmaking technique which I named Hartland Hanga. The natural beauty of wood grain can be printed with oil-based inks on a western paper if the surface of the block is first brushed with a wire brush. With Hartland Hanga, using a new inking and printing method influenced by mokuhanga, beautiful wood grain can be printed directly from the unmodified surface of the block. Using video recording and analysis of the footage, I focus on how gestures, movement and intentions that constitute tacit knowledge in relief printmaking processes develops and how this becomes knowledge that may be communicated.

### **Background: collaboration and trust**

The project started with a general goal that all four artists would make something new together, without any expectations on what that new thing might be. My first immersive visit to Pine Feroda in October 2021 resulted in proposals for the collective to create works which had different scale, format and technique. These lines of enquiry had been abandoned as being too dissimilar from the group’s sense of strength and identity, but the process had given the group a sense of shared exploration and

possibility. The research which emerged from the sessions was circular and iterative, in keeping with our professional printmaking practitioner's usual approaches to making a print.

As experienced printmakers we had many colleagues in common as well as already knowing of each others' work. However, working together creatively on a new project demanded a deeper connection. I had to get to know the members of Pine Feroda on a personal and professional level and develop a sense of friendship and trust. The literature on trust most pertinent to this project is based on trust theory termed Practical Trust. (González-Martínez & Mlynář, 2019). "Practical trust is not granted beforehand, once and forever, as a precondition for action, but rather is enabled, sustained and renewed methodically and continuously by the participants as they organize what they do." This was my subjective experience of collaborating with the group.

## **METHODOLOGY**

A thorough inquiry as to how unspoken elements of printmaking processes are conveyed between individuals has not been theorised explicitly, though authors such as Richard Sennett, Tim Ingold, Peter Korn, David Pye, even Robert Persig champion the ability and finesse of the human senses to attending how to do a physical task supremely well. They write with authority on diverse fields such as cello playing (Sennett, 2008), rope making (Ingold, 2015), woodworking (Korn, 2017) (Pye, 2007), motorcycle maintenance and so on. They were ethnographers of a kind, though rather than being guests and outsiders, they wrote from an internal perspective of being a solid practitioner of the crafts or skillset that they refer to.

The practice of ethnography gained ground after Margaret Mead and Geoffrey Bateson's seminal study on Balinese culture (Bateson & Mead, 1942) and later developed by Clifford Geertz (Geertz, 1973) who coined the term "thick description", in other words, providing a written detailed account of as many elements of what is observed without censorship. Geertz stated, "If you want to understand what a science is, you should look in the first instance not at its theories or its findings, and certainly not what its apologists say about it; you should look at what the practitioners of it do." (Geertz, 1973, p. 9). As I had knowledge about the detailed haptic nature of what was being observed, as a practitioner, I was officially an insider. This has been termed the "indigenous ethnographer" whose "accounts are empowered and restricted in unique ways." (Fortun et al., 2020, p. 8).

Moreover, I had access to audio-visual (AV) recording which could capture gesture and group dynamic in fine detail: a repository for later analysis. There are many new methodological approaches which use AV data, including ethnomethodology (Psathas, 1979), conversation analysis (Sidnell & Stivers, 2013) and micro-ethnography (Green et al., 2020). I decided to take elements from each of these stances and develop appropriate tools to analyse my project.

### **Conversation Analysis**

Most importantly I came to use some basic rules of conversation analysis (CA) to help categorise spoken interactions. Initially I decided to look for the following five categories of conversation strategy: adapted from (González-Martínez & Mlynář, 2019)

- 1) Turn Taking (the conversational ball is thrown to someone who responds) (which I called turn taking).
- 2) Turn Construction Unit (someone says a phrase which could be complete, but might turn out not to be, in this pause another person might interrupt) (which I called fragment and noting that it was usually a physical or tactile or haptic observation).
- 3) Adjacency Pair (someone asks a question to the other with a preference for agreement, they respond with an affirmative) (which I called polite agreement).
- 4) Preference Organization (someone tries to soften the blow of a disagreement by hesitating and making modifying excuses or justification in advance) (which I called polite disagreement).
- 5) Repair (if the conversational ball is dropped, one or the other tries to improve the flow of the conversation by repeating a word or phrase from the previous sentence) (which I called repair).

I decided to create five more categories because they came up so frequently in this project:

- 6) Asking for direction (which I called seeking help).
- 7) Suggestion: One person who might know more responds with a suggestion (which I called suggestion).
- 8) Encouragement (enthusiastic agreement whether verbal, gestural or sound effect) (which I called encouragement).
- 9) Solution finding (brainstorming- no clear answer- suggested by anyone, all possibilities considered- phrases are free floating- very creative use of words and phrases) (which I called Solution finding).
- 10) Humour (which I called humour).

It revealed a different dynamic to the one I thought was happening at the time. I had been under the impression that collaboration had not evolved due to my inexperience in collaboration and in having joined an already mature group. However, in reviewing the footage and the transcripts it became clear that there had been plenty of successful collaboration in terms of solution finding, developing and communicating the new printing technique. There had also been a lot of polite agreement, polite disagreement, seeking for help, encouragement and a very liberal dose of humour.

### **Method**

A novel printmaking technique was developed, and the evolution of the technique was charted as it was used and modified. The basis for the new technique was a curiosity about transposing previously practiced Japanese woodblock techniques to an oil-based formula. The new technique involved the following four stages. First, the block was dampened with water, then saturated with sesame oil. Then a water and oil-based mix of ink was applied and worked into the wood. Then the surface excess was removed, and finally the block was printed with a travelling bed press onto dry paper. The results showed some evidence of wood grain and the surface of the paper was almost touch dry, as if the ink had penetrated the surface of the paper fibres, rather than sitting on the surface as in Western printing techniques. This hybrid printing technique allows for wood grain to be printed from planar surfaces using oil-based inks and a new way of applying ink to the surface. The new technique was christened Hartland Hanga.



**FIGURE 2.** Test Print with a novel technique called Hartland Hanga. Photo by Wuon-Gean Ho. Jan 2022

Pine Feroda usually met every 6-8 weeks for a printing session involving all members staying in the same house and spending a focused period of 3.5 days' work in the studio each time. I joined them for four of these sessions in total. In order to balance subjective and objective knowledge, and further guided by Garfinkel's writing on ethnomethodology (Garfinkel, 1984) and Heath's textbook *Video in Qualitative Research* (Heath et al., 2010) I decided to use two cameras to capture moving image footage at key points in the studio. The data was kept for later analysis and reflection which was performed after the collaborative process had ended.

## **RESULTS**

A vast amount of data was collected. The first 43 pieces of conversation from footage taken during the initial evolution of the technique and subsequent teaching of the technique to the other artists was transcribed. Evaluation of the footage reveals a playful approach to language and communication which was often supplemented with vigorous mime and gesture. I have categorised the speech by grouping them according to the conversation analysis codes outlined above.

Of the 43 pieces of conversation:

- 14 contain elements of seeking help
- 21 contain suggestions (sometimes they were in response to the seeking help, but sometimes suggestions were given without the other party verbally asking for help)
- 12 contain solution finding (which tended to happen more at the beginning, when the technique was not yet crystallised, and then again when new challenges emerged which needed resolving)

- 11 contain encouragement (more when one artist was watching another trying the new technique)
- 14 contain polite agreement (we are British, and like to formally agree)
- 7 contain polite disagreement (we are British, and do not like to disagree)
- 10 contain humour which appears to comment on the absurdity of the serious-play mindset that this project entailed



**FIGURE 3.** Drizzling oil onto the surface of the woodblock. Photo by Wuon-Gean Ho. Jan 2022

Regarding embodied knowledge, gestures tended to be brought in from other situations such as encounters with a material of similar properties. For example, when applying oil to the surface of the woodblock, we drew upon the familiar action of putting oil on top of a salad, and drizzled the oil out of the bottle accordingly. We even joked about how the block smelled tasty, and how we might go shopping to a luxury supermarket afterwards, and what we might like for lunch. Next, the oil needed to be spread evenly all over the woodblock. For this, I suggested using a flat oblong printing brush with pig bristles (that looks a bit like a shoe brush) using my previous knowledge of Japanese woodblock printing to instruct others how to spread oil evenly. However, the other artists drew upon a different printmaking gesture which they had learned from the time they had previously spent together in China. This was for a technique which involved applying rice starch over the surface of the woodblock with the palm of the hand. The palm was sensitive to amounts and evenness of the starch, and much better than a brush at sensing where starch was lacking and where excessive. When one of the artists introduced the palm approach to the oil spreading, we rapidly adopted it as a better way of applying oil than with the brush. We called it, “massaging oil into the block”. Later on still, two of the artists decided that “double oiling” created richer results and so that modification was also adopted.

When talking of how to move ink and oil around, several new phrases, terms and words were favoured. Using tacit knowledge from Japanese woodblock printing to gauge how much liquid is on the surface of the woodblock, I taught participants to look for a reflected gleam of light. This meant they had to position their bodies on the other side of the block from a light source, such as a window, and

glance at the block with a shallow angle (achieved by lowering the head close to the block while keeping the eyes fixed on the look of the ink) to see if there was a sheen and whether it was completely covering the area that it should. If there was too much ink or oil, we commented on whether it was perhaps a little “wet” or “juicy”. One artist described the movement of pushing ink into the woodblock as needing a “whirly action” which chimed with our haptic senses of touch and intentionality. I explained that the surface of the woodblock should be “fingertip dry”, indicating that a tapped finger would not leave a puddle of moisture behind in its wake.



**FIGURE 4.** Checking the surface of the woodblock for sheen. Photo by Wuon-Gean Ho. Jan 2022

When removing the ink from the surface of the woodblock in the Hartland Hanga technique, I was inspired by the process of etching where the plate is given a final polish to remove all traces of ink on the surface. Hartland Hanga is a way of printing grain from a flat piece of wood, and I thought that this could be best achieved by saturating the block so that the grain was packed full of ink, then removing the ink from the surface. Using memory of the embodied etching experience, I used a folded pad of cotton rag (like tarlatan or scrim which is used in etching) and a swooshing, rapid and light gesture. This encompassed the reach of the arm, with a loose wrist, while briskly stroking the woodblock with the cloth almost as if swishing flies off a cake, or performing lymphatic drainage. This I envisioned as clinical, performative, methodical, gentle, protective. This movement was termed a “dancing skim” which communicated the style and intention of the gesture adequately to the others. Moreover, as the pad of cotton rag tended to work more effectively at removing the ink if it were shaped as a firmly rolled wedge, it was called a “sausage” by another artist and the term then stuck.

As we worked on larger blocks, our technique evolved to protect virgin wood from receiving ink and printing by mistake. We started to use shields of newsprint and to “start off and end off” in order to make streak-free inkings. Printing by hand did not provide enough pressure to make an even print, but printing with a press yielded clear results. We realised that the technique worked better with multiple printings, which gradually built up an intensity of colour, and surprisingly the grain remained sharp and clear.

Finally, the words that we used for colour mixing and colour choices repeatedly came up with interesting terminology. The three artists frequently referred to their colour inks as the “mother” which derived from the fact that when mixing ink for printing it is useful to keep a pool of ink as the source, from which subsequent colours might be made. Their recipe for an indigo “mother” usually involved some blue and black, but my recipe for an indigo “mother” came from mixing a crimson with a viridian. We talked of “school-prefect blue” “Winter blue” and “misty blue”, terms which speak of emotion and memory and atmosphere rather than specific chroma and hue.

## DISCUSSION

Communication between the four artists revealed quite a lot of surprises at the analysis stage. The technique arose spontaneously which was reflected in the language used: showing lots of turn-taking, solution finding, seeking help and polite agreement. There were also, at times, pauses and hesitation pointing to polite disagreement (particularly given that we were all native English speakers having lived in the UK for dozens of years) tempered with plenty of humour.

While this project may appear to have been based upon investigating processes of knowledge transfer (Peng et al., 2021), the knowledge itself was co-created by all participants and emerged in overlapping timelines, so traditional transfer of information from authority to novice did not apply to this situation. Furthermore, when I talk of co-creation, I am not referring to consumer- author models of co-creation such as in the music and gaming industry (Saragih, 2019) but rather the notion that all parties had equal potential input to the technique. Of course there have been studies of knowledge transfer in the business realm too (Smith, 2001) which theorise transfer of tacit knowledge to explicit knowledge for commercial gain, largely by enabling managerial strategies. Instead, this project investigates creative “serious-play” processes which emerged organically with no overt commercial drive.

The current approach for this project is that tacit knowledge is located in the body, or more precisely, in the notion of a body schema (Merleau-Ponty & Edited by James M Edie, 1964) which is separate from the body’s automatic reflexes and from visual guidance and from cognitive awareness. Of course data from real time monitoring of cognitive function enabled with functional Magnetic Resonance Imaging (fMRI) would be enlightening if it were to become available, for example, by localizing the exact region of the brain involved in learning new finger movements (Yewbrey, Mantziara and Kornysheva, 2023). Neurophenomenologists attempt to integrate subjective first person (1P) experience with third person (3P) empirical measurements, see (Berkovich-Ohana et al., 2020) and could be interesting to pursue in future. Researchers such as (Kontra et al., 2012) propose that body movements can affect learning and development by grounding mental representations in motor areas of the cortex. Kontra et al’s definition of embodied cognition is how an individual might replay perceptual, somatosensory and motor aspects of an event such as an action experience when accessing that knowledge later on. The subjective 1P view is all that was collected here.

During this project all participants found creative ways of describing movement, colour and texture during the making process which I believe was a strategy to embed tacit knowledge. A study by Sian Beilock on expert ice-hockey players showed that “when individuals hear language about action, they activate neural networks involved in producing these actions” (Beilock et al., 2008), which are probably localisable to fronto-parietal motor circuits (Tettamanti *et al.*, 2005). Adele Diamond (Diamond, 2013) outlines how working memory (the cognitive function employed the most when learning a new task) is hypothesized as verbal and non-verbal, so the act of verbalizing a gesture increases the ability to use both types of working memory during the learning process.

Most interestingly, Dedre Gentner (Gentner & Smith, 2013) talks of analogic learning, where previously known information is used to increase the speed of learning when transferred to a new situation. In this project, many elements of tacit knowledge in the four artists’ repertoire were borrowed from other situations such as cooking and previous experiences with other printmaking techniques. These ways of moving and thinking and speaking were used as temporary metaphors to performing a



new task. The concurrent language which was used was rich and imaginative and helped anchor memory of how to perform it and what the end goal was.

## **CONCLUSION**

In my experience (having worked in 33 studios in the past 20 years), printmakers develop new techniques as a matter of routine because they are used to adapting materials to find new solutions. Printmakers are used to working in communal environments, but it is very unusual to work in a team such as this one. For the purposes of this project it was essential to build trust in order to develop the new technique together and be able to record data in an honest way. Using conversation analysis revealed some of the motives in the interactions that we had around the printing block. There were a lot of equitable requests for help, communal solution-finding and encouragement used in our speech. Trust and friendship was evidenced by the amount of humour used: of 43 transcribed conversations 10 contained humour. Finally, and most interestingly, metaphor and analogy (both in creative language and creative gestures) appeared to arise spontaneously and be rapidly employed as ways of describing, communicating and remembering tacit knowledge. This finding requires further research into how much creative language and gesture was used because it was a group of creative practitioners or if it is used in other fields as well.

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