Improvisation: Autonomy, Heteronomy and Wilful Naïveté

Dr Ian Lambert, Edinburgh Napier University, Scotland, UK

Abstract

This paper discusses theoretical perspectives on improvisation as a powerful generator of new knowledge in practice-based research and its enhancement through *wilful naïveté*. The paper discusses a wilfully naïve approach to making with reference to Ingold's morphogeneticism (making as a process of growth; 2009, pp.21-22), and Peters' (2009) balance of autonomy and heteronomy in the passage of creativity.

The sandcasting as a making process was a new field of practice chosen deliberately to help avoid the effect of entrenched practices on the process of growth. The paper discuss new theoretical insights with reference to his experimental work and the influence of others, i.e. a heteronymous lineage of practice. As an auto-ethnographic heuristic making enquiry, the author writes of their work and practice in the first person.

Keywords

Improvisation, making-as-growth, autonomy, heteronomy, wilful naïveté

This paper discusses a theoretical perspective on improvisation as a powerful generator of new knowledge in practice-based research and its enhancement through *wilful naïveté*. The paper discusses a wilfully naïve approach to making with reference to Ingold's morphogeneticism (making as a process of growth; 2009, pp.21-22), and Peters' (2009) balance of autonomy and heteronomy in the passage of creativity.

The heteronomous actors in my process were other designers and makers who work formed the prefigurative elements in the making: Studio Swine's Can City (2013), with cast aluminium furniture, Max Lamb's Pewter Stool (2007) cast on a beach in Cornwall, and Rony Plesl's Bubble Bowl (2012), a glass bowl derived from bubble-wrap packaging. All heteronomously advanced the development of my practice through improvisation leading to the making of a series of cast aluminium bowls (fig 1).

The discussion that follows focuses less on the practice itself, and more the theoretical insights arising from it.

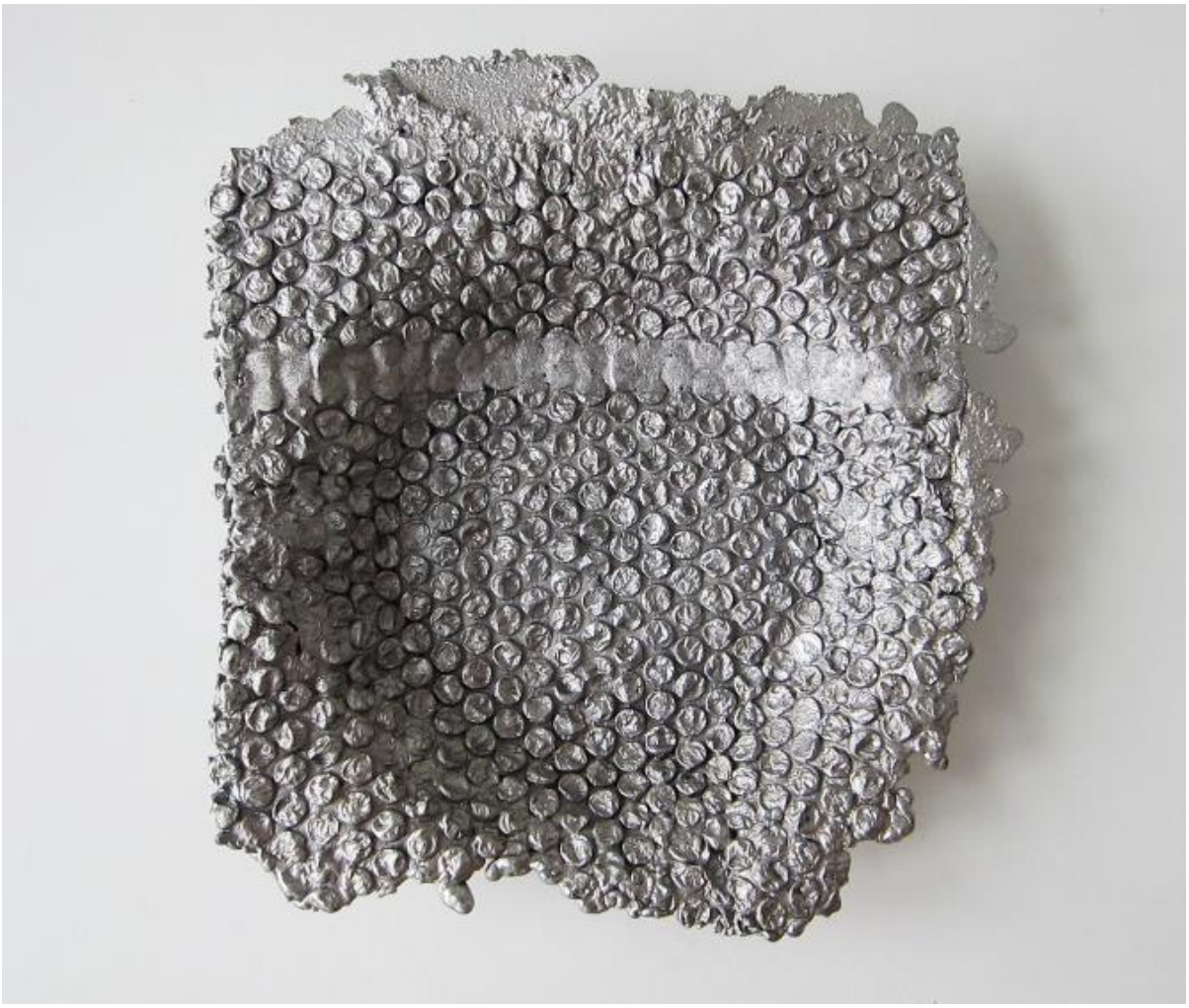

Fig 1. Sand cast aluminium bowl using bubble wrap as a waste mould (Lambert, 2015).

Improvisation

To improvise literally means to not foresee[1] (Douglas & Nil Gulari, 2015, p.395), but there are nuanced variations in the definition of the word. Improvisation can refer to where something is created spontaneously, or without preparation, in response to a certain unexpected predicament. In acting, improvisation is an unscripted performance which may occur spontaneously by going off-script, or deliberately entering into a performance without script, as what Peters (2009, p.10) would describe as an originating process. Peters makes an ontological distinction between the *power* and the *predicament* of the improviser (p.10). In my work it is the former that is of significance. My work with sand casting discussed in this paper has not been a response to an unexpected predicament, and any notion of improvisation as being "the makeshift, the cobbled together, the temporary solutions to problems that remain unsolved" (Peters, 2009, p.9) is of no significance. Instead, improvisation has been used as a *generative* force according to Ingold's making as a process of growth (2012; 2013, p.21). Ingold (2012) describes improvisation as "finding one's way", adding that creativity is not in innovation or giving rise to the novel, but rather it

[1] The Latin for improvisation is *improvisus*: *im-* as in 'not', and *provisus*, which stems from *provedre*, meaning 'to foresee' (Douglas & Nil Gulari, 2015, p.395)

is about growing: “creativity lies in the improvisation, the improvisatory nature of the processes” (ibid). That is not to say that an artwork grows spontaneously: as Peters tells us, “all improvisers must face the demand for a work from within the confines of a limited material universe” (2009, p.11), and so the creation of an artwork requires a certain “marking of space” (ibid, p.13) which arises from this. For this making-as-research, the confines have been in the process of sand casting as a methodological choice. Furthermore, as will be discussed below, there is a difference between origination as a form of genesis, and origination as a form of becoming (Peters, 2009, p.62). For example, as will be discussed below, the pewter sand casting used by Max Lamb becomes something else in my own. While Peters (2009, p.62) refers to improvisation as origination, here improvisation is as generative. So for the maker as a lone practitioner, improvisation occurs along a line of “[…] the potential for mutation and recombination” (Ingold & Hallum, 2008, p.6). In this sense, improvisation is also *relational*, in that it needs to make sense within the societal constraints that it seeks to disconform to (ibid, pp.6-7). Edwin Hutchins argues that human cognition is a social and cultural process that is inextricably tied to the extended history of a task (Randell & Lewandowsky, 1996). Latour (2009, p.5) sums it up more simply: “to design is to redesign”.

While I claim above that there have been no unexpected predicaments, there have been some practical ones. To make the most of improvisation as a generative force I needed greater autonomy in my practice – in other words, the independence to be *disobedient* (cf. Peters, 2009, p.11). This inherent disobedience sets improvisation against the rule-following of craft (Dormer, 1997, p.219). To achieve a personal autonomy of practice I used a home-made foundry (I stop short of *makeshift* as it is certainly not cobbled together or insufficiently prepared – see Peters, 2009, p.9) and sand casting pits – this is improvisation of sorts, but as a facilitating rather than a generative force. This aligns with the temporal nature of improvisation as an enactment, a sequence of innovations (Ingold & Hallum, 2008, p.10) and is tied up in the ephemerality of the making process itself.

Peters (2009, pp.9-73) discusses improvisation as a type of freedom, “[…] the clearing of an aesthetic space that brings the improviser to the ‘moment of decision’” (ibid, p.73). However, in one respect, improvisation is not guaranteed to provide satisfaction or success: an improvised culinary process can be disappointing for the diner (ibid, p.75). Equally, improvisation as a methodological choice is not to throw creativity into the wind and see what happens, nor is it to absolve oneself from the deliberation of forethought; while an “over-determination” of the process risks either a turning back and starting again (Peters, p.71), or that improvisation is lost altogether. Ratto refers to some of his project outcomes (that ended up as useful real-life interventions) as being less planned and emerging accidently from “the sort of *drunkard’s walk*, consistent with my own critical making process” (2016, p.32). This is perhaps part serendipity, but the consistent unplanned/drunken-walk approach seems a methodological choice.

In his book *Improvisation*, jazz musician Derek Bailey (1992, p.66) provides a dictionary definition of improvisation in music as being “The art of thinking and performing simultaneously”. In many ways, improvisation is simply unavoidable in an exploratory making process. Ingold and Hallum (2008) go as far as to say that improvisation is the default setting for the way that humans work. Not only is there no script for social and cultural life, life is “unscriptable” (2008, p.12). Jazz musician and academic Dr Haftor Medbøe (personal communication, 2018) adds that even composition is improvisation written down. Indeed,

Bailey (1992, p.83) adds that historically improvisation predates any other music: "[…] [hu]mankind's first musical performance couldn't have been anything other than a free improvisation."

This view that improvisation is pervasive in all human endeavour is not entirely helpful when attempting to pin-point it as a specific element of a type of creativity, but two points do arise: i) that creativity occurs along a line of historical activity; and ii) that improvisation is generative. There is a contrast between the work of, say, Studio Swine, who plan and carefully direct the filming their projects, and that of Max Lamb (2018), who states that he never knows what is going to happen when he enters a creative process. That is not to say that Studio Swine do not improvise in the development of their scripted narratives – they do – but Lamb is immersed in improvisation. With both, new and stimulating ideas have emerged.

The Generative Value of Improvisation

What is the value of improvisation as a knowledge-generating factor in making? Or put simply: How does improvisation generate knowledge? Ingold's morphogenetic mode has provided a template to explore making as a means of generating knowledge in itself. With respect to this, to be clear, making does not only occur in binary terms of *making as growth* (morphogenetic), and *making as project* (hylomorphic) as described by Ingold (2010; 2013, pp.21-22), or indeed Arendt's (1958, p.136) *making as thinking* and *making as labour* (cf. Sennett, 2009, pp.6-7). Morphogeneticism is improvisation, but, as discussed later, improvisation in making occurs in varying degrees of intensity.

Improvisation focusses the practice on process as opposed to outcome. Ingold and Hallam (2008, p.2) discuss creativity in terms of improvisation and innovation, firstly referring to Liep's argument that creativity is associated with the production of novelty (2001, p.5, cited in Ingold & Hallam, 2008, p.2), as opposed to more conventional forms of everyday problem-solving. Here, Liep refers to creativity as innovation, which he regards as "a virtual synonym for creativity" (ibid, 2008, p.2), and everyday problem solving is improvisation. Ingold and Hallam challenge this, firstly in terms of the perceived polarity of innovation and improvisation, arguing that differences lie elsewhere: where innovation is characterised by products, improvisation is characterised by processes. Secondly, they argue that to read creativity as innovation is to read it backwards, in terms of its results, instead of forwards, in terms of its "movements" (ibid, pp.2-3). That is to say, innovation is defined and evidenced by its outcome, whereas creativity is temporal. To place an end point to the process is to extinguish the generative processes of creativity. Instead, they argue that "harnessing our understanding of creativity to improvisation gives a forward reading of creativity that recovers productive processes that have hitherto been ignored" (2008, p.3).

It is important also to briefly clarify the use of the word inspiration. Inspiration is not discussed specifically by Ingold in the morphogenetic process of growth, because inspiration is not really a generative factor - It is interesting to note that the word inspiration or its derivatives appears only 8 times in Ingold's book *Making* (2013), not once in relation to making itself. The word inspiration is often misused to define a sudden or spontaneously stimulated moment of creative *poiesis*. However, Max Lamb casting on a beach can inspire a practitioner to attempt something similar – to *go and do* something, or take action, but the actual outcomes are generated through improvisation. For example, I was moved to cast

aluminium using bubble wrap packaging as a waste mould, having seen Rony Plesl's glass bubble bowl. This did not arise through inspiration, it is relational improvisation, it is *redesign* (fig 2).

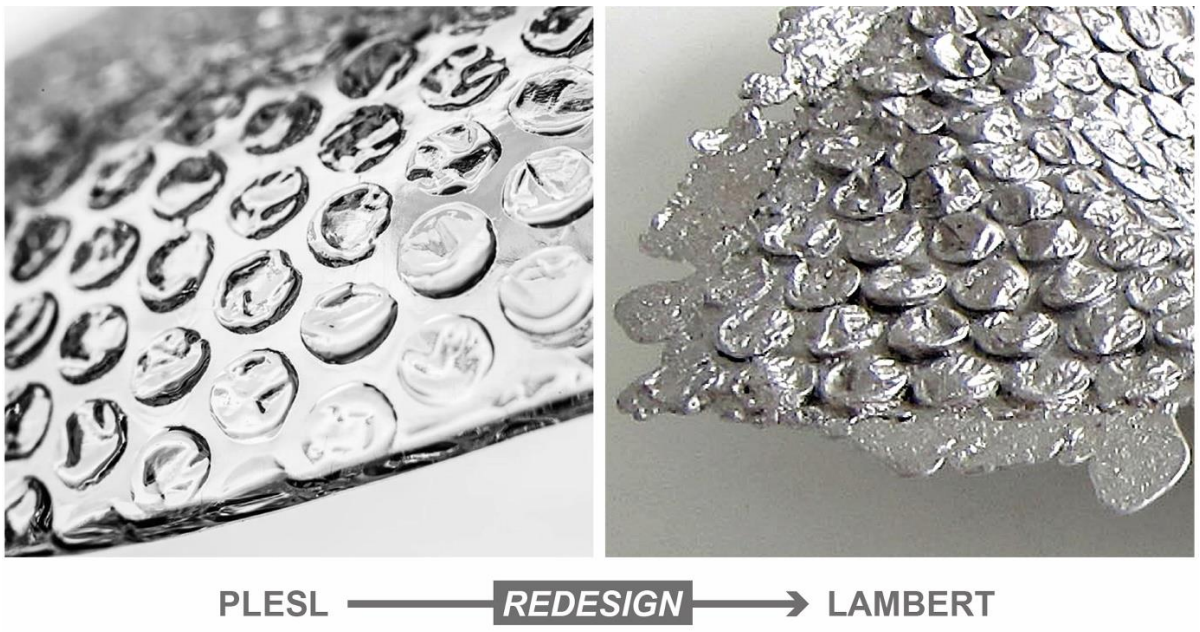

Fig 2. Plesl's bowl to Lambert's bowl as redesign, not inspiration (Lambert, 2018).

So, one might be inspired into creative action, but the creative outcome arises from improvisation (cf. Ingold & Hallum, 2008, p.3). Creative action does not exist in a vacuum: "To design is never to create *ex nihilo*" (Latour, 2009, p.5); that is, creative work is relational to a prior experience or (others') prefigurative work (Peters, 2009, p.62). Improvisation generates the *becoming* of new ideas, but this is always from that which came before: or, as Latour would have it, "to design is to redesign" (2009, p.5). In other words, creativity is a heteronomous process involving several makers.

The overall body of the practice-as-research here is indebted to external influences and ideas of practitioners who have gone before with accomplished bodies of work, as illustrated in fig 2. Max Lamb's work with pewter stools has been mentioned as being influential, along with Rony Plesl's *Bubble Bowl* above – the work would not have arisen as it is without these reference points in the lineage of practice. Nelson (2013) asserts that practice-as-research has to be located in a lineage: "[…] if we wish to claim that our praxis manifests *new knowledge* or *substantial new insights*, the implication is that we know what the established knowledge and insights are" (ibid, p.31). Ingold and Hallum (2008, p.9) go on to quote Boden: "the mind's creations must be produced by the mind's resources", i.e. what is known already from others. To expand further: Peters refers to an interplay of *autonomy* and *heteronomy*. He starts by saying that "all material contains, sedimented within it, historical patterns of human engagement and creativity that impose limits on what can and cannot be done on the occasion of the material's subsequent reworking" (2009, p.11). Peters then quotes Theodor Adorno: "The demands made upon the subject by the material are conditioned much more by the fact that the material is itself the crystallisation of the creative impulse, *an element predetermined through the consciousness of man*" (ibid, p.11; emphasis added). Peters later states: "Origin is an eddy in the stream of becoming, and in its current it swallows the material involved in the process of its genesis" (ibid, p.60). He then cites Walter

Benjamin to clarify: “The term origin is not intended to describe the process by which the existent came into being” (ibid, p.62). To this end, influences from precedents are essential as a foundation for the practitioner to set forth into autonomous thinking. For example, there is a long-standing precedent for using expanded polystyrene (EPS) for waste moulds in sand-casting, but it is a point from which to act. Max Lamb, having already made bronze bowls with EPS waste moulds, is emphatic that he does not own sandcasting, adding that others can and should try it (Lamb, 2018). With reference to my work with bubble wrap, while Plesl provided the prefigurative starting point, the impulse to do so and the work that followed came about from autonomous actions and thoughts that were fundamentally different and new in approach. This is the interplay of autonomy and heteronomy given by Peters (2009, p.11). In terms of heteronomy, I made the connection having already worked with one form of aerated packaging (EPS) and seeing the potential to move towards another (bubble-wrap). The artefacts and modified processes arise in an autonomous stage, or “eddy” (ibid, p.11), in this lineage of practice, as a novel advancement of precedents.

Lineage of *ideas* in practice is not to be conflated with a lineage of practice, that is, the passing down (instruction) of techniques and rules from master to apprentice through guilds, where “the standards of excellence that one tried to attain were set by other people” (Dormer, 1997, p.220). Rules, Dormer argues, do not encourage creativity, “[…] no harm and probably some good can be achieved by shaking these activities free from the assumptions of instruction and the framework of rules and formulas” (ibid, p.221). This is relevant for those operating in the academy, whose role is to challenge and question conventions. It is the relative constraints of rules that help to mark (delimit) the space for creativity (Peters, 2009, p.12). If creativity occurs along a lineage of practice, those who go before are always nudging the next to advance it, not repeat it. Plesl, Lamb, Studio Swine, and others have heteronomously nudged this work towards autonomous action, and indeed, others may nudge this further.

Deriving a creative course of action from precedents does not render a process or outcome unoriginal: all creative practice is dependent on its lineage. It is in the uniqueness and originality of the autonomy of an individual’s practice that novelty can be evidenced, as is the case with the creative practice in this thesis.

Having demonstrated how improvisation has been generative, then, if, as Ingold and Hallum (2008, p.12) claim, improvisation is, broadly speaking, “the way we work” in everything, it is important to discuss the shades of intensity of improvisation in different modes of making.

Rule-Following and Wilful Naïveté

The practice-as-research here not only methodologically embraces improvised methods for material transformation, it enhances this by extending towards naïveté in strategically choosing a new area of practice (i.e. sand casting), to maximise the generative potential. In other words, it is *wilful naïveté*, a deliberate unawareness of the rules to widen the possibilities of discovery.

Conversely, as a mode of making, the skilled level of craftsmanship demonstrated by, say, David Pye (1968) is essentially rule-following, a form of tacit knowledge that is acquired through repetition of practice (Janik 1989, p.216; also cited by Dormer, 1997, pp.219-221). The word naïveté is not used here in the sense of lacking in wisdom, but as an attitude or position adopted by the maker to widen the scope or delimitation of improvisation. By

stepping out of my own established practice (I trained in furniture design and making) and stepping into a new one, I have become *wilfully* naïve.

For the making-as-research in this thesis, the objects are tools of inquiry intertwined with a process driven exploration, where improvisation is embraced. Therefore, the made artefacts have a different status from objects purposed as end products, in that they arise from a creativity where the process is the focus of the inquiry. Materiality leads the work, but the unfinished state of earlier attempts at making the bowls, inadvertently suspended in production, foregrounds process. However, as with Lamb's 2008 film, the narrative brings an additional aesthetic dimension. All of the bowls could be advanced to towards completion by trimming off the rough-edged overflows and vents and polishing them, but from the perspective of research it is helpful to retain elements that narrate the process: for example, the form-feeding umbilical sprues are particularly powerful indicators of the making (fig. 3).

Fig 3. Incomplete cast with sprue, as an indicator of its making (Lambert, 2015).

The casting of the bowls through found objects is relatively quick and easy, accessible to many with a competent practical aptitude. By contrast, David Pye (1968, p.20) and Peter

Korn (2017, p.50) describe a highly tactile relationship with tools and materials acquired over time. As they patiently author intricately crafted work, the procedural conversation is with the mastery of the materials into objects of humble use, yet excellent workmanship.

It is a devotion to a repetitive making process that establishes the rule-following. However, Dreyfus and Dreyfus (2005, pp.787-788) describe how the rules of *subtle* skills[2] acquired as a novice decompose into experience. Like Janik (1989, p.223), they refer to Socrates' frustration of the inability of experts to describe their rules (Dreyfus and Dreyfus, 2005, p.780), concluding that "The expert is simply not following any rules!" (ibid, p.788). This is not contrary to Janik, but another way of describing rule-following as a form of tacit knowledge. This underpins an important distinction between craft and making observed in the making-as-research here. The words *making* and *craft* have many meanings and uses and can be positioned differently in terms of research. All craft is a type of making, but not all making is craft. However, while improvisation takes place within craft in the sense put forward by Janik: "[…] mastery of the rules brings with it a freedom to extend them" (1989, p.215) – at the other end of the scale, more widely improvised making is characterised by a certain naïveté. In fig 4, the diagram shows a scale of improvisation between rule-following and naïveté, wider in delimitation and intensified at the naïve end of the scale, narrowing in delimitation while lightening in intensity at the rule-following end. Wilfully naïve improvisation is characterised by a fast and crude practice (as found in this research); improvisation in rule-following is characterised by slow movement (patience) and subtlety.

Fig. 4. Improvisation on a scale of rule-following and naïveté, with delimitation (Lambert, 2018).

In relation to the practice-as-research the methodological choice of sand casting gives rise to wilful naïveté. It commences at the naïve end of the scale in a wider delimitation of inquiry. Here, so-called failure is more frequent. However, over time, as the inquiry continues, the success of the casts becomes more frequent as a result of acquired knowledge and practice in the technique. In repeating the processes, a script starts to form, while the delimitation narrows. The sand casting practice edges along this scale from left to right towards the rule-following end. To widen the delimitation and wilfully intensify the naïveté, it is necessary to shift the zone of practice, for example, by moving from sand casting to using ludo moulds.

[2] *Subtle* skills being those of music, chess and sports, as opposed to the crude skills such as walking and driving. In subtle skills, a tiny difference in what you do can make a huge difference to the result. Driving can be performed while thinking of something else, music requires deep concentration. (Dreyfus & Dreyfus, 2005, pp.788-789).

Obedience and Disobedience

Disobedience is not to be confused as another opposite to rule-following. Peters (2009, p.11), citing Adorno, refers to disobedience as one of the necessary elements of improvisation; this would be most profound at an autonomous moment. The heteronomous element ("the previous subjectivity"; ibid, p.12) of making sets the delimitation of the endeavour and counters disobedience with obedience, in "[…] a shifting dialectical relation that precisely because of its interminable mobility, demands both obedience and disobedience to ensure one never collapses into the other: the death of improvisation" (ibid, p.12). In other words, improvisation without delimitation (obedience) is chaotic and indeterminable; without disobedience it is rigid conformity and mimesis. Again, obedience is different to rule-following, and the two should not be confused. Rule-following is led by acquired skill, and as already mentioned, is a form of tacit-knowledge, whereas obedience is keeping to the delimited boundaries.

I am arguing that when there is more naïveté in practice, the delimitation of improvisation widens, in that the practice is not constrained by prior knowledge, (hence wilful naïveté).

If rule-following is tacit knowledge, and wilful naïveté a lack of it ("tacit naïveté" is an appealing term but an oxymoron, as we cannot know *less* than we can tell), it stands to reason, that the scope and intensity of improvisation is affected by the depth of tacit knowledge. However, it is not quite that simple. For example, like skilled makers, experienced actors will bring their own nuanced and subtle variation to an established script – this is still improvisation – but without any script at all they fully improvise: some actors specialise in this as a form of entertainment, often very adeptly and successfully. For improvisation to work at its best, the delimitation needs to be refreshed. Actors improvising on a repeated theme (delimitation) will soon exhaust the generative possibilities – if they keep going over the same ground, the improvisation becomes a script. It is the same in music: as Medbøe (personal communication, 2018) says: "composition is improvisation slowed down". Similarly, as the process of improvisation in the aluminium sand casting is repeated, it starts to become a set of rules. The generative power of improvisation diminishes as we become more adept in its use in any one delimitation.

The Axis of Making: Rule-Following v. Naïveté across Risk v. Certainty

Improvisation is by definition a process with risk, because the outcome is unforeseen. Indeed, risk-taking is important to any creative inquiry: little that is ground-breaking in creative practice came about from taking the safe course of action. Design is a goal-directed process of trial and error, which cannot succeed if entirely averse to the risk of failure. The practice here treats failure as a positive: where the process ascends outcome, what might be deemed a failing by some makers, is for the maker-researcher simply data: "Knowing one has failed is useful, positive knowledge" (Gore, 2004, p.43).

David Pye (1968, pp.20-24) describes the "workmanship of risk" and the "workmanship of certainty", (also cited by Ingold, 2011, p.59; and with Hallum, 2008, pp.12-13) as a way to differentiate between craftsmanship and mass-production. In "approximating" his own meaning to the word craftsmanship, Pye gives:

> "[…] workmanship using any kind of technique or apparatus, in which the quality of the result is not predetermined, but depends on the judgement, dexterity and

> care which the maker exercises as he works. The general idea is that the quality of the result is continually at risk during the process of making" (1968, p.20)

Hence, workmanship of risk. Crucially, Pye explains the that workmanship of risk has an immense and various range of qualities, without which "[…] the art of design becomes arid and impoverished" (ibid, p.23). That is to say, there is a degree of the unknown at the outset of the making process, which chimes with the *unforeseen* as the etymological root of improvisation.

Workmanship of certainty is found in "quantity", i.e. mass production, its most reliably consistent form being in automation, "[…] the quality of the result is exactly pre-determined before a single saleable thing is made" (ibid, p.20).[3]

Pye's binary terms of risk and certainty can be placed across the linear scale of rule-following and wilful naïveté form an *axis of improvised making*. In fig 5, the blue shaded area on the axis represents improvisation, operating in a wider delimitation in the darker areas, and subtler delimitation in the paler areas.

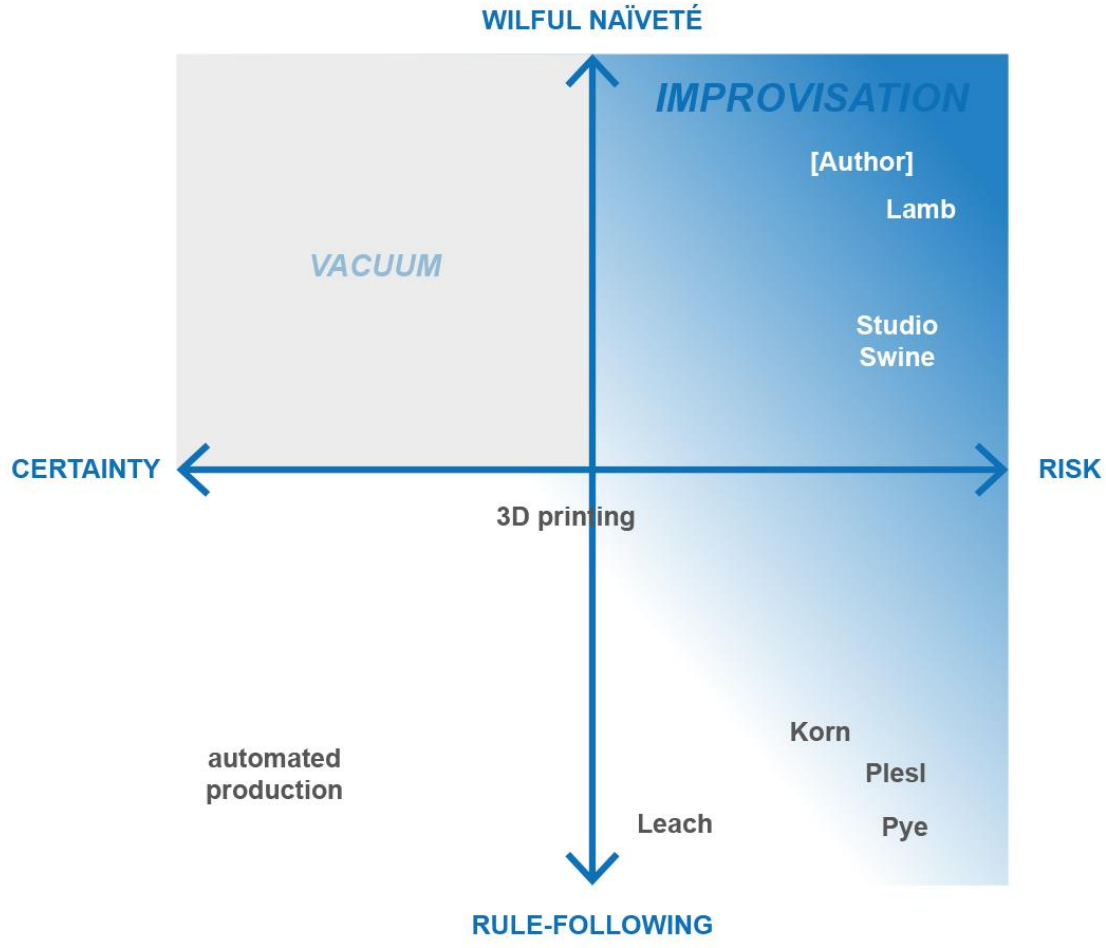

Fig. 5. Axis of improvised making (Lambert, 2018).

[3] Although helpful, this definition has exceptions today – the unexpected (uncertainty) can occur in automated making. Automation, when Pye was writing in 1968, was altogether different to the customisable and digitally controlled kind that exists today. The spontaneous auto-aborting of a task that can occur with a desk-top 3D printer is a risk.

Also the greater the improvisation, the more risk (and less risk-aversion). When asked to comment on improvisation as a generative force in making, Max Lamb (2018) replied that that he never knows what the outcome will be when he sets out to make.[4] This very much accords with Ingold's morphogenetic mode (i.e. improvisation), and thus the research here. Nor does Lamb claim any material or process as a specialism, as might define a conventional crafts practitioner, and he is at liberty to explore (improvise) as his interest meanders through practice. To this end he uses a degree of wilful naïveté. Any competent maker may choose to be (i.e. be wilfully) naïve, as has been the case with the sand casting in this research. Wilful naïveté is an attitude and, with this mindset, the maker-researcher looks more closely at their own actions. But in following flows of the process, and by embracing risk, the *generative power* of improvisation is increased. As already mentioned, it is embracing failings as positive outcomes that has given rise to much of the discussion leading to new insights in this project. My work (the bowls), along with Lamb and Studio Swine, is situated in an area of naïve improvisation. Like Lamb, I was never certain of the outcomes, but it was necessary to adopt a degree of naïveté to create a wider delimitation of practice.

Conversely, to turn a pear-wood bowl, for example, the practitioner must learn the use of a lathe while gaining a workable understanding of the qualities of the material (cf. Pye, 1968, p.35) and how it responds to well-maintained cutting tools: i.e. you need to learn to follow the rules. Contrary to Pye (1968, pp.20-24), it can be argued that as the practitioner becomes adept at this, the risk diminishes, and there is more certainty that the process will result in a serviceable bowl each time. Of course, there is room for experiment and improvisation within this (see the lower right quadrant in fig. 5), even with long-established processes, depending on the imposed delimitation. The greater the delimitation, the less predictable the outcome, thus the greater degree of risk. Rule-following can occur with certainty and risk (and of course naïveté is partly characterised by risk), but on the diagram above there is also a vacuum in the upper left quadrant. While the line of certainty v risk across naïveté v rule-following forms a coherent axis, the quadrant between certainty and naïveté cannot be occupied, for to improvise with certainty is not possible.

The risk, as discussed above, does not just refer to a chance of failure, but also the unknown. The top right quadrant in fig. 5, between naïveté and risk, both unknowns, is the most intense zone of improvisation – the unforeseen. Peters talks of embracing failure as being liberating. "To fail 'gracefully' is to fail successfully. It is to recognise that such failure is necessary for the work to continue" (Peters, 2009, p.60). In this respect, it can be argued that to be fully liberated of failure is to refute its existence. Peters continues: "[…] such liberation might be best understood as an emancipation from the illusions of success (ibid, p.60). If failure does not exist in the morphogenetic (improvised) mode, the focus then is on process rather than outcome.

Conclusion

That improvisation is generative is beyond doubt. The new theoretical insight I provide through my work is firstly to illustrate through the work of Lamb, Studio Swine and Plesl, and my own work the interplay of heteronomy and autonomy as improvisation, and not inspiration. I was not inspired to use bubble wrap as a sandcasting waste mould; more so,

[4] Question posed by me during a public talk in Edinburgh, in conversation with Geoff Mann. 14th May 2018.

my actions were part of a heteronymous lineage of improvisation. Secondly, I have illustrated how the generative power of improvisation is amplified on a scale of rule-following to wilful naïveté, with the caveat that total disobedience can undermine the whole process.

This insight helps to calibrate improvisation as a method for practice-based research: firstly, it liberates the practitioner from failure to the point where failure can be removed altogether as an entity in the making process. Thus, secondly, this denotes a focal shift onto process, for when an object has no agency to fail or succeed, the way that it *became* is the centre of our attention. In this research, the improvised processes have led to rough (although not bad: Pye, 1968, p.30) outcomes that exist as tools of the research. This act of making is embodied in the *things* arising from this practice (fig 1).

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Dr Ian Lambert, Edinburgh Napier University, Scotland, UK

Ian Lambert is Associate Professor at Edinburgh Napier University in Scotland, where this research was undertaken. His research focuses on maker-led product design and sustainability. He has recently completed a Carnegie funded project on design with ocean plastic. He will be taking up the role of Professor and Dean of Graduate Studies at the College for Creative Studies (CCS), Detroit, USA, in September 2019.