INTRODUCTION

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All things are made from materials. This making is the most fundamental aspect of human–object relationships, but it is also complex due to the diverse properties of raw materials, the variety of desired outcomes, and the skills and abilities of makers. In Part I we aim to explore the three materials discussed in this volume: textiles, bronze, and clay. Our specific concern is locating and analysing the impact of the distinct characteristics of these materials. We investigate the development of new procedures for preparing raw materials that were either first discovered or that emerged during the Bronze Age; in other words, the development of new chaîne opératoires in response to the properties of materials. We also examine which factors might have influenced changes through time. In particular, how did various ways of working with the materials engender new understandings and material engagements? What are the implications of procedures being established, and how were they challenged, changed, improved, or innovated upon? We are concerned to address questions such as: How did the innate properties of each material inspire, guide, and restrict the production of objects? What specific knowledge, skills, and decisions were required to work with them? For example, how did textile-making practices evolve to respond to the changed properties of wool fibres, and how were different kinds of temper explored to create different clay qualities?
We are particularly interested in locating factors and conditions that may have stimulated shifts in how the materials were explored, including how they were thought about and ‘with’. Our interest in the role of materials embraces how they were used to establish, maintain, and change production traditions. This is not just a straightforward matter of charting the trajectory of developments over time but also of exploring how new materials and new procedures might disrupt existing practices. Martin Heidegger coined the term ‘present-at-hand’ to refer to how interruptions of routines affect awareness of things. ‘Things in this mode of being are objects of conscious concern; they “light up” and become something that might be thought of in an abstract manner’ (Heidegger 1962: 102 in Olsen 2010: 72). He further argues that disturbances or interruptions cause ordinary things to become ‘present-at-hand’. Malfunctions, things missing, disrupted expectations, and experiences change our awareness of things and their relationship to each other. In Part I of this volume we aim to bring this issue of ‘present-at-hand’ and Bengt Molander’s parallel argument about attentiveness (Molander 2013) to our exploration of creativity.

Different materials have different properties. According to Tim Ingold (2011: 30), properties occur rather than exist. This, however, is a human-centred approach that risks losing sight of some of the dynamics of material–human interaction, and perhaps especially some of the aspects of materials that may inspire creativity, in respect of both opportunities and restrictions. We therefore propose a distinction between material properties and material qualities. Material properties are innate physical, chemical, and kinetic characteristics that are independent of human awareness and exploitation. Material qualities, on the other hand, refer to how such properties come to exist in new ways after being recognised and manipulated; being transformed first into raw materials and then later into objects. We suggest that becoming aware of such properties for the very first time in human history, or encountering new properties as they are evolving (due to genetic changes) would provide a distinct kind of ‘lighting up’ experience as no routines would exist for channelling and guiding responses. Thus, we argue that it is already during the process of materials being turned into a raw material ready to be used that ‘the constant flow, mixing, and mutation of materials and things’ (Ingold 2011: 30) begin, rather than this dynamic being solely linked to the production and consumption of things. We do, nonetheless, also hold that the interaction with materials per se is a particular kind of engagement that has its own characteristics. Things and materials cannot be simply collapsed into each other.

The materials we investigate vary widely in their properties, providing different opportunities and challenges for makers. For instance, they
contrast in the processing needed to transform them from their natural state as raw materials to a fabricated raw material out of which objects can be made. We need to make this distinction between raw and fabricated raw materials as all of the materials discussed are extracted from sources in which they exist as natural raw materials. Subsequently, they are prepared through different processes to become materials ready for use. Fabricated raw materials are the harvested and prepared fibres, the alloyed copper, and tempered clay. For each of these, however, the processes and conceptual frameworks involved in moving from raw materials to fabricated raw materials differ. Thus bronze, as an alloy of different minerals, is different to the natural materials it is made from and is created through a bringing together and mixing of minerals. Likewise the potter’s fabricated raw material – the tempered clay – is made by bringing together materials so that when these are combined the fabricated raw material has distinct qualities. Bronze and tempered clay both differ from the wool used by textile workers, where the desired fabricated raw material is not gained primarily by mixing materials but through the selective breeding of sheep, choice of fibres from the fleece, and their processing. One fundamental difference between our materials is therefore a result of the different properties of inorganic and organic materials. In contrast to sheep, which throughout the Bronze Age show genetic modification due to breeding, the base elements that constitute bronze and potter’s clay are not altered per se by their processing. Whereas chemical reactions are in principle reversible, genetic changes are not. In the following, we shall pursue these ideas by considering how creativity may be located within each of the three materials in terms of how they were being processed to become raw materials ready for use.