

PAPER AS A RESPONSIVE THRESHOLD: MATERIAL CORRESPONDENCE AND ASSEMBLAGE IN COLLAGRAPH PRINTMAKING

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And it is always at the threshold of the elements, where one is about to turn into the other, that significant moments of transformation occur.
(Ingold, 2020, p. 125)

INTRODUCTION

Paper is essential to printmaking, yet its responsiveness, and its ability to mediate the forces of pressure and matrix has received relatively limited critical attention. Rather than treating paper as a surface of record, this practice-based research positions it as a material threshold, a zone of transition where matter transforms across surfaces. In collagraph printmaking, the printed image emerges through the interaction between the paper's own fibre architecture and the matrix it encounters. When paper meets the collagraph plate in the press, a self-organizing process unfolds, in which the paper's responsiveness and contact with the matrix co-produce the printed surface. In printmaking, the plate generally refers to the physical printing surface, while matrix refers to the source that generates the image. In this article, I use plate and matrix interchangeably to refer to the collagraph substrate; by oscillating between the two terms, I emphasize both its material presence and the relational processes activated through printing.

This study follows a practice-based methodology that develops through iterative movements between site-visits and the printmaking studio. The fieldwork I undertook in the landscapes around Helsinki, Finland involved observing, documenting, and gathering surficial materials, particularly geological debris. These materials were then brought into the studio where, in some cases, the granite was heated and crushed. They informed the construction of collagraph plates and the printing process. The cyclical exchange between my fieldwork and studio practice shaped the research process itself: observations of surfaces

in the landscape guided studio experiments, and the printing process reshaped how matter and perception were understood. This approach focuses on how surface materials relate across contexts, with practice understood as a way of generating knowledge through the emergent behaviour between matrix and paper, rather than fixed results.

Building upon this exchange between fieldwork and studio practices, the article investigates how paper behaves as a point of contact between two

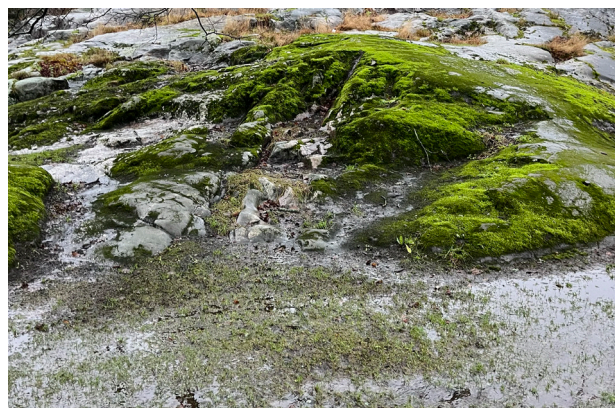


Figure 1



Figure 2

Figure Titles and Information

Fig 1. Exposed granite bedrock partially covered by lichen, Helsinki, Finland, December 2024. Photograph by Montana Torrey.
Fig 2. Surface scatter of geological debris, Helsinki, Finland, 2024. Photograph by Montana Torrey.

anticipatory surfaces. Materials such as crushed granite and sediment carry specific temporalities shaped by their own environmental histories, and these temporalities enter the printmaking process. As the plate is repeatedly printed, the matrix becomes a space of micro-geologies that morph through the printing process. These interactions form a mode of material correspondence (Ingold 2011, Ingold 2013) between paper and matrix, facilitating what, art historian and print scholar, Jennifer Roberts (2024) describes as medium generativity or “a model of embedded intelligence that assumes that specific ways of thinking arise in specific material operations” (Roberts 2024, p. 4). Printmaking itself carries an inherent geological logic: compression, stratification, imprint, and trace that mirror the imaginative processes of materials, allowing past (matrix) and present (contact) to enter into dialogue. The material gatherings and surface scatters encountered during fieldwork therefore shape both the construction of my collagraph plates and the outcomes of the printed surface, situating paper as a responsive threshold within these interactions.

In this article, I have organized this investigation in the same way that my process unfolds. First, I describe my fieldwork, motivations, and the gathering of surficial matter in Helsinki. Second, I detail how the process of assemblage shapes the material structuring of the matrix. Third, I analyze how paper engages with the latent tendencies of the plate in the press, focusing on paper as a responsive threshold between surface and ground. Together, these stages show how paper emerges through my fieldwork, plate construction, and press interaction to become the responsive surface-ground threshold through which surficial matter and the collagraph assemblage continually interact and reconfigure one another.

MATERIAL RELATIONS OF SURFACE

The relationship between field and studio constitutes what I understand as the material relations of surface. If, as Roberts suggests, mediums generate their own logics and tendencies (Roberts, 2024), then the formation of these logics begin long before I enter the print studio; they emerge as I move through the world and the exchanges with the material conditions that later inform my work (see Figure 1). I use the conceptual operations of printmaking as a framework for perceiving these environments, one in which surfaces operate as transitory planes of experience, both methodologically and metaphorically. The temporary debris lying on the exposed Precambrian rock contrasts with the deep temporal layers beneath it, shaping how I understand surface matter as both fleeting and stratified in time. This perceptual framework informs how I attend to surfaces in the landscape and informs how I register their relations and potentials in the studio.

Ecological psychologist, James J. Gibson, describes surfaces as interfaces between medium and substance, emphasizing a world structured through interactive surface relations (Gibson, 1979). Each surface, he argues, offers material affordances that invite certain

engagements. As I walk through the landscape, I become attuned to these affordances as material possibilities; in Gibson's terms, the medium lets us move and perceive, while substances are the solid things we meet in the world, and surfaces form between them to offer affordances. When entering the landscape through the lens of surface relations, I sense these possibilities through what, philosopher and media scholar, Laura Marks describes as "haptic visuality," a perceptual mode in which vision functions as touch (Marks 2000, p.162). This embodied seeing generates an ongoing translation between three-dimensional encounters in the landscape and their two-dimensional articulation in print. Through this continuity of experience, paper in the studio becomes the medium through which these perceptual observations are explored.

This haptic mode of seeing also shapes how I study the ground itself. In attending to what I describe as 'surface scatters' (see Figure 2), the surficial layer of the earth composed of pebbles, soils, plant fragments, and sticks. I observe how these dispersed materials carry with them prior temporal scales and are continually shaped by atmospheric forces. These geological materials are already objects of displacement and deep time, and when they are reconfigured on the collagraph plate, these conditions persist through processes of contact and pressure. Within Finland's post-glacial terrain, such scatters tend to collect in depressions and shallow layers the exposed granite bedrock of the Fennoscandia Shield. Yet they gather momentarily as what Deleuze and Guattari would call an assemblage: a temporary convergence of heterogeneous elements whose potentials are ongoing (1987). As a printmaker, I view these formations not only as material traces, but also as emergent print matrices or sites of potential surface interaction. As these materials gather and disperse, they enact a form of sedimentary reworking in which geological time becomes compressed through repeated contact and redistribution.

Although Gibson's emphasis is on what surfaces *do* this also opens a space to consider how printmaking surfaces *behave*. I depend upon the surfaces that I encounter within the landscape as interpretive fields for my practice, as they offer clues into interactions of texture, imprints, as well as composition. As surfaces unfold in relation to one another, this resonates with Tim Ingold's argument that the properties of materials are not fixed but are continually transformed through ongoing relations within the environment (Ingold 2007). Within the framework of the collagraph, these becomings unfold through the collision of overlapping temporalities: the deep-time histories of geological fragments as they fold into the continual presencing of the print. Paper maps this evolution.

These interactions directly inform the material logic of the plate's construction. The collagraph becomes a re-articulation of the landscape's surface temporal and material reactions on a micro-geological scale. Paper functions as a "medium" (Gibson, 1979) a metaphorical, atmospheric blanket that envelops the micro-terrain of the plate. This interplay of exchanges is similar to how theorist

Giuliana Bruno describes surfaces as a material configuration, a 'site of mediation and projection' where different forms of mediation and transformation can take place (Bruno 2014, p. 3). In the collagraph, this mediation of spatiotemporal conditions culminates in the receptive surface of paper.

THE COLLAGRAPH AS ASSEMBLAGE

As I have outlined, the material and perceptual relations between fieldwork and the printmaking studio shape the encounter between landscape and printed surface, in turn the collagraph plate becomes a site of organization (see Figure 3). The plate functions as a point of collation where interior (studio) and exterior (landscape) converge. Its surface holds latent geological potentials prior to their activation in the press. The plate may therefore be understood as what Derrida describes as a site of 'arche-writing' or inscription (Derrida 1976; Roberts 2024), where material traces precede their printed articulation. Printing does not initiate inscription, but translates latent material relations.

Collagraphs are constructed through an additive process in which materials are adhered; colla, from the Greek *kólla*, meaning "glue" (Oxford English Dictionary 2024), to a substrate. Formalized in the mid-twentieth century by the artist Glen Alps (Fick & Grabowski 2015), the technique forms a shallow, low-relief. In my practice, I use a metal plate and gesso to embed matter onto the matrix. Under pressure, paper modulates itself around the plate's differentiated depths, activating its textured surface.

Because this process begins with materials collected in the field, the plate becomes an extension of landscape assemblages, reconfigured within the studio (see Figure 3 and 4). As these materials enter the studio, they are gathered again into a different configuration. The matrix operates as both an assemblage and a site of arche-writing, where their material relations are already inscribed through their arrangement, before they are printed. The act of printing functions as another assemblage, in which the relations become activated and are translated through the mediation of paper. Each stage reorganizes matter, redistributing its potentials and extending its relations within the chain of operations (Leroi-Gourhan 1993) that structures the process.

The textures of the collagraph become reshaped by printing, as the plate becomes more compressed. In this study, I have printed the collagraph both as an embossment and as an inked (see Figure 5) matrix, with each method revealing a different development. Here, embossing refers to a print created with pressure alone without ink, and an inked matrix refers to the plate coated with printing ink that is then transferred to paper. Embossing (see Figure 6) emphasizes the topological relationships of relief and variation that interacts with the various depths of raised and recessed areas. Printing the inked matrix introduces other details as pigment settles and resists in certain areas.



Figure 3



Figure 4



Figure 5

Fig 3. Creation of the print matrix using collected geological materials, 2024. Photograph by Montana Torrey.

Fig 4. Detail of the print matrix surface with collected geological materials, 2024. Photograph by Montana Torrey.

Fig 5. Detail of the inked print matrix, 2024. Photograph by Montana Torrey.

The relative dampness of paper also effects shifts in tone and density of the printed image. By inking the matrix, its tendencies become more visible. Inking thus becomes a rehearsal for what may appear on paper. It is here, at the moment of contact, that paper assumes its role as a threshold, becoming both receptive and responsive, through which the final qualities of the collagraph begin to take shape.

PAPER AS A THRESHOLD

Paper continues to hold a space of reverie, even amid digital shifts and the imagined disappearance of the printed world. It remains a site of possibility, a plane that invites the slowing of thought and creative inquiry. As a material surface, it also carries its own histories of its formation, yet symbolically a blank page is always a new beginning, an opening to something not yet solidified. By approaching paper as a threshold, I ask how it functions in my practice through reorganization and contact to translate the deep-time traces of geological fragments.

A threshold is a dynamic field rather than a boundary. Philosopher and cultural theorist Erin Manning describes it as a zone in which tendencies shift and relational forces unfold (2016). Similarly, Deleuze and Guattari understand thresholds not as fixed limits but as transitional zones of becoming that emerge through the interaction of multiple forces, where transformation occurs through relation rather than a defined edge. Within this framework, lines of flight describe movements within an assemblage that enable it to open onto new connections and possibilities (1987). Paper seems to have the abilities to occupy both concepts, for it is literally shifting material elements, and forming new pathways or intensities as it remodels through the relief of the matrix. Within this context, paper occupies a state of readiness, becoming a plane of transition only when brought into relation with the matrix. Uniquely, its fibre structure positions it as both surface and ground simultaneously as it responds to the conditions it meets. Paper thus becomes a site where temporal and material processes merge as a momentary play of forces in flux.

In another way, paper's threshold role is rooted in its own formation. As papermaker and historian Dard Hunter describes the creation of paper as "the fibres lifted from the water in the form of a thin stratum"; the result is that 'this thin layer of intertwined fiber is paper' (Hunter 1947, p. 5). Its formation is already a transitional process of maceration, mixing and then consolidation. The very structure of paper is a network of intersections, this interwoven connectivity allows itself to be shaped by events. When it enters into a printmaking process, its latent capacities as a surface become active in relation to the latent tendencies of the matrix. Paper impresses what passes across it, moulding these configurations with its own material receptivity. Paper also has the ability to track the physical changes of the print matrix as it becomes worn through use. These shifts become apparent through paper's ability to respond within an exchange of sensitivities (see Figure 7). Each print becomes a negotiation between the matrix's evolving conditions and paper's ability to interpret them. Through



Figure 6



Figure 7

Fig 6. Printed embossment of a collagraph plate, 2025. Photograph by Montana Torrey.
 Fig 7. Printing an inked matrix, 2025. Photograph by Montana Torrey.

printing, these tendencies are translated into the structure of the paper, where they appear at another scale and through another material logic. Understanding paper as a threshold clarifies its central role: it is the surface where material correspondences become visible, and where the temporal and environmental aspects of the work converge.

DISCUSSION

By placing paper at the centre of my study it reframes the collagraph as a site of emergence. While the matrix operates as a micro-geological assemblage, it is the paper that makes this evident. As it responds and resists to the subtly shifting conditions of the matrix, it produces a surface that simultaneously articulates the encounter that it generates. Paper's responsiveness clarifies the collagraph as a materially relational practice. The behaviours of geological fragments become legible through the reactions of paper's plural capacities: response to the plate's relief, to pressure, absorption, and its ability to carry traces of earlier impressions. Paper functions as both threshold and mediator, sustaining the tension between absence and presence, pressure and release, accumulation and dispersion. Theories of surface and perception (Gibson), becoming and correspondence (Ingold), and assemblage (Deleuze & Guattari) help to illuminate this mediating role, articulating how paper draws geological and studio-based processes into dialogue.

In this light, paper becomes a temporal field where multiple durations converge. It becomes the anticipatory plane of geological histories, the evolving morphology of the plate, and the immediacy of printing. Rather than simply recording these temporalities, paper cohesively captures these complex configurations that appear through the act of printing.

CONCLUSION

Through my printmaking practice, this research demonstrates that paper occupies a generative role within the collagraph, acting as a responsive threshold through which field-collected geological matter, plate, and paper intersect. Paper is in fact an active participant in the formation of the printed image, shaping how materials transform in the printing process. Its fibre architecture mediates between field-gathered material and the shifting materiality of the plate, allowing micro-geological processes to become perceptible at the scale of the print. By accentuating paper's agency and role as a surface mediator reframes collagraph printmaking as a relational practice in which materials co-produce the event of the print. Understanding paper as both surface and ground, one that is responsive, and in continual formation extends broader discussions in artistic research and material studies. It positions printmaking as a mode of material inquiry, one that reveals how surfaces hold and reorganize time, and opens further possibilities for exploring the ecological and perceptual dimensions of printed matter.

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Montana Torrey is an artist, researcher, and educator. She is currently a doctoral researcher at Aalto University and a member of the AREA Doctoral School and the Empirica Research Group, where she investigates how expanded painting and printmaking can serve as tools for exploring the geological imaginary through overlapping temporal and spatial scales. Through this practice-based approach, she examines the intersections of palimpsests, material traces, weather, and time. She holds an MFA from the University of North Carolina at Chapel Hill and a BFA from the School of the Art Institute of Chicago, and she also attended the Skowhegan School of Painting and Sculpture.

IMAGE GALLERY



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Figure 2: Surface scatter of geological debris, Helsinki, Finland, 2024. Photograph by Montana Torrey.



Figure 3: Creation of the print matrix using collected geological materials, 2024. Photograph by Montana Torrey.

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Figure 5: Detail of the inked print matrix, 2024. Photograph by Montana Torrey.
Figure 6: Printed embossment of a collagraph plate, 2025. Photograph by Montana Torrey.



Figure 7: Printing an inked matrix, 2025. Photograph by Montana Torrey.