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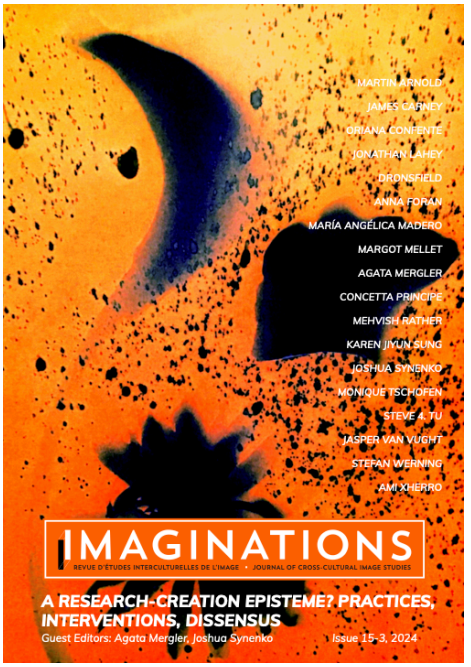

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SURPLUS TO REQUIREMENTS: WORK, NON-LINEARITY, AND ABDUCTION IN CREATIVE RESEARCH

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We argue that the institutional administration of academic and creative research as *labour* does violence to the true character of this research as *work*. Where work is a pluralist concept that admits multiple forms of transformation, labor is based on a linear proportionality of inputs to outputs. We explore various forms of non-linearity in creative work and pedagogical work, ranging across disproportion, the associative, the counterfactual, and the interdisciplinary. We arrive at C.S. Peirce's notion of semiotic *abduction* as a useful cognitive model for research practice and creation. Here, the linear mapping of inputs to outputs is complemented by a recognition of the role played by the speculative or interpretive leap in arriving at novel concepts and practices.

Notre étude démontre que l'administration institutionnelle de la recherche académique et créative en tant que labeur fait violence à la véritable nature de cette recherche en tant que travail. Alors que le travail est un concept pluraliste qui admet de multiples formes de transformation, le labeur est basé sur une proportionnalité linéaire entre les entrées et les sorties. Notre recherche explore diverses formes de non-linéarité dans le travail créatif et pédagogique, en passant par la disproportion, l'associatif, le contrefactuel et l'interdisciplinaire. Nous arrivons à la notion d'*abduction* sémiotique de C.S. Peirce comme modèle cognitif utile pour la pratique de la recherche et création. Ici, la mise en correspondance linéaire des entrées et des sorties est complétée par la reconnaissance du rôle joué par le saut spéculatif ou interprétatif dans l'élaboration de nouveaux concepts et de nouvelles pratiques.

Academic and creative research troubles the distinction between labour and work. Labour, in its most common interpretation, is transactional: an individual's time and effort are—adequately or inadequately—remunerated with value in a linear fashion. Work, by contrast, is more expansive; it comprises processes of transformation that can operate in the cognitive or aesthetic domains (for example) no less than the economic, and need not be linear in character. In other words, all labour is work, but not all work is labour. The problem this distinction poses for thinking about academic and creative research should be evident: While both practices are clearly forms of work, they are "officially" administered as forms of labour.

That this is so is self-evident: research grants pay wages, they generate returns on investment, they are routinized by way of contracts and deliverables—all tokens of bureaucratic administration. That is, research is implicitly conceptualized as a linear process, where the application of labour to a problem *now* yields a predictable increase in knowledge in the future. It is not new to suggest knowledge has never operated in this way (Kuhn 2012); nevertheless, institutional actors still universally converge on the idea that labour articulates the essential activity of research. Why this should be so is less easy to answer, but there can be no doubt that the success of physical labour in transforming the world provides a hard-to-ignore precedent for thinking about how cognitive and creative labour might also do the same.

But when the anthropological reality of research is considered, it quickly becomes clear that the labour model is inadequate. To be sure most qualitative and quantitative disciplines admit *some* forms of routine work, with this being especially so in experimental disciplines. But even the most positivist discipline can only be routinized in the narrowest logistical sense: to identify research outputs in advance is to invalidate the purpose of research. That is to say, they are *disproportionate* in how they relate outputs to inputs. In creative disciplines, this is especially the case, given there is not even an in-principle linear proportionality between labour expended and results

produced; their openness is a de facto refusal of labour in its most fundamental interpretation (Sullivan 2009).[1]

We take this unpredictability at work in artistic research-creation as our starting point. We argue that to truly engage with the reality of how research operates in creative disciplines we must expose ourselves to the most capacious interpretation of work—one that takes in excess, absence, the non-linear, the associative, and the counterfactual. In this essay, we take these concepts and explore how they exemplify themselves through artworks and art practices. This leads us to the semiotic concept of *abduction* as a wider framework for thinking about research in creative disciplines. We argue that abduction provides us with cognitive models that are more precise than those offered by the concept of work, but still general enough to retain its pluralist character.

EXCESS, POVERTY, AND LABOUR

One illustration of the incongruence between labour and creative work can be found in the way that specific artworks distort labour into poverty or excess. That is, they explicitly thematize (and thereby problematize) labour by exemplifying its extreme forms.

On the side of excess, take the work *One Year Performance 1980-1981*, also known as "Time Clock Piece," by Tehching Hsieh. In this work, the artist committed to punching a time clock every hour, on the hour, for an entire year, from April 11, 1980, to April 11, 1981. He wore a worker's uniform and shaved his head to visually mark the passage of time. Each punch of the clock was documented with a photograph, resulting in a time-lapse film showing Hsieh's face aging over the year. The artist's dedication and the physical and mental challenges of adhering to such a rigid, relentless schedule here is an obvious challenge to any notion of artistic practice as a form of routinized labour. No doubt, there is labour in the process, but the labour is not integrated into any linear return on the effort involved—instead, there is an act of self-consumption that the artist offers as a

prompt for an undefined (and probably undefinable) set of audience reactions.

Coming from the other direction, there is the idea of a *poverty* of labour. Where Tehching Hsieh accelerates labour to the point of the physically and mentally unendurable, Robert Rauschenberg took up the notion of erasure and created an aesthetic that centred on making labour invisible. This started with erasing his own drawings, but in 1953 he approached Willem de Kooning and asked for an original work that he progressively erased and, with Jasper Johns, presented as a work in its own right. Here, the refusal of labour is visible in the controlled destruction of a celebrated artist's work as a public spectacle.

One could elaborate on these examples, but the general point should be clear. Labour-based models of productivity in academic disciplines, with their emphasis on linearly predictable outputs from measurable inputs, fall short of creative research and practice. In other words, there is a disproportionality in the work of art that refuses the research-as-work model and invites new ways of thinking about the relation between artistic practice, academic research, and the nature of work. This inordinate proportion of production against product discloses contemporary creation as having at its core the thought process of the refusal of the object (product, oeuvre, piece) as the concluding outcome (Muntadas 2013).[2]

ASSOCIATION

While the simplest refusal of the linear nature of labour comes in the form of disproportion, it is certainly not exhausted by it. There are many logics that connect outputs with inputs in non-linear ways, and all these are visible in the act of creative research. Aesthetic style, in its most basic form, oscillates between the frustration and the satisfaction of perceptual intuitions, to the extent that it floods the environment with evidence of a particular conception of the world whilst innovating on the superannuated styles that have preceded it (Carney 2020). When the innovation is relatively small, style takes the form of decoration; when it

is larger, the stylistic innovation announces an entirely new aesthetic. We see the former in the operation of fashion, where seasonal shifts in taste combine with contingent cultural preoccupations to generate changes in sartorial style. The latter is announced by the *manifesto*: a polemically framed articulation of a new aesthetic that self-consciously refuses prevailing patterns of creation and thinking in favor of a radical break with what went before.

One important case where this creation of new perceptual and cognitive forms reaches its apogee is the logic of free association. At once both a style and a historical movement, the impulse towards free association became manifest in both the creative practices and psychoanalytic theories of the early 20th century. In the *Surrealist Manifesto*, for instance, André Breton wondered when we would have philosophers and logicians of sleep, so he could go to bed and surrender himself to the dreamers (Breton 1924).[3] To operationalize this idea is to inject the oneiric and the associative into the logic of space and contiguity—in other words, to make the irrational predictable and the predictable irrational. Take for instance René Magritte's "Elective Affinities" (1932), a depiction of an enormous egg inside a cage. What makes this image absurd is not that there's an egg inside a cage, but that we have birds inside of cages all the time and find it unremarkable—all we have here is a younger bird. It is the fact that reality surpasses the real. Therefore, the logic that this image presents is not merely a random concatenation of images, but one that starts from an unremarkable social practice and projects it into a space that is adjacent to—and radically deviant from—that practice. Clearly, we are at a substantial remove from any linear mapping here. But how might we better approach this unpredictable-yet-not-random logic?

In psychoanalysis, free association is a method used to bypass internal and external judgments. It aims to modify internal intimidation related to what we feel, think, and desire. It is through the act of saying them that we truly discover their significance. While our internal judgment, or superego, dictates what is permissible to think and feel, free association allows for exploration without censorship, enabling the unsayable and inadmissible to surface without

fear (Philips 1994). This means that if one bypasses internal censorship, new things emerge in the process. Psychoanalysis teaches us that there is always a break, a gap, a lack, a blind spot that indicates our inclusion in reality (Žižek 2011, in Bryant 2015). It doesn't matter if something is true or not, what matters are the webs of associations that are created. Memories, desires, and dreams are in potential and becoming.

Art's modulation is in the play between the sensible and the intellectual,[4] generating associative constellations that operate through nuanced and unpredicted concepts, ideas, experiments, materials, shapes, emotions, narratives, and more. One way to think of associative logic is through the lens of *contingency*: if all events could have happened otherwise, then violating linear causality and proportion allows us to map contingent orders of events that could have been part of our world but aren't. Take the work *Sediments Sentiments (Figures of Speech)* (2007) by Allora & Calzadilla. Their aim is "to make a relationship between geology and politics, two things that have nothing to do with each other. […] Unexpected juxtaposition is something we love. This had opera singers lying down inside a gigantic sculpture that looked like a ruin, singing fragments of political speeches."[5] These giant sculptures of rock-like landslides and tunnels of possible future disasters worked in tension with the fragility of human bodies and lyrical voices activating the space through satirical political rhetoric.

Juxtaposing different media, materials or objects is also reflected in techniques like collage, bricolage, automatic writing, or art of instructions. These methods are radical in the way in which meaning emerges, which is by association—fragmenting and sticking together seemingly unrelated things (a collage's potential is that it can hold infinite contradictions). Laura Emsley—an artist interested in paleolithic consciousness and caves—uses the old surrealist techniques of *decalcomania*[6] and collage as dialectical analogues of submerging (inside the cave) and merging image's contradictions in complex assemblages that break binary categories: inside and outside, mind and body, matter and consciousness, touch and virtuality, present and

Figure 1: Laura Emsley, The Manias_Ramp 2024. Courtesy of the artist.

past, accidental and intentional, singular encounters and existing narratives.

Jorge Luis Borges gives a literary exposition of this idea in his story "The Garden of Forking Paths," in which the narrative describes the eponymous labyrinthine text written by the Chinese diplomat Ts'ui Pên that contains all possible outcomes:

> "In all fiction, when a man is faced with alternatives he chooses one at the expense of the others. In the almost unfathomable Ts'ui Pen, he chooses—simultaneously— all of them. He thus creates various futures, various times which start others that will in their turn branch out and bifurcate in other times." (Borges 2018)

All possible and potential alternatives surface when nonlinear dynamics are at play. Borges's story has been used to think through things like the hyperlinked nature of the internet. But for all that we're endlessly exposed to new possibilities, we remain enmeshed in

Figure 2: Laura Emsley, The Manias_Nana_2022. Courtesy of the author.

the conjunction[7] of the present. That conjunction (which is interconnected, rhizomatic, and networked) is the result of a process. As vari-

able as it is, the operations at work manifested in creativity are the result of different tensions, or rather contradictions. And one of the logics that animates these contradictions is the logic of association.

THE COUNTERFACTUAL

If non-linear disproportion leads to contingency and free association, it also leads to the counterfactual. The human preoccupation with what is not the case has always been something of a philosophical mystery (Sartre 1993), and it is in the act of fictional elaboration that this preoccupation reaches its most elaborated form. Unlike even religious beliefs (which believers hold in principle to be true), the immersion in fictional worlds is engaged in the explicit knowledge that these worlds do not (and will never) exist. And yet, despite the cost that this imposes in terms of attention, memory, and opportunity, humans engage and invest deeply in fictions. In 2005, the average Briton spent about 6% of their waking life immersed in counterfactual realities of one form or another (Nettle 2005). Since then, the explosion in digital media and online social platforms means this figure can only have increased. Though authoritative research is hard to come by, one credible estimate suggests that present-day North Americans now spend 25% of their day engaging with fictive or quasi-fictive online content (Talker Research 2024).

While there are many theories as to why counterfactual realities should be so attractive, what is immediately clear is their non-linear relationship to what is actually the case. Even the most prosaic fictional world is not a mirror but a distorting lens: it will foreground some elements of experience while backgrounding others––and in fictional worlds where naturalism is entirely dispensed with, we are exposed to routine violations of the causal order. While we are disposed to think of such worlds as the creation of narrative fiction, the fact is that any creative act that invites audiences to reflect on alternatives to what is currently the case—which is to say nearly all creative acts—amounts to tracing the outline of a counterfactual reality.

Consider Nomad 13 (2017) by Beatriz Cortez and rafa esparza—artists interested in science fiction—a work that represents a botanical space

capsule of steel that propels a garden (made out of ancient American plants: corn, black beans, amaranth, sorghum, quinoa, chayote (huisquil), chia, prickly pear, chili pepper, yerba buena, yerba santa, sage, and a ceiba tree) into space and the future. This capsule journeys atop an adobe platform,[8] Xolotl, the ancient Aztec deity who leads travelers through various dimensions. This work is counterfactual as there's a projection of the past into the future in an imaginary world. By sending this garden into space, the artists expose an impossible design, but also comment on the current efforts of NASA and SpaceX, as seen in the Seedling Growth-3 mission, to populate space with living plants to populate space with living plants.

What we see emerging here is a type of research-creation that is less concerned with tracing causal implications than in positing fictitious causes and tracing them to their conclusions. Such activity works transversally to the linear sequence of cause-and-effect, and cannot be readily accommodated to models of research that rely on this sequence. The act of entertaining counterfactual realities certainly remains of psychological interest and quite properly the target of cognitive science, but the logic of the counterfactual itself falls outside any deterministic logic. No doubt, one could object to this claim and argue that any preoccupation with consequents and their antecedents retains the emphasis on causation. To fully answer this we need to bring in the notion of *simulation*, where there is an attempt to elide the distinction between a cause and the representation of a cause. Whilst we are unable to treat this idea with the thoroughness it merits here, we would note that any analysis of causation that arrives at an agent (a simulator, a novelist, a god) as its termination point cannot realistically be described as analysis of causation in the first place.

BRAIDED METHODS

Another space in which creative research is reflected is in interdisciplinary academic practices, which can sometimes take non-linearity as a productive space in which to ground counter-intuitive research. At The London Interdisciplinary School

(LIS), a crucial ambition is to create conceptual models that allow the heterogeneity of disciplinary perspectives to be brought together in a way that is neither unprincipled eclecticism nor reductively cohesive. The idea of *braided methods* aims to dismantle traditional disciplinary boundaries and challenge the limitations imposed by disciplinary approaches to research-creation. The practice of braided methods integrates words, images, numbers, and algorithms—four fundamental cognitive revolutions of human culture—into the core of the Master's Programme in Arts and Sciences (MASc). Image is a cognitive technology that allows us to record and recode our perceptual environment; its earliest evidence is from 73,000 years ago but it is certainly much older. Words are a cognitive technology that allow us to communicate as a species and engage in collective action, with the first language (probably) being around 100,000 and 200,000 years ago. Numbers are a cognitive technology that allows us to abstract away randomness from our environment and emerged around 43,000-42,000 years ago. Algorithms are a cognitive technology that allow us to control the environment by exploiting its predictable regularities; they gained most significance in the industrial revolution.

Braided methods are informed by interdisciplinary research practices that aim to break down silos between different areas of knowledge associated with these revolutions and create counterintuitive results. For example, the integration of language, numbers, and images encourages students to view problems from multiple perspectives simultaneously, creating a more holistic approach to understanding and problem-solving—as well as diversifying the languages in which to communicate (both in terms of information and symbolically). They learn numerical methods (statistics and probability), linguistic methods (natural language processing, close reading, narrative), visual and creative methods (image analysis, archival practices, cultural probes, visual journals) and programming.

Traditional educational models follow a linear progression, where knowledge is acquired step by step. However, braided methods require students to engage with a diversity of data simultaneously. This non-linear learning process demands that the learning experience be reflective of the synthesis of multiple—sometimes contradic-

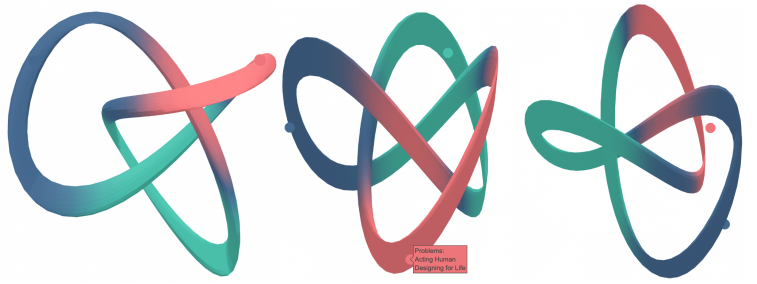

Figure 3: James Carney and María Angélica Madero, 3D curriculum visualization of the MASc in Interdisciplinary Problems and Methods at the London Interdisciplinary School, 2024. The dots are equidistant extreme points corresponding to the problems, methods, and research strands of the program. The braiding of these strands is captured by the color leakage across different parts of the knot.

tory—frameworks. This synthesis is not only theoretical, it is embodied and reflected in the shape the curriculum takes—a trefoil knot (see fig. 3). Its interconnected loops represent the intertwined assemblages of words, images, numbers, and algorithms symbolizing the circuit through which the student moves. In this journey, any arbitrary point can be an extreme point, a beginning, or an end of the process.

Each student creates their own unique knot with a specific set of contents. The metaphor of the knot also points to its (mathematical) complexity, as most problems resist simple solutions, and it challenges hierarchical structures. It also means students graduate with a range of diverse outcomes. For instance, one student analysed plant growth using neural networks in order to model complex systems, another worked on neuroaesthetics and the impact that art has on wellbeing, and another worked in art as a tool for speculation.

In this last case, you can see the work of Juliana Echavarría who created "*ing*: speculating in the present continuous," an open-source web platform (www.i-n-g.space) designed to address the limitations of current ideation processes by leveraging speculation (see fig. 4 and 5). *ing* (intentionally spelled in lower caps, signifying the suffix of

present continuous verbs) is developed through a collabourative curatorial approach that invites different visual artists to conceive a series of exercises, providing a repository of tools for people to engage with speculation and construct meaning through actions, learning by making. The exercises are framed through a methodology of play that allows people to embrace chance—a fundamental vehicle to reach a speculative mindset, one that embraces a plurality of outcomes and unpredictability.

ing explored the relevance of speculation in addressing today's complex problems, the need for embodied solutions, and the role of collabourative approaches. The project was premised on the idea that we are currently facing a crisis of imagination (Mulgan 2022). Juliana employed a braided approach to research methodology, integrating a range of methods, including participatory action research (PAR), cultural probes, archival practices, thematic analysis, natural language processing (NLP), computational image analysis, and data science.

ABDUCTION

If we have succeeded in making our case, the non-linear, non-laboured nature of creative research and elaboration should be visible. Across the cultural record, there is clear evidence that standard models of research are not alone inadequate to the artistic practice—they are in fact antithetical to them. Instead, creative research relies on notions of disproportion, association, and contingency that, while not random, are not straightforwardly predictable, either. How might we frame these ideas through a cognitive paradigm that helps us to synthesize them? We propose to use Charles Sanders Peirce's notion of *abduction* as one way to do this (Pierce 2014).

Peirce offers abduction as a counterpoint to the familiar process of scientific induction. Where induction consists of the abstraction of a general rule from observed statistical patterns, abduction is the act of generating hypotheses that best fit the data available. That is, where induction is guided by the data itself, abduction supplements the data with a cognitive surplus that derives from the theorist's creative ac-

Figure 4: Juliana Echavarría, poster for "ing: speculating in the present continuous." Capstone project at the MASc in Interdisciplinary Problems and Methods at the London Interdisciplinary School, 2024. Courtesy of the curator.

tivity. The most routine forms of abductive inference are found in interpretation: the meaning of a poem cannot be determined by the statistical relations between its linguistic tokens—cognitive and pragmatic knowledge is also required. But one can also find startling examples of abductive processes in natural scientific inquiry. Henri Poincaré recalls how "I entered an omnibus to go to some place or other. At that moment when I put my foot on the step the idea came

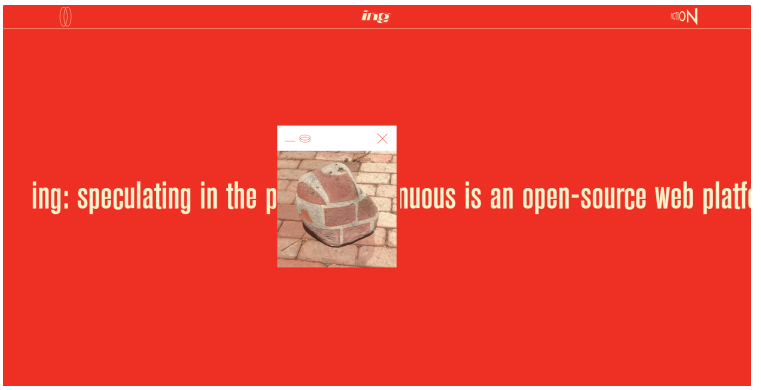

Figure 5: Juliana Echavarría, about page for www.i-n-g.space. "ing: speculating in the present continuous." Capstone project at the MASc in Interdisciplinary Problems and Methods at the London Interdisciplinary School, 2024. Courtesy of the curator.

to me, without anything in my former thoughts seeming to have paved the way for it, that the transformations I had used to define the Fuchsian functions were identical with non-Euclidean geometry" (Hadamard 13). August Kekulé famously claimed to have discovered the structure of the benzene ring by way of a dream in which he saw a snake eat its own tail; Niels Bohr maintained the same of his model of the atomic nucleus; Srinivasa Ramanujan assigned his mathematical insights to visions sent in dreams by a Hindu goddess—the examples could be multiplied. What they all share is the presence of a non-deterministic subjective factor that guides the evolution and selection of hypotheses in a credible way.

That abduction is in fact present in aesthetic fabulation is nowhere better visible than James Joyce's monumental evocation of the life-world of the dream, *Finnegans Wake* (1939). There are no algorithms here; instead, it is a condensation and compression of meaning that is both a product of and a prompt to the abductive consciousness. Take the title alone: Fin/Vin (French: *to end/wine*), Finn (Irish: *mythological hero asleep under a mountain*), egan (English: *again*), Wake (English: *to rise/a funeral ritual*), Finnegans (*all the habitual wine drinkers––no possessive apostrophe*), Finnegans Wake (*the funeral rit-*

ual of the builder Finnegan). Here we see a polyvocal layering of cycles of death and rebirth, ranging from the comic (getting dead drunk and waking up to do it again) to the quotidian (the death and rise of an individual called Finnegan), to the mythopoeic (the expression of Irish collective destiny through a mythological narrative centred on the figure of the sleeping giant, Finn McCool). While this logic is not scientific in any positivist sense, it is the same cognitive strategy that stands behind hypothesis generation. Hypotheses may exist to be falsified, but the falsifiable hypotheses do not come from nowhere.

A second example can be seen in Santiago Pinyol's work *Simbouvenires* (2024), which stimulates participants into abductive subversion of practices of exchange. In this installation, Pinyol presents plaster chocolate bars in exchange for real ones, subverting the tradi-

Figure 6: Santiago Pinyol, Simbouvenires, 2024, installation, action, tablets cast in dental plaster, SGR Bogota. Courtesy of the artist.

tional exchange of goods and emphasizing a speculative exploration of value. By inviting participants to trade a real chocolate bar for a plaster replica, the work engages with a creative process that is far from deterministic, allowing for new hypotheses about materiality, exchange, and cultural significance to emerge. The exchange does not conform to simple fungible structures but instead creates an associative space where the viewer must generate meaning based on their own experiences. However, these experiences are not merely arbitrary or random: "chocolate bars" trace the troubled colonial history of cacao, which went from an Aztec beverage in pre-Columbian America to a storable and tradeable solid in 16th-century Europe. This commoditization is captured by Pinyol's elimination of the gustatory association of chocolate in his collapsing of the consumable object into its aluminum wrapping. Abduction, then, is a process that moves beyond linear reasoning, instead making space for creative activity to fill in the gaps of meaning and engage with the contingent nature of cultural value.

Figure 7: Santiago Pinyol, Solid Desire (No sugar, no palm oil), chromed copper, 2024, SGR Bogota. Photo credit: Sebastián Cruz. Courtesy of the artist.

Figure 8: Santiago Pinyol, Concretised Still Life #0,1, cacao pods at various stages of ripeness, aluminum leaf applied using "gilding" technique, 2024, SGR Bogota. Photo credit: Sebastián Cruz. Courtesy of the artist

The great value of abduction for our purposes is that it respects the specific action of creativity without monopolising it as the prerogative of a particular discipline or set of disciplines. Practitioners of the natural and social sciences and the humanities are perfectly correct to say that there is a creativity specific to their forms of thought, and the concept of abduction captures this. But by the same token, the greater freedom of the creative disciplines in the generation and selection of materials and processes can also be made consistent with the abductive consciousness. The question, ultimately, is one of where the act of abduction occurs. In the standard model of the scientific method, the hypothesis is the primary focus of research—and this is downstream of the creative activity of hypothesis generation. Nevertheless, if this abduction—this dream of the atomic nucleus or the periodic table—is not there to begin with, there is no hypothesis.

In the creative disciplines, the hypothesis is of less interest than the dream that leads to it, whatever form that dream may take.

And it is precisely here that we see how we can arrive at an episteme of research-creation that is neither reductive nor hallucinatory. Artistic practice and creative research cannot be collapsed into the linear logic of qualitative and quantitative research without violence being done to their nature. But neither can an ethos of unprincipled randomness deliver any appreciation of the material and symbolic connections that attend creative action. Against both, abduction supplies that extra subjective element that allows for the disjoint to be joined in radically unexpected ways. For this reason, we volunteer it here as a worthwhile paradigm for thinking through the idiosyncratic logic of research creation.

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IMAGE NOTES

Figure 1: Laura Emsley, Manias Series 2 Ramp 2024. Courtesy of the artist.

Figure 2: Laura Emsley, Manias, Series 1 _Nana_2022. Courtesy of the author.

Figure 3: James Carney and María Angélica Madero, 3D curriculum visualization of the MASc in Interdisciplinary Problems and Methods at the London Interdisciplinary School, 2024. The dots are equidistant extreme points corresponding to the problems, methods, and research strands of the program. The braiding of these strands is captured by the color leakage across different parts of the knot.

Figure 4: Juliana Echavarría, poster for "ing: speculating in the present continuous." Capstone project at the MASc in Interdisciplinary Problems and Methods at the London Interdisciplinary School, 2024. Courtesy of the curator.

Figure 5: Juliana Echavarría, about page for www.i-n-g.space. "ing: speculating in the present continuous." Capstone project at the MASc in Interdisciplinary Problems and Methods at the London Interdisciplinary School, 2024. Courtesy of the curator.

Figure 6: Santiago Pinyol, Simbouvenires, 2024, installation, action, tablets cast in dental plaster, SGR Bogota. Courtesy of the artist.

Figure 7: Santiago Pinyol, Solid Desire (No sugar, no palm oil), chromed copper, 2024, SGR Bogota. Photo credit: Sebastián Cruz. Courtesy of the artist.

Figure 8: Santiago Pinyol, Concretised Still Life #0,1, cacao pods at various stages of ripeness, aluminum leaf applied using "gilding" technique, 2024, SGR Bogota. Photo credit: Sebastián Cruz. Courtesy of the artist.

NOTES

1. Graeme Sullivan's model of practice-based artistic research has four areas: in the first, theoretical, the researcher explores problems. In the second, conceptual, the artist creates works that are part of the research process. In the third, dialectic, human processes in the creation of meaning are explored (beyond direct communication). And, finally, in the contextual area, practice results in social transformation.↩

2. Antonin Muntadas's art project methodology situates this question historically, outlining that after the 1960s and '70s new considerations emerged in art practices, amongst them, specificity of place, temporality, and duration.↩

3. Surrealism could be read as the impulse to break seemingly logical structures of thinking in order to reach different cadences of semantic chains. The manifesto's first statement says: *"I would like to sleep, in order to surrender myself to the dreamers, the way I surrender myself to those who read me with eyes wide open; in order to stop imposing, in this realm, the conscious rhythm of my thought"* (Manifesto of Surrealism, Andre Breton, 1924). The impulse of breaking normative speech was also part of Sigmund Freud's talking-therapy. Later, Jacques Lacan outlined that Freud couldn't achieve further as he couldn't access a department of linguistics, as the forms language took in its free manifestations revealed the content of what was said.↩

4. According to Friedrich Schiller, in the *Letters On the Aesthetic Education of Man,* nature is split into two contrasting elements: the physical, driven by the sensuous, and the intellectual, guided by reason and morality. Schiller believes that art is in the play between the conflicting forces of sensuality and reason, thought and emotion. While his ideas come from the Enlightenment, they resonate with contemporary artistic research by addressing how art engages with—and mediates—the material and the rational. If it was purely rational it would be philosophy; if it was purely material, it would be craft. It is in that play between both that creative contemporary research engages both the mind and the body.↩

5. Yablonsky, Linda, et al. "Jennifer Allora and Guillermo Calzadilla." *Interview Magazine*, 9 July 2011, www.interviewmagazine.com/art/jennifer-allora-and-guillermo-calzadilla.↩

6. Decalcomania is also the rhizomatic process of mapping over tracing (Deleuze and Guattari 1983). Maps represent dynamic thought, while tracings imply fixed, hierarchical structures. In *A Thousand Plateaus*, this distinction underpins their philosophy and poststructuralist theory: arborescent thought is linear and hierarchical, while rhizomatic thought is non-hierarchical and interconnected.↩

7. This can be thought with what Irit Rogoff calls "contemporaneity," not seeing it historically, but as a conjunction of shared urgencies (Rogoff 2006).↩

8. The codex preserves the recipe and adobe-making technique, ensuring future generations can understand this form of land stewardship and labour.↩