The panel interrogates contemporary notions of performance and embodiment from a materialist and (post-)phenomenological point of view. In the light of this approach that includes performance and performativity in various contexts (e.g. Science and Technology Studies amongst other epistemic domains), the potential of the nonhuman to shape performative events enables new considerations about performative practices that comprise humans and nonhumans.
Matter, like meaning, is not an individually articulated or static entity. Matter is not little bits of nature, or a blank slate, surface, or site passively awaiting signification; nor is it an uncontested ground for scientific, feminist, or Marxist theories. Matter is not a support, location, referent, or source of sustainability for discourse. Matter is not immutable or passive. It does not require the mark of external force like culture or history to complete it. Matter is always already an ongoing historicity. (Barad, 2003, 821)

Abstract
This paper outlines how wearables reconfigure notions of performativity because of their admixtures of human/nonhuman agencies. It argues that contemporary wearables, in a continuum with technological/body performative entanglement dating from early 20th century art (Avant-Garde), materially alter practices of performativity because they propose new and intimately co-dependent agencies of the human/nonhuman. The theoretical arguments to substantiate this human/nonhuman reconfiguration of performativity via wearables are culled from recent Science Technology and Society (STS) and posthumanist approaches to materiality and performativity.

Materiality
Art is material. It always exists in a substrate, a substance, a history of expertise, tools, practices, and in association with the lived physical world – be it in the object or the receiver. Furthermore, when art is technological it enters into a relation with the event. Technology is active – it moves, signals, modulates, and transforms over time, in short it “performs.” Technological art is event-making. Latour argues that the incommensurable divide that Modernism created was to conceptually and materially separate nature from culture (Latour, 1993). To uphold the “illusion” of human supremacy over the environment, and over the nonhuman, however, is an untenable premise
which supposes a material divide between human bodies/intentions and that of technologies/nature. I would like to argue that this divide has long been bastardized in arts. We've been tinkering in consort with, and in symphony/sympathy with machines certainly since the Modern age, since the Avant-Garde, since Vsevolod Meyerholds’ biomechanics or Frederick Kiesler’s control walls. (Poggioli, 1968; Salter, 2010) We’ve been courting material as agency, and machines as “beings” for quite some time now. And we have enlisted them (the nonhumans, the material, the machines, the technology) for more that our servitude – we have enlisted them as active creative collaborators.

Posthumanist Performativity

“Matter”, as a platform for enquiry, has had a recent surge of importance. The transformation of matter – in creative and scientific domains – is increasingly at the fore of the shaping and constitution our rapidly changing world (think: physics! biology! telecommunications!). We can look to the performative turn (in Sociology, Anthropology, Ethnography) as one of the first steps towards the material, the “real”, and the lived to better understand the world. Today, techno-scientific practices in the field of STS are increasingly engendering a shift from representational models of the world to actively engaged ones which seek to encounter “materiality”. Emphasis on the mechanics of the production of knowledge – laboratory contexts, specific uses of apparatuses, human/nonhuman interactions – have shifted scientific paradigms both towards the physical world (which engages the human and nonhuman) and towards the “active” world with a particular interest in “performativity”. (Knorr Cetina, 1999) This interest in the non-representational raises a critique of the premise that scientific knowledge is only encoded in inscriptive forms (documents, theories, papers, texts) – and rather looks at the modalities, the actions and the messy relationship between humans and nonhumans as a platform for the construction of knowledge. (Barad, 2003)

Feminist scholar Karen Barad’s quantum physics-inspired posthumanism redefines the concept of performativity from a techno-scientific standpoint to argue that science “performs” – in experiments, in laboratories, with specialised instruments, with human agents etc. Science, as a knowledge-based endeavour, is inherently “performative” for Barad. She notes:

the move towards performative alternatives to representationalism shifts the focus from questions of correspondence between descriptions and reality (e.g., do they mirror nature or culture?) to matters of practices/doings/actions. (Barad, 2003, 802)

Wearables

I wish to investigate wearables as a practice which is specifically reconfiguring the notion and process of performativity via its intimate integration of human and nonhuman actors – both from a production and presentation standpoint. Wearables, intelligent garments/textiles, have as their depar-
ture point to act as second skins, as translators, interpreters, sensors and vehicles for the processes of data which must be lived on/by/with the body. Wearables, as a technology, co-habitate with the body and “perform” in such a way that gives agency, materiality and meaning to both the organic (the body, organism) and the technological (electronics, sensors). Of interest is: How do these two agencies interpolate? What kinds of performative admixtures are produced by the conflation, overlap and feedback loops of these two systems, these two “matters”? And how do wearables rethink “performativity” via “materiality”?

References

In 1939, the Austrian trained architect/scenographer Frederick Kiesler authored an essay entitled “On Biotechnique and Correalism: A Definition and Test of a New Approach to Building Design” in which he posed the question “at what point does inanimate matter pass over and become alive?” Kiesler was referring to a 1912 experiment by the Nobel Prize winning surgeon Alexis Carrel in which cells from the heart of a developing baby chick were removed by Rockefeller Institute researchers and healthily grown and sustained inside the technically constructed environment of a test tube culture for over 34 years. As Kiesler wrote, “The experiment confirms the view that, while life only comes from life, it is also dependent on its technological environment” (Kiesler 1939, 74).

Kiesler’s background in architecture and, in particular, scenography, together with his underlying interest in the dynamics of forces that give form to life within the technical environment give us a frame to understand some recent cultural trends, namely, the tendency for researchers and artists in fields as far flung as linguistics, anthropology, game studies, cultural studies, theater, music, HCI, cognitive science, STS and, particularly the new media to utilize the concept of performance and performativity. As I have recently written in the book Entangled, “performance as practice, method and worldview is becoming one of the major paradigms of the twenty first century, not only in the arts but also the sciences” (Salter 2010, xxi). Whether the territories of stage spaces, speech acts, linguistic tropes, anthropological and sociological frames or increasingly, the interior of laboratories and scientific practice – none of these escape the grip of performance and its even more complex cousin, performativity. According to feminist scholar Rebecca Herzig, attributing performance to all sorts of disparate contexts appears to be a rampant phenomenon, most recently in the field of science studies. If there is any doubt, it should be clearly evident from the many discussions at this SLSA focused on life and its temporal dynamics and, as we can see from
Kiesler, past artistic practices that employ and simultaneously, problematize technical invention. As Herzig articulates,

Given the heightened recognition of contingency, temporality, and reflexivity made possible by performative analyses, it is perhaps not surprising that a number of recent studies of science reveal a quiet but steady turn toward this useful analytical tool. Accounts which bear striking differences in disciplinary trajectory, methodology, and object of study converge in their invocation of performance (Herzig 2004,130).

In 2010 there has been a shift away from the performative turn in anthropology and sociology in the mid 1970s with Richard Schechner’s interest in the appropriation of theories and methods of the social sciences to understand the nature of human-centered performance practice. Instead, we increasingly are shifting towards what Andrew Pickering has recently termed “performative ontologies” a grappling with the “agency” (to use a particularly problematic word) or actions of things, processes and indeed, technical-vital environments themselves. Indeed, performativity as a concept and worldview seems to have increasingly become a boundary object for different artists, scientists and scholars to understand the political-aesthetic-ethical ramifications of a seemingly incoherent, out of control contemporary technoculture. In this sense, as a way of describing a temporal, dynamic phenomenon, the concept of performance operates across three registers: (1) as a material act (though not necessarily bodily), (2) eventilization in and through time, and finally, (3) the temporal unfolding and articulation of an embodied yet, quasi or non human “subject.”

While Herzig argues that “with the important exception of [feminist scholar] Karen Barad’s work, there has been relatively little traffic between discussions of performances in science and the treatments of performance and performativity elaborated by feminist, queer, or critical race theorists” (Herzig 2004, 128), I will argue that there has been even less work in understanding the increasing attribution of performativity to the hybrid realm of mixtures between quasi-human “agencies” or stuff in the world. Indeed, in an era in which we are increasingly confronted by the indeterminate actions, dynamics and performances of non human forces (volcanos, oil spills) and the ways in which artists are grappling with such forces, perhaps Kiesler’s correlationist vision of a world that itself is constituted by the complex, co-productive dynamics of vital, psycho-social and technical beings may provide us with a framework for both analysis and action.

References

This presentation draws from a behavioralist perspective of artistic activities in relation to theories of cultural development. Insights found here, the author will argue, may be profitably introduced into current discussions considering how new technologies create new problems for research practices regarded experimentally. Proceeding thusly, the author will consider the relevance of this kind of experimentalism for developing new techniques of cultural production, in particular the development of a 'speculative rhetoric' for new media (here considered generously). A number of recent examples will be considered, including those drawn from the author’s own artistic work revolving around dynamical and computational media systems.

What follows is a related and previously unpublished statement which coincided with Your Participation Not Required (2010):

**Art has no value.**

What is experience? Experience is that which impinges upon us. What is spontaneous/extra/excess comes from experience, exceeding our concepts, presenting a perceptual discontinuity. This direct experience of difference may actualize an idea, as suggested by Deleuze, by providing the impetus for the invention of new ways of thinking. Or, as is the more probable case, it is subsumed by a kind of “rage to order.” In part this is what allows us to be free in certain senses of that word.

Sensory experience is not all-important. Perceptual beliefs are habits or dispositions towards certain patterns of response behavior. These beliefs need not arise from the senses for their causal efficacy. Meaning cannot be dependent on an individual cognitive act alone, however tenacious the will to believe. Nor is value strictly bound with what human actors in particular construct. The usual arguments for and against this form of relativism and its concomitant anthropocentrism contains two assumptions that need to be
dealt with. The first is an assumption that only humans create meaning in
the world. The second stems from the view that the only actors are human. Each (theoretically) excludes nonhuman processes from the co-structuring of meaning.

**Art has absolutely nothing to do with making the invisible visible.**
Definition alone is not adequate to make an idea clear. A concept must be examined through its relation with practical endeavors. Ideas ought to be tested practically in the course of experience. The thinking in thought has been called an event-disruption, nonsense, excess. What can the new media arts do for thought? A promise of new media lies in our ability to manipulate new forms in order to observe unexpected results. In order to understand something, it must have consequences for ordinary, everyday experience. For thought to move there must first be a living doubt – a hunch that something could or ought to be different. Such a doubt can arise from recalcitrant experience that does not conform with our perceptual expectations, including the private observation of our own behavior. Doubting is not knowing what to believe. It is oriented towards the future. It is logically and historically the first step to an hypothesis which then has to be tested experimentally. This is not always good, or beautiful.

**Art has not gotten the philosophy, or the science, it deserves.**
The cultural historian Morse Peckham long ago urged us to concentrate on the “semiotic transformation” of what happens, since “the meaning of a sign is the response to that sign or, to be a touch more precise, is the determination of the appropriate response.” From this proposition Peckham derives three important corollaries that are worth quoting at length here:

1. Theoretically any sign can elicit all responses [...]; all interpretations are equally valid. 2. Theoretically all signs can, in an individual organism, elicit but a single response. Indeed, in instances of extreme psychosis, that is exactly what can and does happen. Yet behavior that can be subsumed by these two corollaries is extremely rare. 3. Sign response is controlled, and ultimately can be controlled only by force.

If instructions for performance fail to control and stabilize behavior, and if force fails, there is no other recourse than to rhetorical seduction. In contemporary times, this amounts to a reorganization of labor alongside the deployment of technologies for the mobilization and control of affect. Rhetorical seduction (including verbal as well as non-verbal signs) is the only way to circumvent force. The science of this speculative rhetoric, prefigured over a century ago by Charles Sanders Peirce, has yet to be developed.

**Art is our least and greatest hope.**
The recent performative turn, a move away from representation and towards a process-oriented view of interpreting events has, for the cultural moment,
established momentum in a wide ranging group of disciplines within the institutions as a way of conceiving and analyzing knowledge production. I have come to agree with an alternative implication that signs are less performative than regulatory, and failing that, persuasive. For my purposes now, it is enough to say that rather than view something called Art as a separate and unique or institutionally bound cultural activity, I have found it useful to think, with Peckham, of artistic behavior as another important mode of behavior in general, one that is particularly well suited to meet the demands of a lively world.

References

This paper aims at a topological contextualization of architectural ornament and its substrate membrane. A membrane acts as the interface to a building as a technical object (Simondon), yet ornamentation is its aesthetic (Simondon) projection. This synthetic deformation of a building's limits punctuates a large tableau of simultaneous multiplicities including physical systems as well as the social, cultural and symbolic (Banham, Maturana and Varela, Simondon). The potential enunciation of an “ornamented” membrane and the translation of building systems into potential opportunities for public engagement will consider how passive (and active) systems can provoke action through material and immaterial phenomenological interfaces.

In its most common model, an architectural membrane is conceived and designed as a boundary condition between mediums. It is a built ecological condition: understood as a delicate stasis of competing and unstable milieus. The membrane is a negotiation between continuous conditions. In its broadest reaches, it is a system that is, in fact, difficult to trace: a careful reconciliation of a disparation of interruptions to the continuity of a variety of dynamic milieus: the interruption of gravity, the interruption of heat, the interruption of air, water etc. Rather than a spatial boundary, architecture is a momentary reification of a modulated interplay of the perturbed weaves of milieus. Although we tend to privilege the non-human, milieus as modulated by a building skin interface the multiplicities of social, cultural and material systems: a complex, somewhat quasi-biological edification of an ever-concretizing co-structured event, performance and matter.

The synthetic and pliable deformation of a building’s limits punctuates a large tableau of simultaneous multiplicities that including physical systems as well as the social, cultural and symbolic. This research takes the work of French philosopher Gilbert Simondon’s positions on the technical object and the question of individuation as a process of evolution towards complex technical ensembles. In this particular research, this work is recast in developing an understanding of the condition and nature of complex ornamented systems and their evolving forms through the immaterial conditions of new technologies. Particularly those of interactive, fabrication and programming technologies.

Pneuma develops work based on an expanding scale of related nodes in an environmental setting. From an architectural perspective, this would be to
develop a membrane condition over top of architectural substrates complimentary to existing active and passive networks that already form a significant (and long standing) repertoire of environmental mediation. The intent is to develop a further network, with a specific interest in data generated from use and environments both within building systems and external to them, and outside of the canon of traditional architectural sciences. The scales can vary and should be rather flexible from urban, to building, to corporeal and to micro scale.

Pneuma could be considered as a layering of architectural substrate, where network nodes are ornamental (in the traditional sense). This is viewed both in the understanding of ornament as being actuator (a mediator of light, sound etc.) and as a sensor (witness, listener and sensible body). From a material and design perspective, this implies a further level of consideration of the sensor node as an intentional artifact to be crafted and made with artistic intent. Hence, it extends beyond the application of existing electronics to surface and substrate to the actual and suggested materiality (and immateriality) of these sensor / actuators. As a consequence we develop work that explores the potential of sensate and composite materials as a palate of architectural expression: this includes but is not limited to conductive materials, voltage regulation etc.

The electronic and sensate qualities of these nodes also have a potential to extend the physical ornamentation into an immaterial realm of energetic expression (heat, electromagnetism and sound). This recalls a sensibility of understanding architectural ornament as a grotesque or monstrous expression of a static form into the realm of the temporal mediation of space and environment. Again, drawing on the network, we examine temporal and rhythmic scales of light and sound composition in dialogue with these ornaments.

Pneuma is an open source research and project platform. Pneuma’s activities include: initiating research, conducting projects, establishing collaborations, developing affiliations and dissemination, formed by Peter Hasdell (Hong Kong) and Patrick Harrop (Winnipeg/Montreal), Pneuma work and projects have been shown in Montreal, Winnipeg and Shanghai.
The current ‘molecular turn’ and its accompanying ‘biologism’ has led contemporary artists to effectively construct links to non human ‘otherness’ while abstracting from previously dominant ‘cognitivism’. Biotechnological art that goes beyond metaphors and representation stages the very presence of the manipulated other (animals, plants, plantimals, tissue cultures etc.) in performative displays. By making themselves into Guinea Pigs for biotechnological self-experimentation, inserting (their) genes into plants and bacteria, co-culturing cells or setting up trans-species collaborative situations, artists question models of alterity by the means of producing authentic immediacy.

As opposed to hypermediacy – which in terms of Grusin & Bolter’s ‘remediation’ theory means looking at the media – biomedia itself is most frequently employed in art to look through the media in order to achieve an immediacy of presentation. However, these displays are in turn linked to a network of hypermedial connections and paratextual discourses. Some works may question species barriers, others can be seen as postmodern vanitas – but is non human centered art even possible? This paper addresses volitionally post-anthropocentric art practices and their (in)ability to confer agency to their subjects and objects.