



meta  
body

IMF - INTERNATIONAL METABODY FORUM - METAFORMANCE STUDIES 2013-14

METABODY - JOURNAL OF METACULTURAL CRITIQUE - 1

METABODY - REVISTA DE CRÍTICA METACULTURAL - 1

MULTIPLICITIES IN MOTION.  
OPEN SOURCE BODIES-SPACES

MULTIPLICIDADES EN MOVIMIENTO.  
CUERPOS Y ESPACIOS DE CÓDIGO ABIERTO



metabody

METABODY - JOURNAL OF METACULTURAL CRITIQUE - 1  
METABODY - REVISTA DE CRÍTICA METACULTURAL - 1

IMF - INTERNATIONAL METABODY FORUM  
METAFORMANCE STUDIES 2013-14

MULTIPLICITIES IN MOTION.  
OPEN SOURCE BODIES-SPACES

MULTIPLICIDADES EN MOVIMIENTO.  
CUERPOS Y ESPACIOS DE CÓDIGO ABIERTO





## INDEX / ÍNDICE

- 4.- Preface of the editor. / **Prefacio del editor.**
- 10.- **Metabody Manifesto 1.0** For an embodied, differential media ethics in global surveillance culture. / **Manifiesto Metabody 1.0 Para una ética medial diferencial y corpórea en la cultura de la vigilancia global.**
- 14.- **Toward a Process Seed Bank: What Research - Creation Can Do**  
Erin Manning and Brian Massumi
- 20.- **The Project: Nonconscious Cognition in Techno-Human Systems**  
N. Katherine Hayles
- 24.- **Reflections on Metabody, Software and the Originary Technogenesis of the (Post)human**  
Federica Frabetti
- 26.- **Metacoming Dualities**  
Stefan Lorenz Sorgner
- 28.- **Ontokinethics: Ontopolitics of Becoming in Affective Hypercapital**  
Jaime del Val
- 32.- **Conceptual Dimensions of Embodiment**  
Yvonne Förster
- 34.- **History of the invention and performativity of reason, emotions and data**  
Eva Botella Ordinas
- 38.- **Movement, gesture and truth. Art as countermovement in Nietzsche's thought.**  
Oscar Quejido and Laura Rodríguez
- 40.- **Redefining the integration of bodies, spaces, and intelligent systems**  
Kevin LaGrandeur
- 42.- **"Metabody: New Environments and Networks for Sustainable Cultural Diversity" A short plea for refocussing the question of freedom**  
Ralf Beuthan
- 44.- **From Facial Expressions to Bodily Gestures**  
Beatriz Pichel
- 48.- **The affordances of music**  
Rubén López Cano
- 52.- **Gesturality and technology: restricting or expanding?**  
Alicia Peñalba, María-José Valles, Elena Partesotti, Rosario Castañón, María Ángeles Sevillano
- 54.- **[Paths and processes (art, technology)];**  
Brisa MP
- 58.- **Metabody proactive playing field**  
Kas Oosterhuis / Hyperbody
- 60.- **Atmospheres of Chorographic Design**  
DAP-Lab - Johannes Birringer and Michele Danjoux
- 62.- **Phantom Limb - Hybrid Embodiments for Dance**  
Daniel Bisig, Pablo Palacio, Muriel Romero
- 66.- **Making interactive media environments relevant to the participating visitor**  
Marije Baalman
- 70.- **Response to Metabody Residency at STEIM**  
Lisa Wymore
- 72.- **First Metabody study work by K. Danse: the "Monster" prototype**  
K. Danse
- 74.- **Interactive Art Question**  
Robert Wechsler
- 76.- **Music of Perception**  
Marcello Lussana
- 78.- **Research themes relevant for MetaBody**  
Casa Paganini- InfoMus research Centre
- 84.- **A Metahumanist Manifesto / Un Manifiesto Metahumanista**  
Jaime del Val and Stefan Lorenz Sorgner
- 90.- **Introductions to METABODY and the International Metabody Forum / Introducciones a METABODY y al Foro Internacional Metabody**



## Preface of the editor

We start here with the first of a series of publications of the Metabody Project and its International Forum. It's a first mosaic of introductions, kaleidoscope of incipencies, declarations of unintentionations and dispositionings, since this project is above all a displacement from disciplinary grids, a movement across known territories.

With this first series of microtextual improvisations and multiples manifestos or manifestations, we share an incomplete mosaic for a potential horizon of thought, yet without aiming to foreclose it. How to mobilise thinking always towards new and irreducible domains?

The images accompanying the text are from the Metabody Forums 2013 and 2014, images that don't aim to represent but rather displace the text towards a corporeal practice from which it emerges and is inseparable, a practice of which the images say little to who hasn't participated in it.

The reflections contained in the text expose a first period of immersion, from July 2013 to January 2015. A difficult period of titanic challenges, of creative chaos and multiplicities in motion.

Where politics has transposed to the secret laboratories of corporations that design perception at planetary scale, we mobilise a counter-laboratory of perceptions, bodies, affects and movements. Mutant Bitches 2.0 as secret agents for a new politics of plurality and resistance.

### **Antidata as antidotes**

The context of the Project is an unprecedented control society, with the onset of Big Data as new economy that aims to reduce all reality to traceable data. The history of cybernetics could be written in terms of the persistent attempt to erase the body, reducing movement and complexity to forms subject to control. Therefore the horizon of the project can only be excessively broad, since it proposes a many sided approach to a millenary

## Prefacio del editor

Iniciamos aquí la primera de una serie de publicaciones del proyecto METABODY y su Foro Internacional. Se trata de un primer mosaico de introducciones, caleidoscopio de incipencias, declaraciones de no-intenciones y des-posicionamientos, pues este proyecto propone ante todo un desplazamiento de los ejes disciplinares, un movimiento a través de los territorios conocidos.

Con esta primera serie de improvisaciones microtextuales y manifiestos múltiples o manifestaciones damos un mosaico incompleto de un horizonte posible de pensamiento, pero sin voluntad de cerrarlo. ¿Como movilizar siempre el pensamiento hacia dominios nuevos e irreducibles?

Las imágenes que acompañan al texto son del Foro Internacional Metabody de 2013 y 2014, imágenes que no tienen vocación de representar, sino desplazar el texto hacia una práctica corpórea en el que se entreteje y de la que es inseparable, una práctica de la que las imágenes dicen poco para quien no ha participado de las prácticas corpóreas que se les asocian.

Las reflexiones contenidas en los textos reflejan un primer período de inmersión, desde julio de 2013 hasta enero de 2014. Período difícil, de retos titánicos, de caos creativo y multiplicidades en movimiento.

Donde la política se ha trasladado a los laboratorios secretos de corporaciones que diseñan la percepción a escala planetaria, movilizamos un contra-laboratorio de percepciones, cuerpos, afectos y movimientos. Las Zorras Mutantes 2.0 como agentes secretos de una nueva política plural de resistencia.

### **Antidatos como antídotos**

El contexto del proyecto es una sociedad del control sin precedentes, con el auge del Big Data como nueva economía que todo lo quiere reducir a patrones rastreables. La historia de la cibernética puede escribirse en tér-



formalizing tradition, both in terms of creating and of reinventing ourselves beyond it, reclaiming a body in all the complexity of its multiple and open becomings.

### **Metabodies as antiobjects**

Metabodies are antiobjects, they invite us to perceive ourselves as part of relational fluxes that never become fully fixed in a form, proposing a relational ontology in which everything is body, but the body is not an object with defined limits, but an infinite field of forces, fluxes and movements. Metabody thus questions the ecology of objects as discreet measurable, traceable, entities, and the economy of objects in the internet of things.

### **Metaaffordances**

Diffuminating the object, undoing its limits, is perceiving in another way, taking perception outside of a millenary fixation, so that instead of objects we may perceive open potentials of interaction. Instead of neatly defined affordances, that invite to just a predefined repertoire of interactions, to open up perception to diffuse affordances, indeterminate potentials.

### **Illegible affects**

In the emoticon era, where our behaviours are traced and reduced increasingly reduced to six universal emotions patterns, to recover the complexity of expressions in all its embodied ambiguity, where each gesture disseminates in infinite potentials, irreducible affects, infinite invention of illegible affects that escape the emoticon capture as invisible mode of soft control.

### **Disalignments**

To disalign from Renaissance perspective that still governs our digital interfaces of rationalized vision and manual control.

### **Microsexes**

To undo the anatomical, functional, biological reductionism of the body to a form-function, and disseminate sex-desire in irreducible movements, constant microdeviations of the attractors of desire in Affective Capitalism.

### **Amorphogenesis**

To mobilise amorphous bodies and movements as antidote to the empire of formalisation in the informa-

minos del intento persistente de borrado del cuerpo, de reducción de su movimiento y su complejidad a formas controlables. Por ello el horizonte del proyecto solo puede ser amplio en exceso, ya que aborda desde múltiples lugares la cuestión de como, no solo cuestionar esta tradición formalizadora milenaria, sino como reinventarnos más allá de ella, desde un cuerpo reclamado en toda su complejidad de devenires, múltiples y abiertos.

### **Metacuerpos como antiobjetos**

Los metacuerpos son antiobjetos, invitan a percibirnos como parte de flujos de relaciones que nunca se fijan del todo en una forma, proponen una ontología relacional en la que todo es cuerpo, pero el cuerpo no es un objeto con límites definidos sino un campo infinito de fuerzas, flujos, movimientos. El metacuerpo cuestiona la ecología de los objetos como entidades acotadas, discretas, rastreables, y la economía del objeto en la era del internet de las cosas.

### **Metaaffordances**

Difuminar el objeto, deshacer sus límites, es percibir de otro modo, percibir en movimiento, sacar la percepción de una fijeza milenaria, de modo que en lugar de objetos veamos potenciales abiertos de interacción. En lugar de disposiciones (affordances) nitidamente definidas, que nos invitan solo a un repertorio establecido de gestos y relaciones, abrir la percepción a affordances difusas, metaaffordances.

### **Afectos ilegibles**

En la era del emoticono, del intento de reducir nuestros patrones de comportamiento a seis univer en toda su ambigüedad corpórea, donde cada gesto se disemina en infinitos potenciales, en afectos irreductibles, invención infinita de afectos ilegibles que escapan la captura en el emoticono como forma de control.

### **Desalineamientos**

Desalinearse de la perspectiva renacentista que aun gobierna nuestras interfaces digitales de visión racionalizada y control manual.

### **Microsexos**

Deshacer el reduccionismo anatómico, funcional y biológico del cuerpo a una forma-función, y diseminar

tion era, opening up language and discourse to its tenuous and mobile frontiers.

### **Intra-action**

Where interaction is of things already defined, intra-action is of emergent processes that co-constitute one another. Radical ecology of bodies, affects and perceptions.

### **Metaformance**

Where performance operates in the limits of discourse and representation, metaformance operates dismantling the very perceptual frameworks that sustain representation and discourse: not towards a new sensory hierarchy, but towards and ongoing non-hierarchical reinvention of the senses, perceptions and relations.

### **Open source bodies-spaces – Affects hackers and perception hackers**

Where the question is above all to open up perception, as ontological substrate of politics in affective capitalism.

### **Metapolitics and Metacultural Critique**

Where politics has transposed to the laboratories of corporations: a counter-laboratory of affects and perceptions.

### **Performing contradictions – Don Quixote Crucified**

Where an ecology of transdisciplinary collaborations and the questioning of dominant homogenizing alignments and expressions is proposed, the very administrative structure of the project operates as hard limit. A Project that started being quixotesque, of fight against the windmills of neoliberal domination, transforms along the way.... ¿Is this performance sustainable?

*Jaime del Val*

el deseo sexo en movimientos no capturables, micro-desviaciones constantes de los atractores del deseo del Afectocapital.

### **Amorfogénesis**

Movilizar cuerpos amorfos, movimientos informes como antídoto del imperio formalizador en la era de la información, abriendo lenguaje y discurso a sus tenuous y móviles fronteras.

### **Intra-acción**

Donde la interacción es de cosas ya definidas, la intra-acción es de procesos emergentes que se constituyen mutuamente. Ecología radical de los cuerpos, afectos y percepciones.

### **Metaformance**

Donde la performance opera dentro de los límites del discurso y la representación, la metaformance opera desmontando los marcos perceptuales que la sostienen: no hacia una nueva jerarquía perceptual sino hacia una reinención permanente no jerárquica.

### **Espacios y cuerpos de código abierto – Hackers de afectos y percepciones**

Donde se trata ante todo de abrir la percepción, el sustrato ontológico de toda política, en el seno del actual capitalismo de los afectos.

### **Metapolítica y Crítica Metacultural**

Donde la política se ha trasladado a los laboratorios de corporaciones, un contra-laboratorio de percepciones y afectos.

### **La performance de las contradicciones – Don Quijote Crucificado**

Donde se plantea un desarrollo de ecologías transdisciplinares de colaboración y el cuestionamiento de expresiones y alineamientos homogéneos y dominantes, la propia estructura administrativa del proyecto opera como límite duro. Un proyecto que inició siendo quijotesco, de lucha contra los molinos de viento de la dominación neoliberal y que se transforma según avanza .... ¿Es esta performance sostenible?

*Jaime del Val*











# METABODY MANIFESTO 1.0

## For an embodied, differential media ethics in global surveillance culture.

§ 1. Media give form to our perceptions and proprioceptions, therefore to the ways we relate to one another and to the world, the way we know, are, move and change, our ontology and epistemology, our ecology and our affects. The human is a historical construction grounded on a technogenetic spiral in which the technologies made by the human are also crafting the human.

§ 2. Amongst the crucial technologies that have crafted the human as an artifact are technologies of perception, from euclidean geometry and architecture, through Renaissance perspective, to ubiquitous cameras, screens and interfaces, which have generated a regime of visual domination and rationalisation of perception. The perception of the world as quantifiable and controllable field is an effect of these perception technologies that in reverse define the subject and the self as quantifiable and controllable.

§ 3. Information Media are expression of a platonic-cartesian tradition that splits the world in matter and forms, and favours transcendent patterns over movement and materiality thereby ignoring context, body and embodiment as radically specific and contingent conditions of life.

§ 4. In the past centuries photography, cinema, architecture and urban design have crafted and choreographed the perception and proprioception of the liberal humanist subject. In the past decades, since World War II, the onset of Information technologies has induced a new realm of choreographic control of bodies, through sensing, aligning and capturing movement at increasingly minute and vast scales, a regime of kinetic control: the Panchoreographic.

§ 5. At the same time reductionist simulations of human emotions (emoticon culture) are being engineered in domains like Human Computer Interaction, robotics, artificial intelligence, and others, while biometric devices disseminate in the bodies new ways of quantification and control.

§ 6. Worst of all, within the global ambience of fear since 9/11, the semiotics and affect of control is generally perceived by the population as desirable, allowing for an unprecedented militarization of affect and life at large that encompasses any potential human activity, feeling, perception or thought.

§ 7. Thus global corporations of ICT have reached what no totalitarian government of the past could do: that billions of people are willing, even desperate to overexpose every imaginable data of their lives in networks of control, concealed behind the façade of friendship and connectivity, but whose misuses and perverse effects have only partly been uncovered in the Snowden case.

§ 8. This unprecedented situation of global surveillance and control serves the purpose of capturing every nascent desire and affect in networks of capitalization, as well as other older purposes of totalitarian control, while its field of operation is only starting to expand in the nano-, bio- and neuro- spheres.

§ 9. The problem is not the defence of privacy but rather the intrinsic relation of current information media with absolute control, and therefore the unsustainable, potentially fascist social ecology which they foster.

§ 10. The solution is thus not in regulating privacy, nor in a mere critique of surveillance, but in reviewing the ontology of contemporary technogenesis of the human, in creating a radical awareness of its problems, and in creating conditions for novel technological paradigms, new perceptions away from the platonic-cartesian-lockean tradition, away from visual domination, that open up the horizon for a planetary ecology to come, in which contexts, bodies and embodiments are radically taken into account and fostered in their irreducible, unpredictable and changing difference.

# MANIFIESTO METABODY 1.0

## Para una ética medial diferencial y corpórea en la cultura de la vigilancia global.

§ 1. Los medios dan forma a nuestras percepciones y propiocepciones, y con ello a los modos de relacionarnos entre nosotros y con el mundo, el modo de conocer, ser, moverse y cambiar, nuestra ontología y epistemología, nuestra ecología y afectos, nuestra política. El humano es una construcción histórica fundada en una espiral tecnogenética en la que las tecnologías hechas por el humano también construyen lo humano.

§ 2. Entre las tecnologías cruciales que han dado forma al humano como artefacto están las tecnologías de la percepción, desde la geometría euclidiana y la arquitectura, pasando por la perspectiva renacentista, las cámaras, pantallas e interfaces ubicuas que han generado un régimen de dominación visual y racionalización de la percepción. La percepción del mundo como campo cuantificable y controlable es un efecto de estas tecnologías perceptuales que definen de retorno al propio sujeto y el yo como cuantificable y controlable.

§ 3. Los medios de información son expresiones de una tradición platónico-cartesiana que separa el mundo en materia y formas, favoreciendo la abstracción de patrones abstractos frente al movimiento y la materialidad, ignorando contexto, cuerpo y corporeización como condiciones de la vida radicalmente específicas y contingentes.

§ 4. En los pasados siglos la fotografía, el cine, la arquitectura y el diseño urbano han dado forma y coreografiado la percepción y propiocepción del sujeto liberal del humanismo. En las últimas décadas desde la segunda Guerra Mundial, el avance de las tecnologías de la información ha inducido un nuevo modo de control coreográfico de los cuerpos, a través de sensores, alineamientos y capturas del movimientos en escalas crecientemente grandes y pequeñas: el pancoreográfico.

§ 5. Al mismo tiempo las simulaciones reduccionistas de las emociones humanas (cultura del emoticono) son resultado de la ingeniería en dominios como la Interacción Humano Máquina (HCI), la robótica, la intelligen-

cia artificial y otros, mientras la biométrica disemina en los cuerpos nuevos modos de cuantificación y control.

§ 6. Peor aún, en el ambiente de miedo global desde el 11S, la semiótica y afecto de control se percibe generalmente por la población como deseable, permitiendo una militarización del afecto y de la vida en su conjunto que abarca cualquier actividad potencial, cualquier sentimiento, percepción o pensamiento.

§ 7. Así, las corporaciones globales de la comunicación han logrado lo que ningún gobierno totalitario del pasado: que miles de millones de personas estén deseosas, incluso desesperadas por sobreexponer todo tipo de datos de sus vidas en redes de control disfrazadas tras fachadas de amistad y conectividad pero cuyos efectos perversos se han desenmascarado solo parcialmente en el caso Snowden.

§ 8. Esta situación sin precedentes de vigilancia global y control tiene el propósito de capturar todo deseo y afecto naciente en redes de capitalización, si como responde a otros viejos anhelos de control totalitario, mientras su campo de operaciones se expande en las esferas del nano- bio- y neurocontrol.

§ 9. El problema no es la defensa de la privacidad, sino la relación intrínseca de los medios de información con la tendencia al control absoluto, y por lo tanto la ecología social insostenible y potencialmente fascista que promueven.

§ 10. La solución no está por ello en la regulación de la privacidad ni en una mera crítica de la vigilancia, sino en la revisión de la ontología de la actual tecnogénesis de lo humano, en crear una consciencia radical de sus problemas y en generar condiciones para nuevos paradigmas tecnológicos, nuevas percepciones alejadas de la tradición platónica-cartesiana-lockeana, lejos de la dominación visual, que abran el horizonte para una ecología planetaria por venir, en la que contextos, cuerpos y corporeizaciones se tomen en cuenta en su irreductible, impredecible y cambiante diferencia.













## Toward a Process Seed Bank: What Research-Creation Can Do

Erin Manning – Brian Massumi

In Canada, the term research-creation, initially a funding category and now the nomenclature for higher degrees including art practice, has become the stand-in for what elsewhere is called art-based research or practice-led research. Worried that the term would reinstate simplistic notions of practice and theory, in 2003 the SenseLab ([www.senselab.ca](http://www.senselab.ca)) decided to explore how else the term could open up the question of how making and thinking intersect. Our use of the term from the outset took it less as a finished category than as a question. At what level and in what modes of activity do research and creation come together? In the absence of a rigorous rethinking of that question, we felt the category of research-creation would do little more than become an institutional operator: a mechanism for existing practices to interface with the neoliberalization of art and academics. The danger, we felt, was that research-creation, once institutionalized in accordance with established criteria, would boil down to little more than grouping traditional disciplinary research methodologies under the same roof. This existing “interdisciplinary” tendency – where collaboration really means that disciplines continue to work in their own institutional corner much as before, meeting only at the level of research results – would do little to create new potential for a thinking-with and -across techniques of creative practice. Instead of asking how research has always been a modality of practice with its own creative edge, and how creative practice stages thought in innovatory ways – how each already infuses the other – the instituted meeting between research and creation would easily settle into a commu-

nicational model revolving around the delivery of results amongst conventional research areas.

This SenseLab inquiry, which over the past decade has evolved into experimentations with new forms of collaboration and new ways of conceiving what we have come to think of as “emergent collectivity,” has focused on how art, philosophy and politics co-compose in event-based formations. Key to this has been a rethinking of how art thinks and how philosophy creates. How do art and philosophy co-exist in an overlapping practice of making and thinking, where philosophy as well as art is considered a creative practice, and art is recognized to be permeated with concepts in the making? What kinds of dissonances must be kept afloat in our collaboration across these different practices in order to assure that both art and philosophy retain their singularity? What kinds of thinking are part of making, and how is thinking itself a multifaceted creative practice?

To pursue this line of thought, what is most necessary, we have come to realize, is that we not homogenize difference. One practice is not all practices, one way of making art does not cover all of art-making, and no amount of philosophy guarantees better art. When practices come together at the intersection of making and thinking what they expose is not homogeneity but their important difference. It is this difference, this active differential in the event of their overlappings, that most insightfully moves them into the third space we call research-creation.

To touch on this differential, to activate it and make it felt, we need techniques. Techniques, as the SenseLab

conceives them, are modes of experimentation devised for the singularity of an event. A technique for reading is always singularly tied to this text, read under these conditions. Reading techniques might include creating a familiarity with how a writer activates a style that moves their thinking, how they create concepts and where the concepts are mobilized. To engage with the singularity of the iteration of thought that is this philosophical text, a certain suspension of disbelief is also called for: what does this text do and how does it do it? This kind of reading postpones the temptation to be critical, listening instead to how its conditions for expression make it singularly what it is, allowing the text to open itself up to its own creative impulse. Here, the text is read not in relation to general ideas, but as its own formative force.

An art practice demands the same investment. How does this practice open up this question of experience? How does this practice invest in opening up the texture of this concept, in movement. How does this tendency, in this practice, move thought (in practice) to its limit.

Thought moved to its limit does not mean moved to linguistic articulation. That thought moves, that practice thinks, does not mean it puts its movement into words. To impose words too quickly, if they are not the matter involved in the process, can result in a dampening of the singularity of the process. Each time, under each circumstances, in each practice, a technique is needed for this activation of the overlap between research and creation.

Three techniques are being mobilized here: one for activating the philosophical within the matrix of its own materiality; one for sensing the material concerns of a practice that devises its own modes of articulation, often beyond language; and one for bringing them into overlap.

The bringing into overlap involves the activation of the differential that holds their difference in lively suspension. Research-creation is not about overlaying one

with the other (finding concepts, for instance, that explain the artistic process), but for making felt the event of their uneasy co-habitation. This co-habitation does not involve giving words to art any more than it involves making philosophy (or politics) artistic. The politics of research-creation are precisely the practice of creating the conditions for their differential to be felt. The question: what kinds of inflections does this differential create? What kinds of processes can be brought into existence at the interstices of difference?

The academic establishment has always loved general concepts. General concepts allow us to speak “coherently” about states of existence. They allow us to know where we stand. Research-creation, pushed to its most creative limit, undoes us of this confidence in “where things stand.” It undermines the very possibility of generalization. For what it does is take us to the absolute singularity of two processes that must remain heterogeneous for their collective potential to be felt. Creative practice is creative precisely in the way it invents the conditions for creativity, and this as much for the philosophical as for the artistic.

And so this call: rather than defining research-creation, or even attempting to mobilize its institutional limits, can we collectively gather our techniques for activating the interval, for making felt the differential? Can we together create a process seed bank that thickens and textures the complexity this process has brought to the fore? We know, as makers, that research has always been at the heart of our practices. We didn’t need a new terminology to give us this information. What has changed is not that we now have practices that include a research component. What has changed is that forms of linguistic articulation are moved to become practice-oriented, that words are pushed to make felt the ineffable. Please contribute to our process seed bank.

## PROCESS SEED BANK (to be filled in, drawn out, unraveled) <sup>1</sup>

### 1. Practice Immanent Critique

### 2. Invent Techniques of Relaxation

### 3. Design Enabling Constraints

### 4. Enable Pop-Up Propositions

5.

6.

7.

8.

10.

11.

9.

## § 1. Practice Immanent Critique

Research-creation begins with the creation of a problem that is truly productive of inquiry. In so doing, it opens the field of experience to the more-than of objects or subjects preformed. Research-creation is an act that delights in the activation of the as-yet-unthought. It is an activity of immanent critique, an act that only knows the conditions of its existence from within its own process, an act that refuses to judge from without. Research-creation is a pragmatically speculative practice that, while absolutely entrenched in its own process of making-time, here, now, remains untimely. It is pragmatic in the sense that it is concerned with the singularity of how this practice does its work under these conditions. It is speculative in the sense that its untimely differential makes operative an opening for experience to unfold its future. It invents problems that have no home, no reference yet.

Immanent critique abhors general concepts and generalized gestures of understanding (including overarching methodologies). It recognizes that research-creation is a mode of activity all its own, occurring at the constitutive level of both art practice and theoretical research, at a point before research and creation diverge into the institutional structures that capture and contain their productivity and judge them by conventional criteria for added value. It recognizes that at that prebifurcation level, making is already a thinking-in-action, and conceptualization a practice in its own right.

Immanent critique is one technique for the activation of the differential between research and creation. Technique is understood here as an engagement with the modalities of expression a practice invents for itself. This meeting in technique, to be truly creative, has to be constitutively open ended. The kind of results aimed at cannot be preprogrammed. They cannot be organized in disciplinary silos. They cannot be generalized across processes. They must be experimental, engaged with the emergent effects of an ongoing process.

With immanent critique as a point of departure, the emphasis shifts from programmatic structure to catalytic event conditioning. It takes seriously that a creative art or design practice launches concepts in-the-making. These concepts-in-the-making are mobile at the level of techniques they continue to invent. Philo-

sophy becomes not an organizer of these concepts, but an activator of them, in a different language.

## § 2. Invent Techniques of Relation

In an attempt to create the conditions for collaboration for event-based practice, the SenseLab evolved a concept of “techniques of relation.” Techniques of relation are devices for catalyzing and modulating interaction. We consider that these comprise a domain of practice in their own right. Techniques of relation are crafted for each event not only as part of a practice of event-design, but as part of a larger “ethics of engagement.” Event is here understood not only in the larger sense of a collective gathering, but also in the more minor sense of a pedagogical encounter, an artistic exploration, a collective philosophical exploration<sup>2</sup>. The techniques have to be structured, in the sense of being tailored to the singularity of this event, and improvised, taking the desires and expertise of the event’s particular participants into account, inviting their active collusion in determining how the event transpires, so that in the end the event belongs to the collaborative impulse, and not to individual organizers.

Techniques as we understand them do not depend exclusively on the content of the practices but move across their respective processes at the site of their potential multiplication. A dance practice, for instance, will emerge across various registers. A movement exploration might co-combine with a conceptual force—a word, an idea, a landscape—influenced perhaps by past explorations and changed, probably, all along its course by improvisational explorations that connect to the experiment’s technical constraints. Similarly, a philosophical practice may emerge in and across a reading-writing register that cannot be restricted simply to content. Like the dance practice, the philosophical exploration is a technique in its own right, activated and activating across registers of content and processual invention, moving incessantly between the rigor of denotation and the force of expression. Techniques of relation seek to find modalities of experimentation that connect practices at the levels of their intensive creative force. This is done not in order to map them onto one another, or to evaluate one in terms of another, but to propose a co-causal thirdness of exploration that can be generative of new modes of practice and inquiry.

### § 3. Design Enabling Constraints

If one of the goals of research-creation is to collaboratively catalyze movement toward the emergence of difference, the role of the techniques of relation is not to “frame” the interaction in the traditional sense. The techniques are for implanting opportunities for creative participation, which is encouraged to take on its own shape, direction, and momentum in the course of the event. The role of techniques of relation is to create conditions conducive to the event earning its name as an event. These techniques would have to be of two kinds: techniques to set in place propitious initial conditions, and techniques to modulate the event as it moves through its phases. The paradigm is one of conditioning, rather than framing. The difference is that conditioning consists in bringing co-causes into interaction. The reference is to complex emergent process, rather than programmed organization. Programmed organization functions predictably in a bounded frame and lends itself to reproduction. Emergent process, dedicated to the singular occurrence of the new, agitates inventively in an open field, creating the conditions for the event to become more-than the sum of its parts.

Enabling constraints is the term we adopted for relational technique in its event-conditioning role. An enabling constraint is positive in its dynamic effect, even though it may be limiting in its form/force narrowly considered. An enabling constraint is constraining to the extent that its focus is to structure the field of improvisation and enabling in the sense that the constraint is potentializing. Take, for example, an improvised dance movement. The major constraint is the action of gravity on the body. As a cause, gravity is implacable, its effects entirely predictable. But add to gravity another order of cause, and in the interaction between the orders of determination something new and unforeseen may emerge. A horizontal movement cutting across the vertical plane of gravity can produce a certain quantum of lift temporarily counteracting gravity’s downward vector. The arc of the jump will be a collaboration between the action of gravity and the energy and angular momentum of the horizontal movement acting as co-causes. Add to the mix priming of the dancing bodies through techniques for entering into the movement and modulating it on the fly (including techniques of attention and concentration, as well as conceptual orientations) and a

third order of co-causality actively enters in. Gravity has been converted from a limitative constraint to an enabling constraint playing a positive role in the generation of an event favorable to the improvisational emergence of a novel dance movement.

The idea of enabling constraint aims to avoid the voluntaristic connotations often carried by words like “emergence” and “invention” when allied to a concept of improvisation that suggests absolute open-endedness. Improvisation is key, but structured through rigorous experimentation with the creation of conditions generative of emergent process. Research-creation as the SenseLab understands it is not about “letting things flow,” as though unconstrained interaction were sufficient to enable something “creative” to happen. In our experience, unconstrained interaction rarely yields worthwhile effects. Its results typically lack rigor, intensity, and interest for those not directly involved, and as a consequence are low on follow-on effects. Effects cannot occur in the absence of a cause. The question is what manner of causation is to be activated: simple or complex; functionally proscribed or catalyzing of variation; linear or relational (co-causal)?

### § 4. Enable Pop-Up Propositions

The careful creation of conditions gives an event its singularity. If we understand the lively interval in the hyphenation of research and creation as a differential, each instance of research-creation is a conditioning of potential that carries the seeds for the creation of an event. If techniques are in place to create the singularizing conditions necessary to bring out the potential of both a thinking-making and a making-thinking, techniques will also have to be invented to bring it to collective expression.

Pop-up propositions are one way to facilitate the emergence of singular points of inflexion. Research-creation requires openings for the making-collective of emergent problems. Problems are here understood in the most creative sense: openings to the texturing of the event-conditioning at the heart of research-creation. A pop-up proposition is a cut in the event that gathers momentum around itself, offering a slight intensification, or a full change of direction. What makes it a point of inflection is its capacity, in the event, to change the direction of what is unfolding.

A pop-up proposition emerges always in the register of immanent critique. How do these conditions come together in a knot, just this way, and what can that knot do? This knot is a collective problem. The force of a pop-up proposition is that it can harness this collectivity, a collectivity both at the level of matter and at the level of participation. By activating a turn in the event that occurs in the midst of its own form-taking, pop-up propositions gather the force of the more-than individual, the more-than human momentum of a practice underway. Their call registers the uneasy, the untimely interstice that moves a process into a new constellation.

Fred Moten and Stefano Harney call the register of what is created at the interstices of experience in the making an “undercommons.” Pop-up propositions create mobile sites for undercommon thought. They orient experience in the making, honouring the ineffable at the heart of dissonance. To make felt across the dissonance is the work they do, gathering momentum not toward a generalized understanding, but toward the tangential force of a direction that can only be followed from the middle.

7.

8.

9.

10.

5.

11.

6.

#### Notes:

[1] Most of the seeds are grown from Erin Manning and Brian Massumi, *Thought in the Act: Passages in the Ecology of Experience* (Minneapolis: Minnesota UP, 2014). Some resonance also with Erin Manning *The Minor Gesture* (Durham: Duke UP, forthcoming).

[2] For an exploration of techniques of relation in relation to radical pedagogy, see *Inflexions: A Journal for Research-Creation, Radical Pedagogy* 1 (issue 8, spring 2015). [www.inflexions.org](http://www.inflexions.org)







## The Project: Nonconscious Cognition in Techno-Human Systems

N. Katherine Hayles - Literature, Duke University

Over the last two decades, research in neuroscience has revealed the existence of a level of neuronal processing inaccessible to consciousness but nevertheless essential to human cognition. Although this processing goes by various names, for example Antonio Damasio's "proto-self," I call it the cognitive nonconscious. Among the functions it performs are internal processes such as integrating somatic markers (chemical and electrical signals) from different regions of the body into coherent body representations. Other processes relating to external stimuli include fast processing of information, recognizing and learning patterns, drawing inferences from these patterns, and forwarding (or suppressing) information to consciousness in ways that influence behavior and guide higher cognitive functions such as thinking. Not coincidentally, these processes are strikingly similar to those performed by technical cognitive systems, suggesting that technical cognition can be seen as exteriorizations of hitherto unrecognized but nevertheless powerful human nonconscious capabilities. These parallels can potentially form the basis for interdisciplinary inquiries along multiple vectors and sites of techno-human interactions. I am presently at work on a book delineating a framework for exploring these connections, entitled *Expanding the Mind of the Humanities: Nonconscious Cognition*. Yet no single book can hope to exhaust the implications of the interpenetration of human nonconscious cognition with the technical nonconscious cognition of complex technical systems. To designate the capacious yet focused range of possibilities the framework opens up, let me

call this wider field of interdisciplinary inquiry simply "the Project."

In a sense, the cognitive nonconscious is as old as *Homo sapiens*. Indeed, it is likely that this kind of neuronal processing developed first in the evolution of our species and then consciousness and unconsciousness were built on top of it. It has appeared in multiple guises through recorded history, frequently articulated as a kind of intuition associated with creative breakthroughs and sudden insights that seem to erupt, as if by magic, into conscious awareness from somewhere else. In another sense, however, its confirmation by empirical evidence and the specificity of its functions have only been widely recognized among neuroscientists in the last couple of decades. For the humanities, its implications, and indeed even knowledge of its existence, remains largely *terra incognita*, despite the explosive potential it has to recast how we think about the relation of thought to cognition, and especially about the interactions of human cognitive processes to the non-conscious cognitions of complex technical systems.

The Project of re-evaluating human-technical interactions in light of the cognitive nonconscious begins with making a distinction between thought, associated with the higher-level neuronal processes generating consciousness/unconscious (which I call modes of awareness) and cognition, a broader capacity that includes both conscious and nonconscious processes. For half a century, debate has swirled around the question posed by Alan Turing in 1950: can machines think? Turing, of course, proposed to answer the question by

operationalizing it in the Turing test. Since his foundational paper, it has become clear that machines do not think as do humans, principally because they are not conscious and do not have a model of the self characteristic of humans and many animals. At the same time, the cognitive capacities of technical systems have been growing by leaps and bounds, performing many of the same functions as the cognitive nonconscious in humans, including fast information processing, recognizing and drawing inferences from patterns, integrating ambiguous or conflicting information into coherent representations, and interpreting signals from sensors and actuators to perform actions. Like the cognitive nonconscious in humans, these systems are crucially important in keeping consciousness from being overwhelmed by barrages of information too fast, complex, and multifaceted to be comprehended by the relatively slow processing of consciousness. Moreover, many technical systems have the capacity to monitor their own states, change them according to variations in contexts, and transform the parameters that regulate these states. Such complex, adaptive, state-aware systems surely deserve to be called cognitive, although they are not conscious and (in my view) are unlikely to achieve consciousness anytime soon. Indeed, it is becoming increasingly clear that cognition in general should not be regarded (as intelligence often is) as a quantifiable property that a being either possesses or does not. Rather than an attribute, cognition is a process and exists along a spectrum in the biological world from the high-cognitive functions in humans and other mammals to low-cognitive functions in such lifeforms as nematode worms and plants. Similarly, technical systems also exist along a spectrum, from sophisticated systems capable of many different kinds of cognitive processes to low-cognitive processes such as word frequency algorithms.

Recognizing the parallels between the cognitive nonconscious as it functions in humans and technical systems opens the way for a host of new and expanded modes of analyses, including the interactions of humans with technical systems that operate below the level of awareness and nevertheless influence behaviors, guide expectations, and alter human neuronal networks. For the humanities, recognizing the specificities of the cognitive nonconscious invites interpretive

strategies focusing on interactions between the modes of awareness and nonconscious processing. For example, in literary texts, this may take the form of identifying and analyzing places in a text where gestural and somatic information subtly influence the verbal narrative, or where information overload leads to conscious dysfunctionality but nevertheless is processed at lower levels of textual organization. Just as theorizations of the unconscious led to decades of fruitful literary interpretations and corresponding theories of reading and writing, so the empirical testing and theorizations of the cognitive nonconscious have the potential to affect profoundly our understanding of how the modes of awareness interact with and are influenced by the cognitive nonconscious.

As suggested earlier, technical cognitions function in many ways as externalizations of human nonconscious processes, notwithstanding the profound differences in instantiation. Our culture has been slow to recognize the importance of nonconscious cognition, however, because traditionally cognition has been identified solely with the modes of awareness. Consequently, when cultural representations imagine technical systems capable of cognition, they typically represent them as achieving consciousness, from *The Forbin Project* (1970) to the *Terminator* series to the contemporary film *Her* (2012). This tends to blind us to the range, depth and pervasiveness of the technical cognitions that already exist, because they function without consciousness. The identification of cognition with consciousness is a fundamental misconception that the Project aims to correct. Rather than parsing the situation as a binary distinction between human intelligence on the one hand and mere mechanical calculation on the other, this framework enables much more nuanced and multi-level analyses in which cognition is seen as distributed among humans, animals, and technical objects, with many areas of overlap and similar kinds of processes at work. As another benefit, it also creates bridges between human and animal cognitive functioning and provides a basis for thinking about cognitions both within and below consciousness.

What the Project proposes, then, is a tripartite framework that can be imagined as a pyramidal schema with conscious/unconscious as modes of awareness

sitting at the top, the cognitive unconscious in the middle, and at the lowest level, the material processes from which the cognitive unconscious emerges. In one sense, the pyramid follows the traditional view in recognizing consciousness/unconscious as the highest level of neuronal functioning. But this image has another implication as well. Just as a pyramid narrows as it progresses from a broad base to a narrow top, so this schema implies that the modes of awareness (consciousness/unconscious) represent the smaller portion of human cognition, with the cognitive unconscious constituting a much larger share of everyday neuronal processing, and material processes (which are not themselves cognitive but which undergird the emergence of nonconscious cognition in certain kinds of systemic organizations and dynamics) a larger share still.

In terms of interactions between human and technical cognitions, the tripartite framework implies that technical cognitions affect all three levels involved in the creation of human cognition: consciousness/unconscious, nonconscious cognition, and the underlying material processes. While considerable attention has been devoted to the interactions of consciousness and technical systems, and from an engineering point of view, the operations of technical systems and material processes (for example, in the design of affordances in relation to human kinematics), very little has been done with the interactions between technical cognitions and human nonconscious cognitions. Yet these interactions are potentially as important, and arguably more important, than the other two levels in understanding how interactions with technical cognitive systems are affecting our historical present and human future.



IMF 2014 Madrid – Workshop at Medialab Prado







## Reflections on Metabody, Software and the Originary Technogenesis of the (Post)human

Federica Frabetti – Oxford Brookes University

The Metabody Project invites a reflection on technology, on software, on the narratives of the ‘human’ and the ‘posthuman’ and also on the extent to which the genesis of the human is always already a technogenesis, and therefore it always already contains elements of ‘post’ or ‘inhumanity’. The prefix ‘meta’ – understood in the “Manifesto for an Ethics of Media in Global Surveillance Culture” discussed at the First Metabody International Forum of 2013 as ‘mutation, change, in between, movement-across, incipient, exceeding, embracing’ – opens up a space for reflection on contemporary technologies and on the kind of technicized forms of life we have become<sup>1</sup>. The idea of the technogenesis of the human (or of the always already post – or trans, or meta – human) is deeply related to the concept of the ‘transductive’, developed by Gilbert Simondon to express the non-preexistence of the terms of a relationship to each other and to the relationship itself<sup>2</sup>. In turn, the view that human genesis is always already technogenesis belongs to what Richard Beardsworth calls the philosophical tradition of ‘originary technicity’ and Bernard Stiegler calls the ‘originary prostheticity’ of the human – a tradition that begins with Heidegger, encompasses thinkers such as André Leroi-Gourhan, Jacques Derrida, Gilbert Simondon<sup>3</sup>. The thinkers of originary technicity suggest that technology is not just an instrument that humans deploy for their own ends. On the contrary, the human has always been technological and it has emerged in a transductive relationship with its technologies. The human is always already artificial; it is only produced through what Stiegler

calls ‘epiphilogenetic memory’, which is always already non-genetic and non-human – a prosthesis. And since the logic of technology is never fully anthropological (never ‘just’ human), there is always an unstable equilibrium and an irresolvable tension between the two terms. Technology brings forth a dis-orientation in society to which society responds through a re-adjustment and a re-orientation of the world.

But what does the idea of the transductive tell us about contemporary technologies and the contemporary sense of techno-embodiments and temporality? This question is also the question of how Metabody would be able to respond to the fact that today the panopticon system of surveillance has transformed into the ‘panchoreographic’, a term that Jaime del Val deploys to indicate a contemporary turn in biopower<sup>4</sup>. To understand the choreographic turn, as well as the contemporary embodiments of the meta-human, I believe that Metabody should engage deeply with the concept of information – or, to use a term that has become increasingly popular in the past half century, software. Software needs to be thought in its transductive relation to the human – as constitutive of contemporary consciousness, of embodiment and of our sense of time and space. And Metabody needs to ask a whole set of questions about it: What kind of temporality becomes accessible to us through software? What kind of relation to ourselves do we establish through software? How is the body materialized by, in and with software? And in what way is one constituted by software as much as one produces and uses it?

If today software (in the form of algorithms and data) is deeply involved in the constitution of bodies as well as in the preservation of memory (that is, in deciding what is visible, traceable and memorable, and what must be selected, stored and transmitted) and if all this is subjected to the economic laws of profit, in what sense is politics still possible? What spaces for (embodied) self-reflection, critique and intervention are still open? How do we think politically in the context of the industrialization of memory and of choreographic biopower?

Importantly, the principle of the industrialization of memory consists in the sustained attempt to calculate the effects of technology in order to make a profit. But of course, calculating all consequences of technology is intrinsically impossible, because to a certain extent the logic of technology always escapes predictability. Metabody points to the fact that to think politically today means to think politics with and through technology and its unpredictability. In order to understand the

specificities of the contemporary embodiment of the (always already) post-human, we need to understand the transductive relations between the technological and the social, between technology and the human, and to explore the conditions of the technicization of life in the context of contemporary global industrialization. Such an understanding would allow us to ask politically meaningful questions of technology, such as: What kind of reflexivity and critique is enabled by contemporary technologies (and particularly software) conceived as constitutive of the human? What kind of political (or perhaps meta-political) formations are enabled by contemporary technologies that can resist/or change/or operate-in-the-space-between the neo-liberal imperatives? How can we promote non-patrimonial forms of digital meta-humanities? How can we work with the unpredictable in technology to generate new political interventions? These are some of the questions that I think Metabody should seek to explore.

#### Notes:

[1] "Manifesto for an Ethics of Media in Global Surveillance Culture". First Metabody International Forum., Madrid, 2013.

[2] Gilbert Simondon. *Du mode d'existence des objets techniques*. Paris: Aubier, 2001.

[3] Richard Beardsworth, "From a Genealogy of Matter to a Politics of Memory: Stiegler's Thinking of Technics." *Tekhnema: Journal of Philosophy and Technology* 2 (1995): 85-115. Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus*. Trans. Richard Beardsworth and George Collins. Stanford: Stanford University Press, 1998.

[4] "Manifesto for an Ethics of Media in Global Surveillance Culture".



IMF 2014 Madrid – Disalignments Workshop at the Dance Conservatory





## Metacoming Dualities

Stefan Lorenz Sorgner, Erfurt

Many scholars, artists and intellectuals have realized the challenges which come along with categorical dualities, like good and evil, and the material and the immaterial. Totalitarian paternalistic structures usually go along with these ways of conceptualizing the world. However, it is far from easy to overcome them, because by trying to move beyond them, it is easy to fall into the trap of creating new categorical dualities. One example:

A central stepping stone concerning the birth of dualistic media was the ancient creation of the theatre of Dionysus in Athens and the festivals which from then on were performed there. For the first time, there was a solid theatre building where dramas were performed. Actors and audience were separated from each other by means of structures built out of stone, which hints at a rigid categorical separation. Furthermore, the dualities created by the theatre as building are further supported by the distinctions between actors and audience and that between protagonists and chorus. Before the institutionalization of the theatre which occurred then, people were running around in groups, singing and dancing together during these types of Dionysian celebrations.

Given the right time frames, this description is an appropriate one. However, it seems to create a new type of duality, as if one situation was simply replaced by another antithetical one. Of course, it was not like this. Before having theatres made out of stone, travelling theatre companies had other ways of creating an environment for putting on their performances. It was rather a continuous development from the people singing together in groups to the institutionalized

event of a theatre performance within a building made out of stone.

The same applies to observations concerning dramatic performances today, e.g. Jaime del Val's metaformances. It is important here to stress that his metaformances are no performances, because performances imply that there is a performer who does something for an audience. However, his metaformances are not like this, as there is neither an artist, nor an audience, at least not in the traditional form with a rigid categorical separation between these two categories. A metaformance consists of an active individual formerly known as performer, and a group of contemplative individuals formerly known as audience which start to interact and to create new forms of relationality during a metaformance. There is no longer a rigid dualistic building in which this artistic event takes place, but the active and the contemplative individuals get related in the same spatio-temporal frame. Thereby, these metaformances move beyond the dualistic structures of theatre performances.

Given this description a new type of dualism turns up; namely that between dualistic theatre performances and non-dualistic metaformances. It is difficult to describe these processes in an appropriate manner, as our grammar is structured thus that we permanently have the tendency of falling into the dualistic trap. There are several ways, in which these challenges can be avoided. One option is to develop a new kind of language in order to avoid the dualistic implications of our traditional languages – Heidegger's solution. A second

option is to permanently reclassify everything one has put forward before to stress the challenges related to everything within the grammar available to us today. This is what Nietzsche did. A third option might be to simply use the traditional language to describe the phenomena as clear as possible and to stress in the end that everything one has put forward cannot actually be said in an appropriate manner and needs to be reclassified or understood in a poetical manner. It is this option Wittgenstein used in his *Tractatus*.

It might be important to stress that by moving towards non-duality, dualities still remain present. Human beings still consist of mind and body. In this way, a duality can be affirmed. However, what we understand as a mind or a body changes. Both are different attributes of one and the same thing. This is in tune with Spinoza's take on these issues. However, it is not even appropriate to talk about one and the same "thing", as it seems to imply that there was something unchanging

present when referring to it. Or just by saying "it" seems to have the implication of there being a stable identity. Yet, this is a highly implausible way of thinking about whatever there is. Hence, Jaime del Val and I introduced the "emergent becoming of metahumans" and "alteration processes of the metahuman as flowing types of amorphogenesis of the relational body". This way of talking relates the above mentioned insights by Heidegger, Nietzsche, Spinoza and Wittgenstein, as we use a poetical language, permanently reclassify whatever we suggest, stress that whatever we put forward is problematic, but at the same time affirm a non-dualistic ontology which integrates a certain type of duality in an altered manner. It might be appropriate to stress that it is not a way of overcoming dualities, but of "metacoming" dualities, because here non-duality gets related to duality and thereby a move away from, a further development and an integration of dualistic ways of grasping the world occurs.





## Ontokinethics: Metapolitics of Becoming in Affective Hypercapital

Jaime del Val

Current modes of domination require a new understanding of movement that exceeds the platonic tradition of metaphysics of presence: not the movement of things but movement as the only ontological substrate, from which thingness itself may emerge. Through an ontology of becoming that redefines movement beyond the Aristotelian legacy we may understand power in terms of movement and how in the Information era and the explosion of Big Data new modes of power (new modes of movement alignment, of choreographies, of Panchoreographic) emerge.

The Panchoreographic as kinetic power that aligns the movements of matter at all scales, from the nano- bio- and neuro- to the individual, social, urban, land and geo- scales, is a multifaceted metabody of movement alignments superposing multiple choreographies of perception that, especially since ancient Greece, have favoured a particular kind of visual domination, and the attempt to fix movement in forms. From the birth of Geometry through Renaissance perspective to ubiquitous interfaces designed in the secret laboratories of corporations, the perceptual revolutions of power have a kinetic ontology: of fixation and hierarchy of perception, and thus of our movements and relations, our affects and desires, our bodies and sexes, that become more and more the object of quantification in the Big Data Era as we become extensions of a planetary hypercyborg. This affective hypercapital of kinetic alignment of bodies at all scales requires a reinvention of movement in ontological, political and ethical-ecological dimensions: an ontokinethics, or metagenethics, an ontopolitics and metapolitics, an ontoethics and metaethics.

Ontokinethics, as an ontology of the becoming, foregrounds an understanding of movement as both incipient and relational, as proposed by Erin Manning (2009). Incipency points to the non actualised potentials, the preacceleration of movement towards the unpredictable. Relationality points to the multiplicities of forces in interaction and the immanent intervals they generate. Both incipency and relationality point to movement not as property of already given entities within an actualised extension, but as ontogenetic: as generative of reality, of extension, of perception, of thinking and affect.

Ontokinethics has groundings in the traditions of Process Philosophy and of Philosophy of Becoming, as well as in other disciplines: from Heraclitus and Taoism, to Spinoza and Nietzsche, from Simondon, Bergson and Whitehead, to Deleuze, Guattari, Derrida and Foucault, from neurosciences and quantum physics to contemporary philosophers such as Brian Massumi, Erin Manning, Luciana Parisi or Karen Barad.

In a world of relational forces in constant motion we need an understanding of motion not as that which happens between given identities and forms, in a given extensive space, but of movement as constitutive of all that is. Form appears thus as residue at two different levels: as the partial actualisation of a movement that is exceeding its actualisations, and as relative to certain regimes of alignment of movement that generate a fixed mode of perception.

Potentiality on the other hand is neither absence nor presence, but creative movement of becoming: it is not the deferral of an unreachable idea (as identity is) but an ontogenetic gesture that exceeds what it creates:

double gesture of creation. Amorphogenesis is this very process of formation that is not directed to the fixation into forms, but where movement is always exceeding its formations into new undefined potentials, thus placing the emphasis on emergence and becoming.

The ontology of becoming is also an epistemology since it accounts for the ways in which consciousness is formed as an effect of movement relations, as many cognitive sciences suggest, such as enactive cognition theories by Francisco Varela (1993).

Ontokinethics is also an ethics, since it inverts the traditional priority of identity over change, whereby traditionally, identity has served the purpose of establishing universalist sets of values and conceptions of the Good. Such fixations of being are in radical contradiction with the multiplicity of movements of becoming, the creative potentials of the forces of life, and bring forward a violence implicit in the imposition of a universalist, homogenising construct.

Not only is it necessary to problematise the unity of identity versus multiplicity, but foremostly its fixity. Multiplicity cannot be only of already given identities. The potentiality of movement as the permanent opening into the yet-unthinkable opens up a new domain of multiplicity as related to becoming, to the emergence of what is not yet existing or thinkable, the yet-impossible, which, as soon as it becomes possible is already being exceeded by movement, that points to new potentials. Movement and change is thus not only of the already given, but is an opening towards the yet unthinkable.

The fixation and foregrounding of identity over movement and change, is thus a negation and annihilation of the creative forces of life. We invert thus the traditional account of nihilism understood as the negation of universal values that is derived from the logic of identity: metaphysics of identity is the true nihilism.

This opens up a new horizon for ethics, in which it is necessary to interpret movement as it happens in each complex relational context in terms of its alignment in choreographies or trajectories of replication and homogenisation (nihilistic drive, reactive forces) or its opening of potentials, its indeterminacy (affirmative drive, active forces).

A relational field of forces is a metabody, which, doesn't rely on individuation of events and limits, but on the consistence and immanence of the relations that are experienced, which include movement alignments such

as those which constitute power relations in the social field, and also the amorphogenetic field, the much larger field of murmuring potentials. Metabodies are defined by affects (modes, rhythms and contacts of relation of forces) and desire (incipience and directionality of the relation of forces). The interpretation of the active and reactive forces operating in movement can be traced through multiple alignments of movement that traverse the social field at all levels: choreographies of verbal language and writing, of urban space and state bureaucracy, of transport and media, of information and code, of visual culture and perspective, of binary gender and sexuality constructions, of family and education: complex and multiple alignments of movement which foreclose its potentials, as it gets choreographed in increasingly multifaceted, binary, circular, and linear programmes of pre-emption.

These metaprogrammes constitute the pancoreographic as the movement alignments that constitute a given social field. The different forms of alignment account for different interrelated strata in the panchoreographic, according to the different alignments of despotic, disciplinary and control societies. In control society elements of prior alignments survive, appropriated and recodified by the new alignments of capitalism and Information, that choreograph thinking and bodies in molecular scales, assimilating every useless flow of desire and affect into capitalist flows (Parisi 2004).

Information as pattern distinct from its material substrates, and meaning as entity distinct from signifiers, conform transcendental entities analogue to platonic ideas and the christian God, thereby subduing the forces of life to a predefined, unreachable fiction, a negative alignment that structures other alignments, a metaprogramme that has implicit a line of abolition and death.

Ontokinethics is the ground for a new kind of creative science in which the question is not after the nature and origin of things in a quest to control and fix them, but to understand their potentials for transformation, for generating movement ecologies that foster multiplicity and change rather than alignments of replication.

Ontokinethics is also a pragmatics and a politics that opens up a new field of agency, not of a unitary subject and its free will, but of movement ecologies. Metaformativity is the rhizomatic and deconstructive science that interprets the alignments of movement and generates new conditions for movement ecologies.

Ontokinethics, by understanding the nihilistic alignments of movement that are foundational to individual and social, discursive and identity formations, allow for new kinds of agency that are not reduced to the given structures of a discourse and its possibilities for oppositional or subverted iteration, but of infinitesimal movements of disalignment that may open up the given trajectories to new potentials, thus inducing disalignments that don't imply violent realignments of the macrostructures, but imperceptible creative moves.

Ontokinethics is an ecology that allows for the emergence of new kinds of movement that does not foster the formation and sustainment of dominant power relations tending to actualisation and fixation, but the emergence of metastable fields of potentials.

Ontokinethics is a new form of applied physiology and health, in which the illness of a culture and a body can be traced in its implicit nihilistic alignments of foreclosure, vs. the open, creative, affirmative moves to indeterminacy.

Ontokinethics is a radically dionysian aesthetics of the amorphous. Metaformance is the process of permanent transformation of perception that accounts for this aesthetics, where there is no defined set of senses but a changing field of multimodal capacities.

Ontokinethics is metalogic and metadiscursive in so far as it considers thinking a form of movement, of alignment of movement, that doesn't describe, but creates new reality. At the same time Ontokinethics challenges and investigates the very conditions of possibility of thinking understood as movement and its relation to perceptual movements and other modes of alignment.

Ontokinethics radically challenges the account of thinking in terms of ideas, and of language in terms of meanings, and proposes instead an understanding of thinking and language as creative movements, as affects and impingements that generate difference and the emergence of the new. Difference (Deleuze 2002) and

Difference (Derrida 1989) are thus not subdued to identity. Differential difference, as the movement of potentials that exceed actualisations are about creative differential intervals between forces that don't fix themselves in patterns of visual domination.

Ontokinethics also challenges linear time and extensive space conceptions in so far as they are the result of perceptual alignments. Movement, as force and intensity, generates time-space irreducible to linearity. Every embodied field of relations generates irreducible time-space dimensions, intensities, modalities or qualities.

Ontokinethics subverts Plato's ontology of form, which posits binary sex in the foundations of western metaphysics, by assigning form and being to man, and formlessness and non-being to woman, as mere receptacle for the self-replication of man (Butler 1993). In contrast to this binary conception of sex, related to form and reproduction, Ontokinethics proposes an understanding of desire as excess of the movement of the forces that can flow potentially in any direction, far from aligning itself with binary macro-structures, creating directionality altogether, or a-directional spatiotemporalities. Microsexes are the molecular flows of desire of a body irreducible to form (postanatomical body) which subvert the binary foundations of western metaphysics not through oppositional macro-alignments, but through infinitesimal disalignments of movement.

Ontokinethics appears as an urgent response, not only to longstanding traditions of dogmatic nihilistic thinking, but also to implicit power in late capitalism, which operates through the production, orchestration and assimilation of desire and affects within capitalist flows.

An ontokinethic approach is needed in order to understand and dismantle the new implicit fascism as multiplicities are pre-empted into homogenising market flows while concealing the extreme violence of its structures: an ontoethics and metaethics of becoming for a metapolitics and ontopolitics of movements to come.

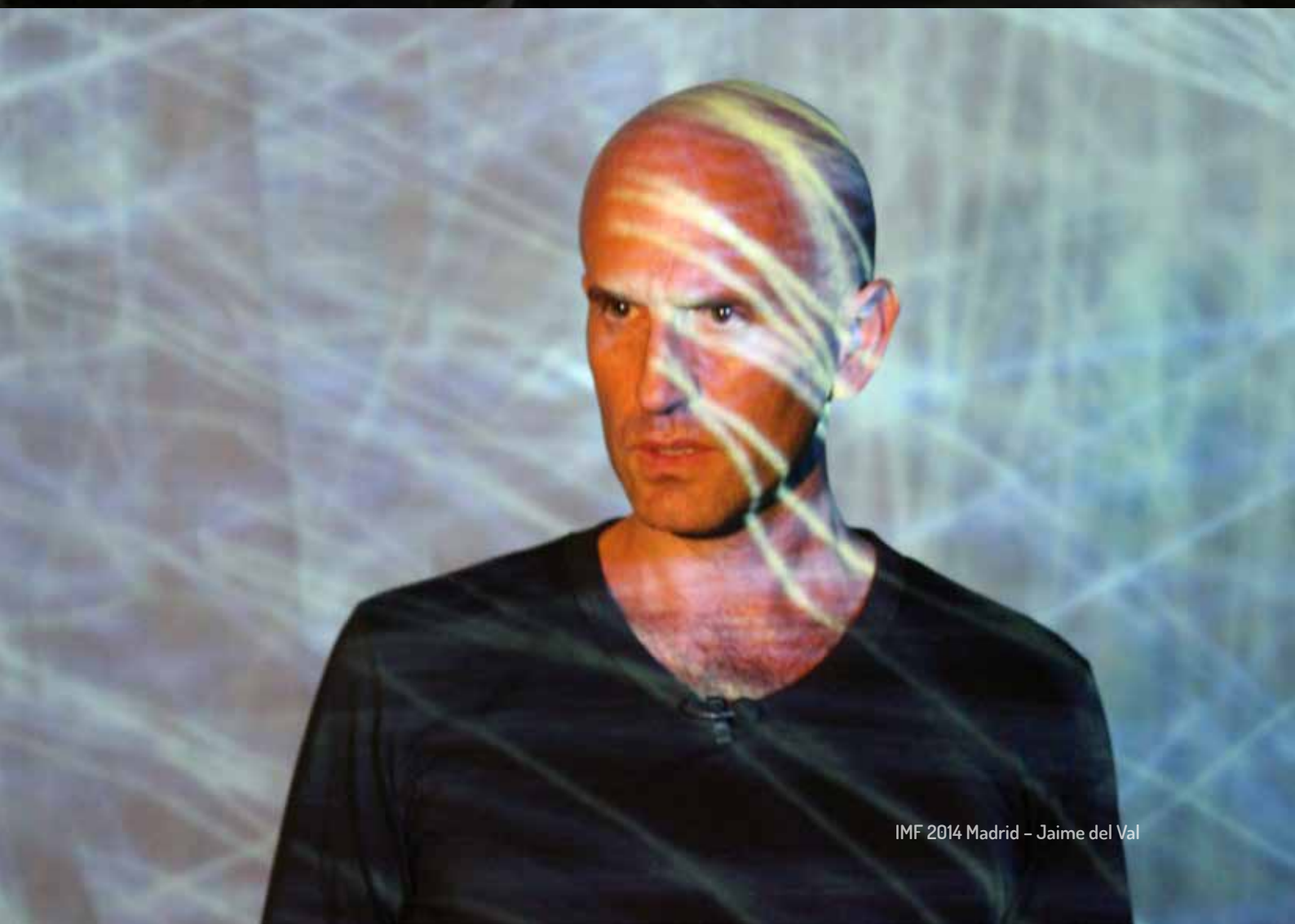
#### References:

- Barad, Karen. 2007. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Duke University Press
- Butler, Judith. 1993. *Bodies that matter – On the discursive limits of “sex”*. New York. Routledge
- Deleuze, Gilles & Guattari, Félix. 1988. *Mil Mesetas. Capitalismo y Esquizofrenia. 2ª parte*. Valencia, Pre-textos.
- Hayles, Katherine. 1999. *How we Became Posthuman: Virtual Bodies in Cybernetics, literature and Informatics*. University of Chicago Press
- Manning, Erin. 2009. *Relationscapes. Movement. Art, philosophy*. MIT Press
- Massumi, Brian. 2002. *Parables for the Virtual. Movement, Affect, Sensation*. Durham & London, Duke Univ. Press.
- Parisi, Luciana. 2004. *Abstract Sex, Philosophy, Biotechnology and the Mutations of Desire*. Continuum.





IMF 2014 Madrid – Partner meeting



IMF 2014 Madrid – Jaime del Val





## Conceptual Dimensions of Embodiment

Yvonne Förster, Leuphana University Lüneburg, Germany

The Metabody project aims at developing communication strategies that involve bodies in a holistic, non-uniformed way. The project starts with a critical stance toward communication via digital media which implies that the use of digital media leads to a uniformed and heteronomous way of bodily behaviour. From a conceptual point of view there are at least three principal questions to be tackled. First: What do we mean by the concept of the body? Second: Is the notion of embodiment tied to the standard human body? And third: How can theories of embodiment further the project's aims?

Metabody is a project that plays with the role of the body in unexpected ways. Therefore it is crucial for the success of the project to overcome notions of the body that heteronomously shape its form and ways of agency. My contribution to Metabody consists in a philosophical reflection of the concept of the body and the various forms of theories of embodiment. Alongside the different approaches to communication and interaction within the project I develop a concept of the body that is essentially open to new ways of agency. This concept is not bound to a pre-given idea of what is human. On the contrary the body must be conceptualized first and foremost as being alive and sentient. What is important in my considerations is a definition of the body as complex, autopoietic system that constantly is in contact and exchange with its environment (see Eleanor Rosch, Evan Thompson, Francisco J. Varela 1993, *The Embodied Mind*). The environmental aspect is crucial, because an embodied being is never detached from its environment. Body and en-

vironment represent a configuration that actively brings forth its specifications. The body here is not understood as determination of agency but as enabling a dynamic relation with a complex environment.

To describe the role of the body within the communicative process I use the concept of embodiment. Theories of embodiment are essentially a critique of standard cognitive science that takes cognition as brainbound computational process. There are numerous forms of theories of embodiment. In the context of Metabody I stress two aspects. First: Cognition and communicative/interactive processes depend on embodied agents. Second: Embodiment does not only include biological bodies but also artificial body-extension, media in different forms and complex environments from which autopoietic closures can emerge. That means that artefacts that facilitate cognition and communication are not alien to the body but have to be conceptualized as pertaining to the body scheme. Just as the blind man's cane is not simply an object but rather a prolonged sensory organ many other digital or non-digital objects can become integrated in embodied processes. This is what in philosophical terms is called Extended Mind Theory (see Andy Clark 2011, *Supersizing the Mind*). To understand mind and henceforth cognition not as brainbound is crucial in the context of the Metabody-Project.

Metabody sheds new light on the notion of computability since it involves strategies of computing artificial nets and feedback loops between bodily movements and computed environments. The different

projects involved in Metabody as well as the envisaged interactive architecture as a whole essentially depend on motion and feedback loops between subjects and digital environments. What is needed here is a concept of embodiment that integrates biological and computational features without reducing one to the other. The concept of embodiment has the advantage of not requiring a strong concept of the subject. In contrast it can be used to show how subjectivity co-emerges with the environment in an enactive process (see Shaun Gallagher 2005, *How the Body Shapes the Mind*).

By elaborating the concept of embodiment this theoretical stance contributes to the description and specification of complex structures that enable new forms of cognition, awareness, affect and interaction. To make sure that the participants in the communicative pro-

cesses within the Metabody framework do not follow pre-determined paths one needs to establish an idea of an open form of embodied cognition – one that allows for the emergence of new relations between bodies and environments. It is specific to the Metabody-project that it focuses on processes amongst/between/through bodies. It aims at an architecture that is fully interactive and depends on sensory-motor feedback-loops. This form of architecture regards the whole artefact as a metabody – an embodied artefact that integrates bodily agents and constitutes a meta-form of embodied cognition. Therefore the notion of the body here needs to integrate the idea of autopoietic closure (to ensure the possibility of feedback loops) as well as an openness for dynamic interactive processes. My aim is to clarify these demands on a philosophical basis.





## History of the invention and performativity of reason, emotions and data

Eva Botella Ordinas – History department (UAM).

Trans sé Luis Moisés

In the studies and discussions of METABODY, concepts such as agency, individual, human, emotion, affect, reason, gesture, movement, data, information, code, heritage, nature or disability are usually referred to. These are the transparent concepts studied by the project and those which, in turn, it tries to redefine. Transparent like a fishing line: invisible and sharp. These concepts underlie the works that create a new reality: METABODY. A reality that is augmented in relation to the one experienced, through the deterioration of the actual one by such emotional and gestural deletion that increases exponentially over time via constant determination and definition. It is problematic to use these concepts ignoring the political-social-cultural burden involved. I would say that the most important role of my work in METABODY is precisely to locate them: to study their genesis and meaning, thus revealing the specifics of their creation and use. As well as some of their consequences.

Due to METABODY's approach itself, the meaning and genealogy of the concept of "individual" and its consequences become a core issue. This is a deeply transhuman concept, fully assimilated in the Western World. Its relevance lies in that, according to the work I have developed since the beginning of the project, it has been directly linked to "agency", "rationality" and "nature", and initially connected to a kind of eminently sociocultural, gestural performativity, rather than to a specific body which could only be defined gradually over time. We are analyzing these links through the documents of John Locke: considered either a founder

or a crucial contributor to disciplines as diverse as psychology, economics, education, political science, language studies or philosophy. In this way, it is easier to understand how his approach has been progressively reinterpreted and recreated, and how the subjects who are called individuals and the criteria for agency and rationality has been varying by means of these reinventions, alongside with the alterations to the bodies, relationships and performativity of normality and rationality. Early results indicate that the person is defined before the individual, to whom it transcends, by having its illustrated origins anchored in theology and law, but not least in a gestural choreography (defined as decorum-propriety) which is indicative of a rationality linked to possessive capacity, certain social status, and certain cultural values. But then, at the dawn of the Enlightenment, a huge variety of particular situations difficult to define and determine allowed for conceptions of diffuse areas to emerge. The concept of individual was born as opposed to that of nature, to which still then everything belonged and from where the individual emerges after incorporating it into itself.

We opened another case study (Civilizing process and nature studies) to understand the concept of nature-individual and its variations from the Enlightenment to the present day, with particular emphasis from the mid-19th century on. That would enable us to understand how this opposition establishes certain types of relationships that prevent other interactions/intra-actions from occurring. Nature is conceived as being populated by individuals and groups of individuals whose

alleged behaviors are measured, evaluated, categorized and explained largely in emotional terms, thus becoming scientific data which therefore goes to explain and standardize societies, and to affect international law and order themselves. This trend is shown in traces as varied as natural history books for children, treatises on animal psychology, photography and the fine arts. The concept of nature is linked to the civilizing process and related to the observation of behavioral patterns which are evaluated according to emotional categories built on the assumption of the existence of individuals, reason, nature-civilization, races, species and genders. The eye that measures and analyzes already has a lens that indicates the result, so to speak. The result is then given a name which is not questioned. It is no wonder that in 1918 Juan Ramón Jiménez should ask his intelligence to give him the exact name of things.

The road leading to the belief that these results unquestionably represent what they claim to measure, and that the emotions read in certain gestures-movements are universal, involves inevitably a study of the "measurement" environment. Biometrics, with the help of photography and hand in hand with some theories on the evolution of species and societies, is fertile ground for this study. That is the reason why I opened a case study (Biometrics, movement, gestures and emotions: 1870-2014. A comparative approach) that would make it possible to analyze the origins and changes in this science, its practices, tools, performativity, the generation of scientists' identities, the understanding of their results and the gradual conversion thereof into disembodied "data", alongside with their social and cultural implications, while including here within the fixing and clearing of movements and gestures that escape these measurements and are categorized as irrelevant or abnormal. Given her deep involvement with the history of science, photography and philosophy, we worked on this together with Beatriz Pichel. It is particularly remarkable how in recent times the huge mass of data created and disembodied ends up being incorporated into and giving shape to our identity and the ways in which we feel and conduct ourselves. These "data" whose aim is to portray us actually end up being incorporated into and comprising us, excluding anything that is removed in the process of creation, and thus creating new behaviors that reinforce precisely the biometric

theories. In this sense, we worked both on the concepts of "data" and "metadata" with Jaime del Val.

It is precisely in connection to this notion of data as given, discovered, objective and disembodied, and to the identitary performativity of the "technical sciences", that we opened another case study focused on the figure of Loie Fuller (Loie Fuller as a danscientist) in collaboration with Beatriz Pichel. During the 20th century, science had gradually become separate from the arts and humanities, which would be responsible for providing either less objective "data" (the humanities) or fully subjective "creations" (the arts). At the time, Loie Fuller was at once regarded as an amateur in the disciplines that she practiced (dance, philosophy, chemistry...), while she was otherwise accepted by those who were considered professionals in those fields. Besides, her work and life influence many METABODY participants, regardless of their discipline but excluding scientists, in whose field she is an alien figure. As in the previous case, the progressive separation between creation and discovery via not questioning biometric practices, establishing emotional patterns and obscuring or penalizing other kinds of relations / ways to live, feel and experience or move, is central to METABODY.

On the other hand, my work in METABODY is making me rethink issues affecting my own discipline: History. Traditionally considered bound by time and space, which serve as a context to analyze events, people and objects, it provides socio-cultural, economic or political explanations. The task of History is not merely to study the past, but mainly to locate the subjects-objects under research.

From a historical-epistemological perspective, time and space were (and are) political and cultural concepts, and using the category of "context" may per se entail already the study of events, people and objects as isolated, abstract subjects-objects of study, to proceed only then to analyze their relationships. Each of these concepts responds to a set of Western values and traditions which are imposed on other cultures. Past and present, and identities are recreated and invented imperialistically and in Western terms: not only for other cultures, but for our own. Conceptual and terminological changes entail alterations in the analysis. Speaking differently leads to looking differently. We can hardly use other terms: to what extent can we escape our



own culture and identity? Maybe it is studying "situated problems" that allows other elements to be included in the study and to pay attention to diverse relations in a different way.

Would we be studying "humans" as such, and exclusively, if we asked ourselves about the evolution of a supposedly universal gesture or emotion through certain lifestyles, and in specific situations? Would they be the same objects-subjects of study if we looked into a metropolitan neighborhood over a period of time, but as an ecosystem? What would carry the narrative? Perhaps by considering the located "relationalities", we would write about how they were lived by those who experienced them and who left, in one way or another, a testimony to them, and about what and who were part of the experience but were voiceless. We may possibly have to pay attention to how these experiences were expressed and ask ourselves why it happened in that way, and why the silences. And finally, maybe we should as well have to try to understand how we are telling that story, and why we are choosing one way and not other.

Following the philosopher, environmentalist and poet Jorge Riechmann, it may be possible that the most important aspect is what happens on the fuzzy "THERE" border: an imprecise albeit specific, located experience that, from a historical perspective, we haven't lived, but that we try to partially understand.

*And so say we all ... "agent"  
and see a white man in a black suit (or a Galactica  
cylon)  
we say... "twitter"  
and don't see any bird or hear any sound  
we say all "smile"  
and we see some people in front of a camera  
or a yellow dot with a convex curve below  
we shout JOY!  
And labelled it an emotion  
If we say THERE  
we all see a finger pointing,  
not the fragrant nudity of a splinter  
and we call this "cognition"*









## Movement, gesture and truth. Art as countermovement in Nietzsche's thought.

Oscar Quejido and Laura Rodriguez – Nietzsche Complutense Seminar

Translation: José Luis Moisés

In early 2014, the Nietzsche Complutense Seminar (SNC) belonging to the Faculty of Philosophy at UCM was included as a partner in the METABODY project. Starting out from the basic interdisciplinary principle that guides the METABODY project, the contribution of philosophy seems fundamental, specifically that which may involve the thought of German philosopher F. Nietzsche. His radical criticism of the fundamentals of metaphysical thought, his role as a critic of Western culture, and his proposed reinterpretation of philosophical concepts such as “body” turn this thinker into the undoubted starting point of a deep reflection on the foundations that guide the development of society today, just like the one METABODY is carrying out.

Nietzsche proposes an explanatory hypothesis of reality in terms of a “relational ontology of forces”: the world is the “result” of a permanent confrontation of forces, dynamic and constantly changing, which he calls the “will to power”. Thus, “identity” –either logically or ontologically understood– is questioned, so that in his proposal everything has some value or other in relation to that by which it is surrounded and comprised: nothing is unconditional for Nietzsche, but it is a result or effect of a co-relational confrontation.

Well, this general approach is what Nietzsche applies to his interpretation of the body: for him a body is a result, an “effect” we might say, of the confrontation of the forces which constitute the body in the form of impulses, drives or instincts. Such conception of the body

implies that any morality, any regulatory system, or any cultural mechanism –be it moral, political, artistic, scientific...– can be understood as a “drive economy”, i.e. as a system that boosts or weakens certain drives, and that in so doing constitutes bodies out of certain social values, which are en-bodied in a process of constitution of the individual. In turn, as these individuals act, they reciprocally play out certain values pertaining to that morality, in an iterative process which is the actual grounds of identity.

Therefore, Nietzsche is not proposing that the body is now the new “source”, immutable, stable, and closed, the new origin –in a metaphysical sense of the term– but what he is telling us is that we cannot ascertain the source conceived as a single origin, the foundation of all things, since it is based on the co-relation between two elements. The problem for Nietzsche is not so much that the body is organized by a particular interpretation or evaluation of the world, as this always involves some form of structure, but that certain types or forms of instinctual organization be imposed and taken for real which deplete any possibility of generating new interpretations, new life forms.

Henceforth, how should we understand movement and gesture? For Nietzsche, words, gestures and choreographed movements are instances that try to represent fixedly what the thing is in itself, through “fixed meanings”; however, what they really express cannot be more than a mere relation, a relation between forces that, as noted, is variable and changing, i.e. the precise opposite of the essence of the thing, as intended by metaphysics.

We may, in our view, extract three consequences of this Nietzschean relational ontology, as applied to the scope of the body, and to the concepts of gesture and movement:

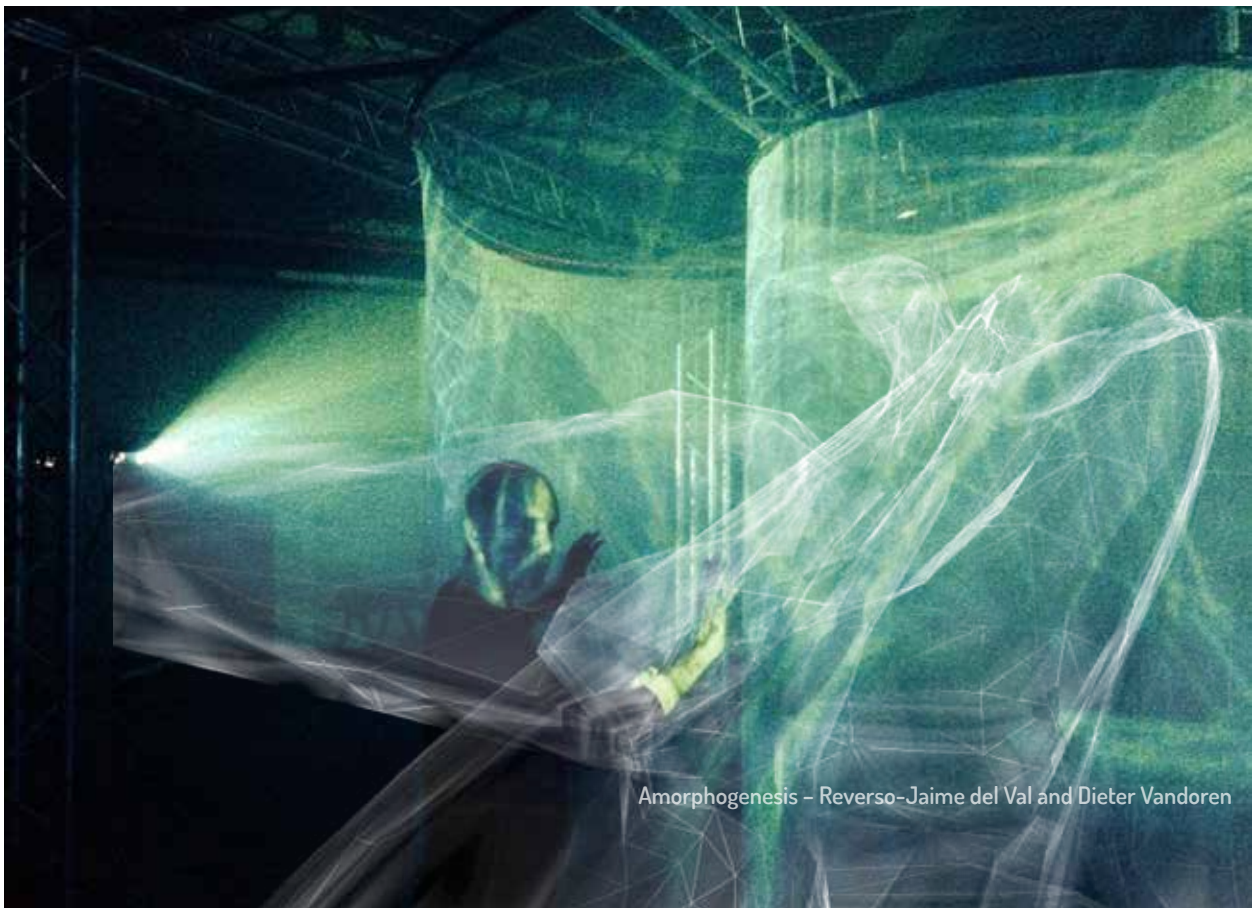
§ 1. First, much of Nietzsche's work is dedicated to exposing the mechanisms, tools, and strategies by which, at one point (Plato, for example), an "inversion" in our way of interpreting the world occurs, making the relations –that were transient and dynamic up to that moment (Heraclitus, for example)– become determined and establishing their development from fixed evaluations exclusively, adopting a "prescriptive" way, and beginning to constitute the meaning and significance of things as essential. In short, Nietzsche's complaint focuses on the inversion by which values are no longer an "effect" or a result of varying relations, but become the structure makers of these relations.

§ 2. Nietzsche considers the body as the place from which all thought, feeling and volition emanates, and yet, in its inner workings, we find it completely unk-

nowable in a strict sense: any language, any form of expression is for him just a metaphor, a transposition of that which goes beyond consciousness.

§ 3. The Nietzschean proposal takes form as built-in knowledge, a knowledge that is unconscious, a knowledge that should be instinctive in a relational and dynamic ontology: for Nietzsche, invention and imagination are instances that allow us to structure the forces and drives, to generate constantly new meanings, interpretations, perspectives, senses, or new ways of life. That is, art is broadly understood as the expression of a countermovement that places the body, creational, against reason, explanatory.

Some of these ideas were presented by Prof. Oscar Quejido Alonso and Laura Rodríguez Samperio, members of the SNC, in the paper "Movement, gesture and truth. Art as countermovement in Nietzsche's thought", at the 4<sup>th</sup> International Metabody Forum, "History and ontologies of movement-gesture", held at the Autonomous University of Madrid from 7<sup>th</sup> to 20<sup>th</sup> July 2014.



Amorphogenesis – Reverso–Jaime del Val and Dieter Vandoren





## Redefining the integration of bodies, spaces, and intelligent systems

Kevin LaGrandeur, Ph.D. – NYIT faculty, and Fellow of the Institute for Ethics and Emerging Technology

Our buildings and public spaces are increasingly saturated with intelligent artifacts that are incorporated into their structures. Ubiquitous Wifi is just one example of this; climate control sensors, security sensors and associated response mechanisms are others. And all of these smart elements, because they react to and interact with the humans who enter those spaces, mean that we must change our conception of such spaces. In fact, the whole notion of space should be broadened to include integrative elements beyond static materials used to build them. One good example that demonstrates this more expansive conception has to do with Edwin Hutchins' solution for a famous philosophical problem called Searle's Chinese Room.

Edwin Hutchins is noted for defining the notion of "distributed cognition," which posits that we must redefine cognition to include the tools that we use to accomplish it. For instance, in his famous study of the navigation of a naval vessel, he noted that decisions were not made by one human thinking alone; rather, they were made by a group of people thinking about different aspects of the navigation problem. Moreover, and most importantly, the group of humans also needed to use tools such as calculators, rulers, charts, and so forth in order to accomplish their task. These integral tools, termed "cognitive artifacts" by Hutchins, were also part of the cognitive process. Thus, navigation decisions were a matter of cognition that was distributed, not just among humans, but also among their tools. These tools could also, as I am about to show, extend to the very spaces they occupied.

The Chinese Room is a problem that investigates what it takes for an intelligent entity to solve a problem. John

Searle, the philosopher who made this thought experiment, focuses on a man who is fed questions he cannot understand, while he is locked inside a room with a set of rules for solving those questions. Searle concludes that this man could solve the problems by using the rules, even if he doesn't understand his solutions. But Hutchins disagrees. He says Searle neglects to consider that the "complete environment"—the room itself and everything in it—must be considered as part of the cognitive milieu. This is part of the set of philosophical ideas that have arisen recently regarding about not only "distributed cognition," but further, about the "extended mind." Though spurred by technology, these ideas all maintain that seeing phenomena in this light is not dependent on advanced technology, but has always been part of human cognition and understanding. For example, Hutchins notes that even a pencil or an abacus are cognitive artifacts that extend our mental capacities.

My point: we might think of using this idea to see our traveling Metabody structure as one that is symbiotic with the people who enter it, that they and the structure form a completely new entity that has a sort of distributed, innate, collective intelligence, and one that changes as the bodies inside it change, and as the structure itself transforms in small ways. This also is in keeping with second order systems theory (which I know Jaime and others are familiar with), which emphasizes that all observers of systems are also part of that system (or extended body), whether they acknowledge it or not. In other words, embodiment is not limited to human bodies, but can be seen more expansively, less chauvinistically.





## “Metabody: New Environments and Networks for Sustainable Cultural Diversity“ A short plea for refocussing the question of freedom

Ralf Beuthan – Myongji University Seoul

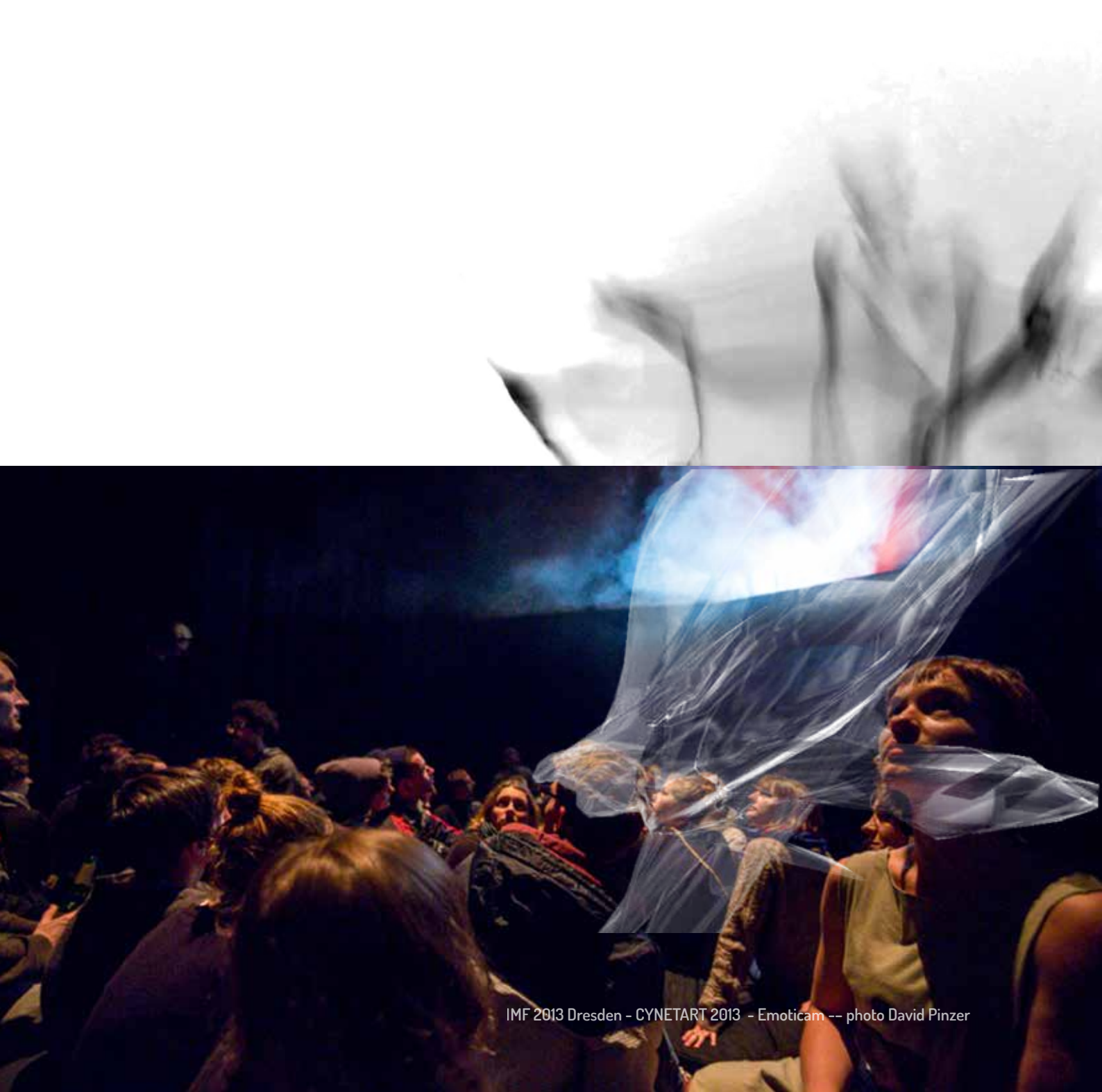
In my talk “From Superman to Metafriend” at the “Metabody”-conference (Madrid, July 2013) I have delineated my media philosophical project. Taking in account both postmetaphysical philosophical and scientific theories and posthuman filmic reflections I tried to outline basic patterns of belief concerning the human/machine-relation. Within a wide conceptual framework, covering anthropological, cultural issues as well as philosophical conceptual analysis and history of ideas, I outlined the key question: How to overcome the traditional “dramatic” approaches towards the issue of human/machine-relation which are actually based on simplified and reductionist beliefs (such as anthropocentrism on one side or technocentrism on the other side)? Shortly: How to overcome the simplified oppositions? – In compliance with Metabody-thesis of a “differential media ethics” (Metabody Manifesto 1.0) and a non-reductionist research of the new [technological] environments I argued in the first step against the narrow version of a technological or media apriori. In the second step I started to analyze the conceptual specific of the notion of “media” (in opposite to the notion of “machine” etc.), and draw some methodological and ontological consequences. Due to the argument that the reality of “media” is basically connected with practice and therefore with normativity I plead for a methodology and ontology which are not presupposing “media” as simply objectified entity (such as mechanical objects).

In the wake of the preliminary results of the presentation and the discussion within the Metabody-project I can state now more precisely a key question of me-

dia philosophy. According to a bunch of contemporary media theorists (Kittler, Stiegler, Hayles, Hansen), and according to the thesis of the Metabody-project we have to face the so called “technogenesis”. This concept rightly takes in account the postmetaphysical and post-modern development of a non-anthropocentric and evolutionary point of view. However, despite of his critical approach to the French theorists also Mark B. Hansen did radicalize, or better: transform his former point of view (in “New Philosophy for New Media” (2004) he argued for an irreducible embodiment of information) along this line, comparable to Latour’s “actor-network theory” and Stiegler’s and Hayle’s “technogenesis”. By crossing the border of an anthropocentric definition of media he understands Media in terms of “environment”. His specific new idea is, that the environment itself “is acting directly, it’s not only acting through our embodiment” (quote from a talk 2011, <https://vimeo.com/20753681> ). Although the move from ‘body centered’ to a broader ‘environment centered’ approach to media is plausible (and Hansen suggest to use the metaphysics of Whitehead to develop the full picture), his idea is moreover leading to a general problematic philosophical issue: Hansen as well as some other media theories easily use the notion of “acting” for describing processes driven by non-organic entities. But in a philosophical or categorical point of view – despite the suggestion might be in parts understandable concerning the general non-anthropocentric approach – it’s actually not clear, what it means. And according to the ethical aims of Metabody the question becomes a cru-

cial one. The vague concept of "action" needs to be clarified at least for the sake of the concept of "freedom". As far as I can see it is a crucial issue involved in the premises of the Metabody-project to develop a differentiated concept of freedom, based on a clarification of the concept of a broader action-theory which covers both a concept of the specific media environment and a concept of normativity, which basically contains the concept of freedom. Following this line I plead for a theoretical shift: Whereas I marked at the beginning the question "how to overcome the simplified oppositions?" as a key question I suggest to focus the question

"how to understand media without dropping the idea of freedom?". The current concepts of "technogenesis" (Stiegler and Hayles) and 'interaction within coupled systems' (Clark/Chalmers) and 'active environments' (Hansen), even they are not made for denying freedom, they are rather appropriate for overcoming the mentioned oppositions than giving a full-fledged picture of an environment which gives room for different forms and levels of freedom. I think, it's time to rediscover the multilayer concept of freedom again instead of taking a back seat by holding the negative concept of freedom (= 'free from something', 'no restriction') only.





## From Facial Expressions to Bodily Gestures

Beatriz Pichel – de Montfort University

In July of 2014 I presented the text “From Facial Expressions to Bodily Gestures. The Question of Movement in French Photography (1862–1902)” as one of the keynote lectures at the 4 METABODY Conference “Histories and Ontologies of Gesture/Movement” (Universidad Autónoma de Madrid, Spain) <sup>1</sup>. This paper aimed to determine to what extent photographic practices in psychology, psychiatry and physiology constituted facial expressions and bodily gestures as particular objects for the scientific study in the second half of the nineteenth century in France. With this purpose, this presentation examined the photographic projects of prominent contributors to this field, namely the physician Duchenne de Boulogne, the British naturalist Charles Darwin, the clinician Jean-Martin Charcot and his collaborators at the Salpêtrière hospital the anatomist Paul Richer and the photographer Albert Londe, and the physiologist Charles-Émile François-Frank.

The first section examined Duchenne de Boulogne’s *Mécanisme de la physiognomie humaine* (1862) and Darwin’s *The Expression of Emotions in Man and Animals* (1872). These authors supported different theories on the origin of passions and emotions, and in consonance, used photographic technologies differently: while photography became an integral part of Duchenne’s experiments, it was an instrument to collect observations in Darwin’s case. In spite of this, these two works developed two main ideas that pervaded later works: that emotions and passions were mainly expressed on the face, and that the particular instant captured by photography defined and identified how the expressions looked like.

The following two sections were dedicated to the photographic practices carried out at the Parisian hospital La Salpêtrière, focusing on how the clinical interest in defining the bodily signs of hysteria led to consider gestures as manifestations of normal and pathological passions. As the later development of chronophotographic methods manifest, capturing gestures challenged photography as it had been practiced so far because it involved dealing with the question of movement and its visualization through a sequence.

However, later scientists did not continue this line of research. François-Frank, for instance, adopted the principles defined by Duchenne and Darwin and illustrated with instantaneous photographs focused on the face the two courses on the expression of emotions that he imparted at the Collège de France (1901–1902). Bodily gestures, but above all, movement, disappeared from the scientific images and definitions of emotional expressions by the turn of the century.

This case study contributes to several theoretical and methodological questions discussed in the frame of the METABODY project. In the first place, it aims to develop an interdisciplinary methodology at the crossroad of the histories of photography, emotions, science and technology on the one hand, and theoretical notions of embodied knowledge on the other. In this regard, this research does not consider photography merely as a technology of inscription, but also a technology of embodiment. The sitter’s poses, as well as the gestures and performances of the photographer when using the camera, are exa-

mined as actions through which specific knowledge is gained and communicated.

Closely related to the previous point, this work proposes a critical approach to the role of image-making technologies in the construction of the body, a transversal issue in many of the projects related to METABODY. By putting into question the neutrality of technology, this research challenges traditional analyses focused on the content of the images and explores photographic technologies as a set of performances, images and objects in relation to the values of particular societies. From this viewpoint, photography is not merely a tool to make visible, but a practice that constructs reality in many different ways.

Finally, the photographic material examined here allows bridging the gap between historical studies of science and art. Focusing on a period when disciplinary boundaries were still blurred and different voices were trying, at the same time, to differentiate or approach diverse fields of knowledge, this case study helps to rethink the relations between scientific and artistic practices as forms of knowledge.

These three questions will be developed further in the next years through the contribution to the projects “Loie Fuller as a dancescientist” and “Biometric, movement, gestures and emotions: 1870–2014. A comparative approach”.

**Note:**

[1] An updated version of this paper, “From facial expressions to bodily gestures: passions, photography and movement in French nineteenth century sciences” has been submitted to the journal *History of the Human Sciences*. This research has been funded by a Wellcome Trust Research Fellowship in Medical Humanities ref: 103101/Z/13/Z.



IMF 2013 Madrid - Katherine Hayles in dialogue with Jaime del Val



# The Affordances of Music

Rubén López Cano - Escola Superior de Música de Catalunya

The concept of affordance has been introduced by James Gibson in his Ecological Approach to Visual Perception theory. According to Gibson, «the affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill» (Gibson 1979, 121). They are «functional meanings» (L. Windsor 2004, 180) that «are primarily understood as the action consequences of encountering perceptual information in the world» (Clarke 2005, 38). Affordances are the information given by one object about the possible uses that it is possible to do with it. In this way, the perceptual organism knows from the very moment of the visual perception, how to interact with the objects and anticipates the body posture required for this intervention: they are “invitations” to the action already present in the morphology of the objects: the object communicates how it works (Volli 2000, 200). They are the performances offered by the objects, the stock of actions we are able to do within the environment. By means of the affordances meaningful relationships arise from the environment.

## Affordances in music

The notion of affordance has been introduced in several musical studies (Clarke 2005; Nussbaum 2007; López Cano 2008 y 2009; Godøy 2010; Tanaka, Altavilla, y Spowage 2011; Krueger 2011; Menin y Schiavio 2012; Windsor y Bézenac 2012; Krueger 2014). Each one of these authors interprets the Gibson's notion in his own way. The typology I am proposing here is divided into

two large categories: Affordances that give rise to a Manifest motor activity and those that permit Covered motor activity. Each of the last two categories can be explained as follows.

## Manifest motor activity

All visible external movements that each segment of music allows us to execute along with it while we listen. The result of this activity can be directly understood as kinetic interpretant signs of the musical signs, or else as kinetic interpretants of logical and emotive interpretative signs that have previously interpreted the musical signs. It includes the following types of activity:

### 1.- Non-musical movements and postures.

Motor attitudes or corporal postures of non-musical origin, typical of normal gesticulations developed by those groups that the music addresses or represents. Normally, corporal conduct adopted by both musicians and public is the result of mutual influence. Examples can be found in the backstreet antics of singers and dancers of the tango who imitate men from the Buenos Aires underworld (Pelinski 2000, 268); the gesticulation of Rap singers; the sexually sensual insinuations of the dancers and the public that attend clubs to dance to Cuban salsa or timba, etc. (López Cano 2005).

### 2.- Paramusical movements.

All kinetic and postural activity resulting from imitating or synchronizing with any given element in the music. There exist three different levels or possibilities.

### **2.1.- General basic synchronization:**

Whenever a part of our body (a foot, our hands, fingers, head etc.) latch onto some metric aspect of the music. Synchronizing with the beat or accents or micro and macro formal metric structures. This is the most physical level as it represents a direct linking between sound properties and corporal activity.

### **2.2.- Kinetic and postural activity related to particular musical genres:**

There are genres that lend themselves to certain specific movements. Hard rock prefers vigorous and vertical up and down head movements. Pop music prefers smoother movements from side to side. Classical music from the north of India is usually accompanied by a sudden shaking of the head as if saying no on the part of both the musicians and the audience. In this case the social and cultural construction is markedly present.

### **2.3.- Executant mimesis:**

Imitating the playing of musical instruments and other actions producing sounds as well as any associated kinetic activity. Imitations of a solo guitar player from a rock band or imitating the gestures of singers by singing along with them. Incipient music lovers belong to this category when they imitate the gestures of a conductor by moving a finger as if it were a baton while listening to the music. It also includes imitating the gesticulation often employed by musicians while playing their instruments. For example, when musicians move their heads in time with the strong beats in the bar or the gestures of the musicians as they react to the contours of the music they are interpreting.

### **3.- Ritualization:**

Motor routines with specific rules inserted into more complex text-activities. Here, music and movement are only a part of the entire performance. This includes children's games accompanied by movement. These are particularly important because on relating musical elements or events with specific movements and postures, children develop corporal elements in their musical competence. They exercise their capacity to somatize and translate musical events into body sensations. They learn to detect and use external and

internal musical affordances. This also includes strict coordinated movements that are used during certain rituals such as military marches, royal entrances, wedding processions, etc.

### **4.- Dance:**

Dance is inherently a complex symbolic activity that interacts intersemiotically with music. Specific styles and kinds of music develop their own affordances by lending themselves to certain modes of dancing, while rejecting others. It is quite common for a given piece of music be accompanied by different dance movements and new affordances are being continually invented to dance to the same style of music.

### **Covered motor activity:**

Besides explicit corporal movements, music permits us to exercise non-visible corporal activities. It also permits us to develop cognitive activity closely linked to corporal and motor activities. These elements may also function as interpretant signs that relate physical corporal activity with imagination and emotion.

### **1.- Motor imagery and motor simulation:**

Researchers like Arnie Cox, Rolf Godøy and Mark Reybrouck[1] affirm that while listening to music we experience virtual motor and kinetic reactions that are narrowly related to real motor activity. In general terms, it is called motor imagery, motor simulation (Berthoz 1997) or ideomotor simulation (Reybrouck 2005) to certain dynamic mental states in which we imagine ourselves in movement or we feel ourselves executing a movement that we shall never actually make (Mahoney y Avener 1977; Reybrouck 2001, 129). These mental states habitually appear during the preparation and programming of actions.

High and low cognitive processes that intervene in motor simulation are practically the same as those we develop in real movement situations. In both cases we activate the motor sensor controllers that connect the sensors of the central nervous system with the effector muscles (Reybrouck 2001, 129-130). The only difference is that the process breaks down just before activating the said effector muscles. However, this does not mean that they necessarily remain static. There exist four cases for motor simulation and imagination.

### **1.1.- Ideomotor simulation (Reybrouck 2005) of possible real movements producers of sound:**

On occasions, listening to music we mentally imagine the type of action produced by a particular sound. Then we mentally reconstruct the movement producer of the sound. We feel it in our own body. We perceive corporally the violence or eloquence of the producing gesture of the sound, or the ease or difficulty of its realization. It is as if we ourselves had realized it. We feel in our body the effect of the resonance of the drumstick beating the drum, or of a nail or plectrum rasping the strings of a guitar.

### **1.2.- Ideomotor simulation of fantastic, imaginary or make believe movements producers of sound:**

This occurs, above all, with acousmatic music or electroacoustic where the sounds are produced electronically. The sound is not produced by any real physical action. However, we have a tendency to imagine the sound source in question. We construct fantasies in our imagination like glass flying through the air to gently smash, drops of water, bells, etc. despite having no real referent, all this imagination also activates corporal elements.

### **1.3.- Corporal extension.**

Music is movement; acceleration, retention, precipitation, staticism, ascending and descending fragments, etc. On occasions music permits us to experience sensations of corporal movement that we do not effectuate in reality but that we project onto it. Just as a telescope expands the possibilities of our own eyes, or a ladder expands our capacity to stretch ourselves in order to reach for something, music is a kind of expansive prosthesis (Eco 1999) of the motor possibilities of our own bodies. Through it we move in imaginary spaces.

We move in ways that would be physically impossible. Music is a way of colonizing the surrounding space. In the same manner as when we shout we extend our presence beyond our actual location, the audition permits us to approach real or imaginary spaces, whereby we take control of them with the movement our extended body realizes through the music.

### **1.4.-Kinetic somatization or motor empathy (Reybrouck 2005):**

The sensation of movement caused by the music that we experience in our own body. For example, when we feel that certain musical passages take root in our stomachs or in our heads. It has a lot to do with what François Delalande has termed as empathetic audition (Delalande 1989).

### **2.- Other types of metaphorical projections of image schemata:**

All these processes depend on image schemata as proposed by the theory of corporal cognition expounded by Mark Johnson (Johnson 1987; Lakoff y Johnson 1999; Johnson 2007). This theory affirms that the corporal experiences we develop from childhood form non-rational and non-propositional abstract cognitive patterns denominated image schemata. We metaphorically project these patterns towards more abstract or complex cognitive domains so as to adapt them to our corporal dimension to thus understand them better. Everyday language is full of corporal metaphors. We use them to better conceptualize abstract concepts like time, moral and philosophical terms, mathematics, etc. This theory is widely applied to music in order to explain certain processes of conceptualization, categorization and musical comprehension.

#### **Notes:**

[1] See bibliography of these authors about this subject on (López Cano 2005).


[2] For a bibliography and some critics on this subject see (López Cano 2003; Peñalba 2005).

#### **References:**

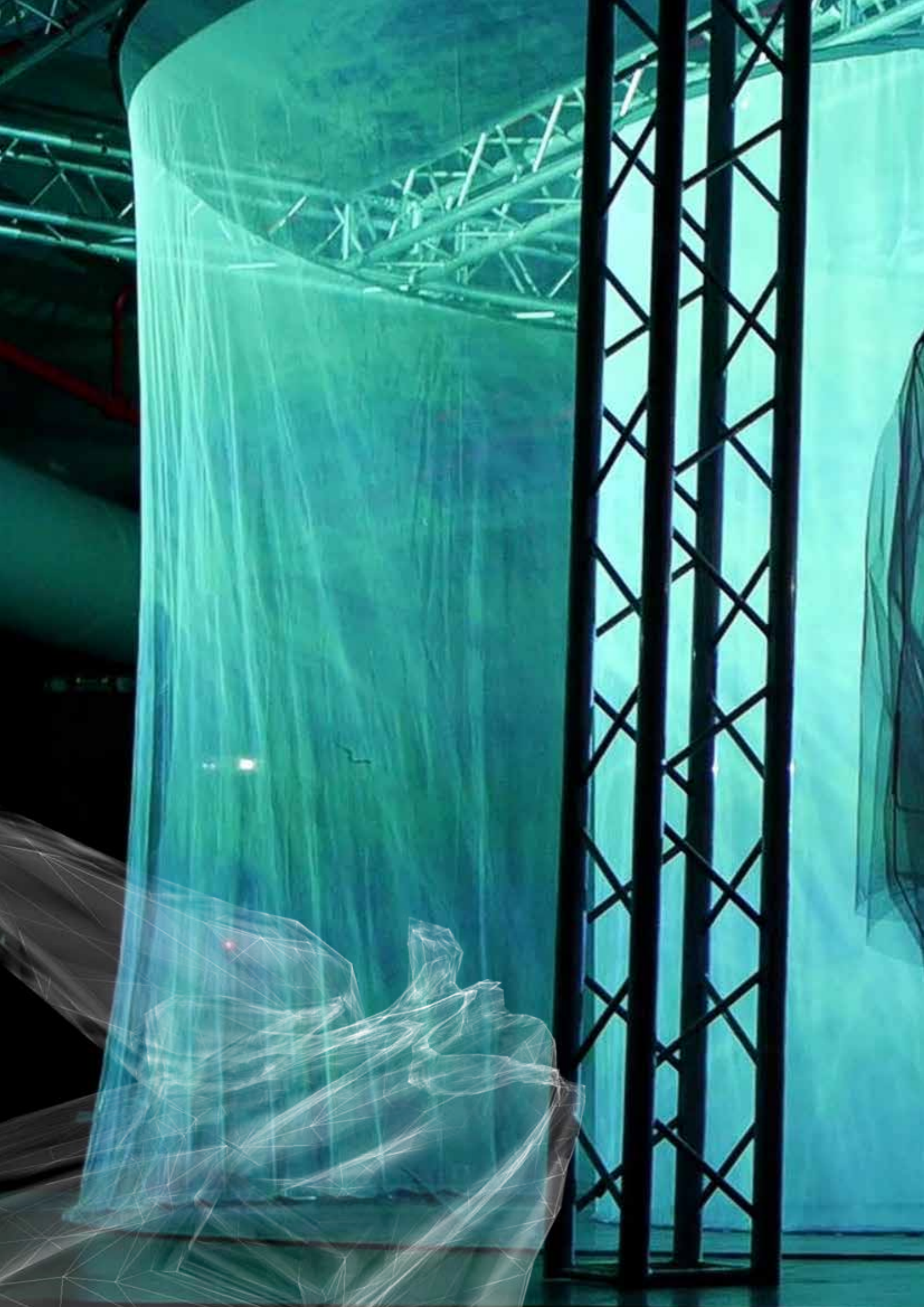
Berthoz, Alain. 1997. *Le Sens du mouvement*. Paris: Odile Jacob.

Clarke, Eric F. 2005. *Ways of Listening: An Ecological Approach to the Perception of Musical Meaning*. Oxford University Press, USA.

Delalande, François. 1989. «La terrasse des audiences du clair de lune: essai d'analyse esthétique». *Analyse musicale* 15: 75-85.

- 
- Eco, Umberto. 1999. *Kant y el ornitorrinco. Palabra en el tiempo; Ensayo 265*. Barcelona: Lumen.
- Gibson, James J. 1979. *The Ecological Approach to Visual Perception*. Boston: Houghton Mifflin.
- Godøy, Rolf Inge. 2010. «*Gestural affordances of musical sound*». En *Musical Gestures: Sound, Movement, and Meaning*, editado por Rolf Inge Godøy y Marc Leman, 103-25. London; New York: Routledge.
- Johnson, Mark. 1987. *The Body in the Mind : The Bodily Basis of Meaning, Imagination, and Reason*. Chicago: University of Chicago Press.
- . 2007. *The Meaning of the Body : Aesthetics of Human Understanding*. Chicago: University of Chicago Press.
- Krueger, Joel. 2011. «*Doing Things with Music*». *Phenomenology and the Cognitive Sciences* 10 (1): 1-22. doi:10.1007/s11097-010-9152-4.
- . 2014. «*Affordances and the musically extended mind*». *Theoretical and Philosophical Psychology* 4: 1003. doi:10.3389/fpsyg.2013.01003.
- Lakoff, George, y Mark Johnson. 1999. *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*. New York: Basic Books.
- López Cano, Rubén. 2003. «*Setting de body in music. Gesture, schemata and stylistic-cognitive types*». En *International Conference on Music and gesture*.
- . 2005. «*Los cuerpos de la música. Introducción al dossier Música, cuerpo y cognición*». *TRANS: Revista transcultural de Música* 9.
- . 2008. «*Che tipo di affordances sono le affordances musicali? Una prospettiva semiotica*». En *L'ascolto musicale: condotte, pratiche, grammatiche*, editado por D. Barbieri, L. Marconi, y F. Spampinato, 43-54. Lucca: LIM.
- . 2009. «*Música, cuerpo, mente extendida y experiencia artística: la gesticulación de Keith Jarrett en su Tokyo '84 Encore*». VIII Reunión anual de la SACCoM (Sociedad Argentina para las Ciencias Cognitivas de la Música): La experiencia artística y la cognición musical. 25 y 26 de Junio de 2009.
- Mahoney, Michael J., y Marshall Avenier. 1977. «*Psychology of the elite athlete: An exploratory study*». *Cognitive therapy and research* 1 (2): 135-41.
- Menin, Damiano, y Andrea Schiavio. 2012. «*Rethinking Musical Affordances*». *Avant* 3 (2): 202-15.
- Nussbaum, Charles. 2007. *The musical representation: meaning, ontology, and emotion*. Cambridge Mass.: MIT Press.
- Pelinski, Ramón. 2000. *Invitación a la etnomusicología: quince fragmentos y un tango*. Madrid: Akal.
- Peñalba, A. 2005. «*El cuerpo en la música a través de la teoría de la Metáfora de Johnson: análisis crítico y aplicación a la música*». *TRANS Revista Transcultural de Música* 9.
- Reybrouck, Mark. 2001. «*Musical imagery between sensory processing and ideomotor simulation*». *Musical imagery*, 117-35.
- . 2005. «*Body, mind and music: musical semantics between experiential cognition and cognitive economy*». *Trans: Transcultural Music Review* 9.
- Tanaka, Atau, Alessandro Altavilla, y Neal Spowage. 2011. «*Gestural Musical Affordances*». En *Proceedings of the 8th International Conference on Sound and Music Computing*, Padova, Italy.
- Volli, Ugo. 2000. *Manuale di semiotica*. Roma: GLF editori Laterza.
- Windsor, Luke. 2004. «*An ecological approach to semiotics*». *Journal for the theory of social behaviour* 34 (2): 179-98.
- Windsor, W. Luke, y Christophe de Bézenac. 2012. «*Music and Affordances*». *Musicae*











## Gesturality and technology: restricting or expanding?

Alicia Peñalba, María-José Valles, Elena Partesotti, Rosario Castañón,  
María Ángeles Sevillano – University of Valladolid

Translation: José Luis Moisés

The research conducted focuses on studying how a technological tool like MotionComposer (MC), which “transforms movement into music” (Bergsland & Wechsler, 2014, p.1), shows varying gestural behaviors in people of different age, gender and training, some of them with disabilities.

The technology is twofold: to begin with, it adapts to the individual needs of the persons, improving their quality of life; however, this adaptation is controlled by governments and technology corporations, and generalization, standardization and homogenization are threatening the gestural idiosyncrasies of people. The term coined by del Val (2009, p. 129) is Panchoreographic, defined as “a set of globally spread technological devices, characteristic of the culture of leisure, information and communication technologies (...) that distributes standard choreographies onto the bodies.”

Various types of interaction have been studied with the MC in 170 participants of different age, gender and training, some of them with disabilities. Only two of the six different environments offered by this device have been used. Fields and Tonality were the ones chosen, the first being more causal and the second more random.

### Diversity vs homogeneity

After analyzing the video recordings of the various participants' interactions, it has been shown that there occurs a constant dialectical tension between gestural diversity and standardization. These differences do not appear to respond to gender, age or disability factors, but to the training or experience of the individual. Some

people, or at some times, the said individuals interact with the device in a very stereotypical way, using a learned and standard gesturality. Generally, it has been found that this type of gestuality is more common in dancers or people with training in dance. Other people subordinate their gestures to what they hear, trying to control the device as if it were a musical instrument. The type of gestures used in this case is exploratory and much less stereotyped than in the previous case. Musicians or people with musical training tend to use this type of interaction. Others explore the device at bodily level, and feedback sounds inspire them to move, thus creating a feedback between gestuality, sound and body awareness. It has been observed that this type of interaction is more common in people with training in dance and music.

Differences in the exploration of the Fields and Tonality environments have also been found. The gestures found in Fields are more diverse (in terms of body part involved, location, novelty, use of space), while those in Tonality are more stereotyped. The gestures in Fields were more discreet, smaller and jerkier, as compared to the more continuous and fluid ones in Tonality.

### Gestural idiosyncrasy

Although certain commonalities among some participants were observed in this study, it has become apparent that each person has a rich, irreducible gestural vocabulary of their own, and that making use of a technological tool to which we are not used makes it possible to bring out the gesturality which comprises



part of the individual assets of each person, and which is then liable to become an intangible collective asset.

### Changing perception and body awareness

The MC can provide a feeling of listening to our body, and so it can expand our body awareness and change the way in which we perceive sound by promoting en-active perception.

### Gestural amplification. Invitation to difference

The difficulty (a certain indeterminism) in controlling sound invites participants to explore new avenues of gestural interaction. Therefore, the MC (technology) extends gesturality and invites escaping the norm and the stereotype. It is not necessary for the

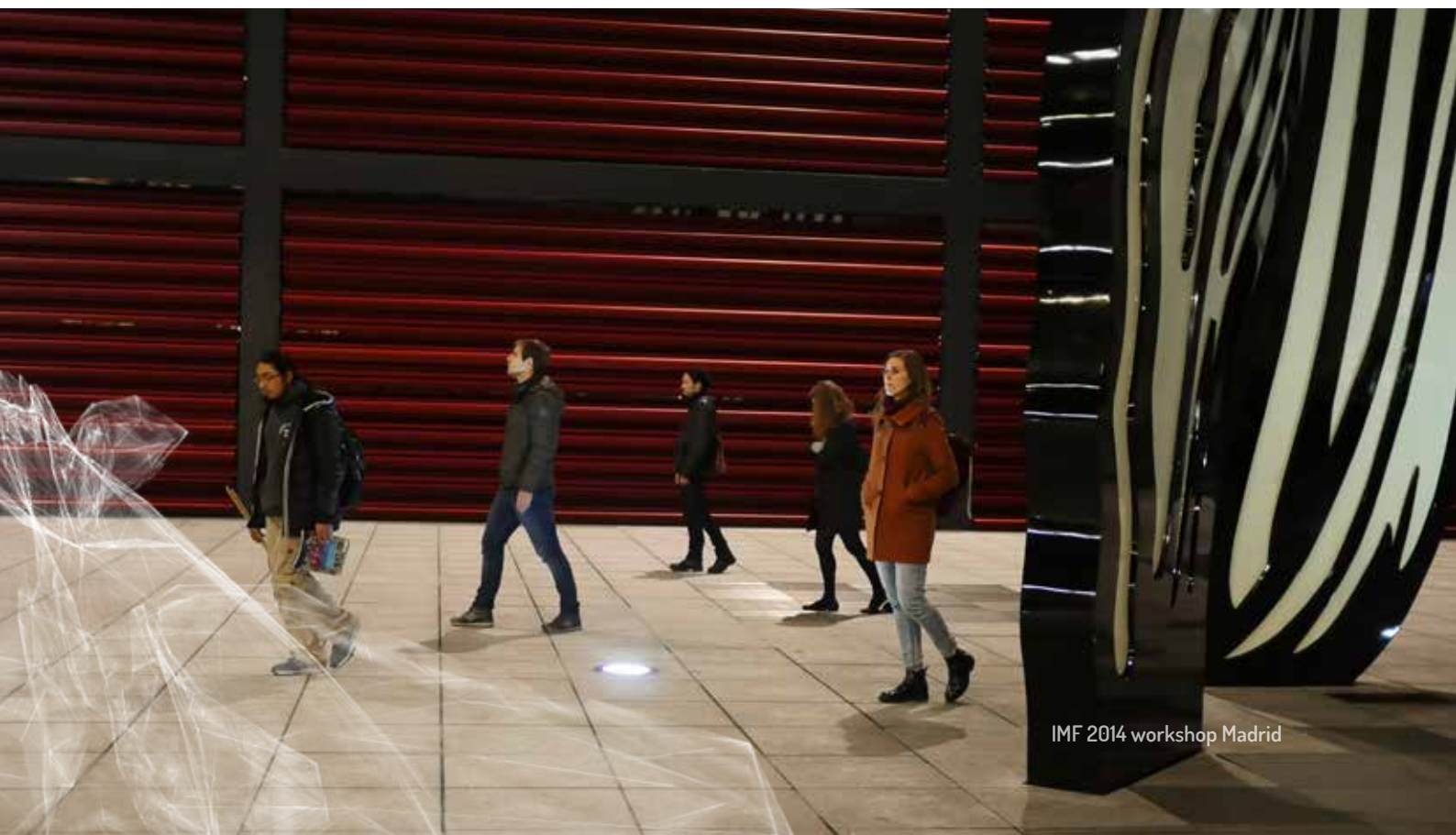
indeterminacy to be absolute; in fact, riskier results were found in Fields, which is a more causal environment than Tonality. We believe that a certain amount of control is necessary for the participant to “cling” to the experience, always accompanied by some degree of uncertainty.

### Therapeutic, educational and artistic possibilities of the MC

The MC takes individuals, with and without disabilities and of different age and gender, to the same competence level, thus transgressing the musical-artistic expressive possibilities. It allows enlarging the expressive capacity in people with and without disabilities by exposing soft skills not evidenced or socially considered..

#### References:

- Bergsland, A. & Wechsler, R. (2013). *Movement-Music Relationships and Sound Design in MotionComposer, an Interactive Environment for Persons with (and without) Disabilities*. *Proceedings of re-new*, Copenhagen 2013 (pp. 56-62). [http://issuu.com/re-new/docs/re-new\\_2013\\_conference\\_proceeding](http://issuu.com/re-new/docs/re-new_2013_conference_proceeding)
- Del Val, J. (2009). *Cuerpo común y guerra de los afectos. Coreografías globales y cuerpos en serie del Afecto capital*. *Cuadernos de Información y Comunicación*, 14, 121-139







## [Paths and processes (art, technology)];

**Brisa MP**

Translation: José Luis Moisés

The article by Bruno Latour “Technology is Society Made Durable”, written from the field of Science, Technology and Society, drove me to consider some of his thoughts in the context of the creation-research processes which result in the production of a work of art and technology, heading into the context of stage production.

It is assumed that when we face a project to create some work, we think of it as a goal to meet, as a result. Generally, widespread publicity of the process undergone for the creation of the work is subordinated to the information on what the work deals with, its technical, conceptual and aesthetic relations.

As it is well known, the works of art which make use of contemporary technologies have destabilized certain categories that looked like time-honored traditions, ranging over interactive and generative systems, artificial intelligence, virtual reality immersion, etc. But, what happens to the process of work creation?

“To eliminate the great divides between science / society , technology / science, macro / micro, economics / research, human / non-human and rational / irrational is not to immerse ourselves in relativism and indifferenciation. Networks are not amorphous. They are highly differentiated, but their differences are fine, circumstantial, and small; thus requiring new tools and concepts. Instead of “sinking into relativism” it is relatively easy to float upon it”<sup>1</sup>.

The purpose is not to fall into ambiguity, but to begin by establishing how and which of those traditional laws and categories are changed by the procedures of

contemporary creation in art and technology, and those which are not. Whether technological matter and materiality destabilize traditional categories and their hierarchies –such as: actor / spectator, movement / code, process / work, etc. – or whether these dichotomies still remain today.

I wonder if the time has come when the artwork can claim another place... the dynamic and erratic space of the process turned into artwork.

The procedures for work creation still seem deleted and missing. The Internet appears as a space for publicizing work just inasmuch as this is the result of a hidden process; only what has been achieved is exhibited: a recording of the “show” in a room, in a theater or in a rehearsal; the poster, the advertising, the review and the datasheet.

The importance of the open processes of artistic creation lies in that they establish a new paradigm for the concept of learning and knowledge. Open publication not only “democratizes” the open access to information or tools allowing to gain a general or specific knowledge of a subject –within the controlled degrees of freedom provided by the Internet– but also facilitates the publicity of the creative processes by way of displaying everything which is omitted from the artwork as a result, even their failures.

It is not only about exposing records of teams reporting their ideas and achievements, but about revealing their paths, incorporating and publicizing the problems, successes, failures and hindrances that they face, pure instability. And in this sense, interpreting Latour’s text,

some kind of record or trace of the paths within the network, a network of “actants”, “human” and “non-human”, putting forward these work processes as operations to be understood, as works in themselves.

“How do we define an actant? An actant is a list of answers put to trials – a list which, once stabilized, is hooked to a name of a thing and a substance. This substance acts as subject to all the predicates– in other words, it is made the origin of actions (Callon, 1991)”<sup>2</sup>.

If each of the components, either human or not human, physical or digital, all have a role within a project; What variations, hindrances and alliances come up among their components within a path?

And then, in what way is this resulting –artwork– still affected by others –spectators / actors, spaces, materials, environments– to generate new paths or even new and unknown actants?

“The more variations that exist among the actors to which it is linked, the more polymorphous our actor is. The more it appears as being composed of different elements elements from version to version, the less stable its essence.”<sup>3</sup>.

Just like the error is understood as a strategy that allows knowing / creating / investigating, the instability comprises an area of affections, of structures composed of physical and digital actors who contaminate each other, losing and winning new forms and categories.

We could think of a computer code of cellular automata as a generative architecture which, based on a general structure, will produce random relations which will in turn generate their own relations. This process could be extrapolated to choreographic creation, in which we could generate a structure of instructions for each of the dancers to move and interact. Starting out from its variables (dancers), a structure of conditions will be generated (choreographic instructions of time and space, for example) in which random relations will be self-generated (improvisation).

If we think about these issues as an example, connecting the workings of a computer code to a possible process of choreographic creation, it may be the case that every human artistic process calls for another nonhuman one.

Clearly, any computer code will be created by a human, but the human will become part of this network of actants that will shape up the work, but not exclusively

from its center, which may even disappear or relocate depending on the paths that occur within the process.

In this context, we are modifying the idea that a work of art is purely that which we are invited to see once it is finished, the result of what is unknown to others – either categorized as spectators or public– and we will integrate this organic and artificial factor, highly erratic, to finally constitute the process of technological investigation / creation. In this sense, software, hardware, a human body would all be at the same level of involvement and therefore their horizontality would lead to establishing new categories and relations, driven by the contamination among them and their various paths within a spatiotemporal process.

This may be more clearly seen in the case of an artisan. Artisans are subjects who manufacture their own tools, works, artifacts, objects, etc. In this sense, a technological artisan has replaced any physical materiality (pigment, paper, metal, stone, etc.) with an electronic and digital materiality (resistors, wires, LEDs, numbers, symbols, etc.).

While the DIY movement is not a uniquely artistic community, this strategy of “do it yourself” has been integrated into the online processes of artistic creation and public disclosure in order to reclassify the concept of artisan and craftsmanship. In this context, we see artists entering the scientific field (computer science, electronics, biology, etc.), and scientist entering the arts field (aesthetics, thoughtfulness, project approach, etc.), who will solve their own proposals by themselves and thanks to all the possibilities given by the open and open-knowledge culture.

This concept of DIY perhaps puts more clearly forward the complexity of the creative processes around the art and technology axes, as human and nonhuman “actants”, in a horizontal position that brings down hierarchies, with a closely connected art-and-technology matter and materiality. Physical affects digital and digital affects physical, along the same path, or in other words, at the very moment when both digital and physical, organic and inorganic meet.

Tackling a project from this concept gives us a momentary stability in our initial objectives, since this intention –or interpreting Latour ... this “declaration”– will provide only the starting point but not the arrival point, given that the path of a project can never be stable.

What will happen in this process is unknown and unexpected, but registrable and mappable only while the path lasts, perhaps thereby undermining the idea that works are just deliverable products.

"When actors and points of view are aligned, then we enter a stable definition of society that looks like domination. When actors are unstable and the observers' points of view shift endlessly we are entering a highly unstable and negotiated situation in which domination is not yet exerted"<sup>4</sup>.

The understanding of such procedures carried out by technological processes will possibly allow us to find new relations or breaches that are consistent with the creative processes traversed by technology, art, science and body. Otherwise, if we do not record such paths we risk going on creating interesting artworks by using technology; dramatic, poignant but which do not enable us to think about the problems at hand, let alone to try and solve them.

#### Notas:

[1] Latour, B. "La tecnología es la sociedad hecha para que dure". P. 140

[2] Ibid. P. 131

[3] Ibid. P. 131

[4] Ibid. P. 139

#### References

Latour, Bruno, "*La tecnología es la sociedad hecha para que dure*". Sociología Simétrica. Ensayos sobre ciencia, tecnología y sociedad. M. Domenech y E.J. Tirado (comps.) Barcelona, Gedisa Editorial, 1998

Latour, Bruno, "*Technology is Society made Durable*" <http://www.bruno-latour.fr/sites/default/files/46-TECHNOLOGY-DURABLE-GBpdf.pdf>



IMF 2014 workshop Madrid





# Metabody proactive playing field

Kas Oosterhuis / Hyperbody TU Delft

## Things and People

Hyperbody's contribution to the Metabody project is to design and build a proactive environment incorporating dancers, spectators and unsuspecting passers. The key questions concerning interaction are why, what, when and where to become involved. As a starting point for the discussion I will make no distinction between the components of which the environment is composed of and the people that roam in the space, I consider both things and people as players in a networked field of tension, things and people act on level playing field. We call this the Internet of Things and People.

## Why

The why question is irrelevant when things and people are in place and are actually acting in real time. The why question is relevant though before we design the setting, as to identify the players and the rules of the game. Seen from Hyperbody's perspective it is quintessential to allocate a unique identity to both people and things in order for them to communicate in a common language. This language whether you like it or not lives in a dynamic database, basically importing, processing and exporting digital data and metadata incessantly. Things and people talk to each other, things talk to things, things to people, and people to people, therewith creating the level playing field. Having defined the players and their identity, we will need rules for the game to unfold, we will need intention. Rules are basically a set of intentions written in the shared communication platform. I emphasize the need for simple

rules as to set the initial condition for selforganisational behavior. When we would have thousands of preset rules they would feel as topdown order, and the outcome of the game would be to a large extent predictable, since already described in the extensive set of rules. We as Hyperbody do not want that, we wish to explore selforganisation based on simple rules, we want to move and weave patterns in space and time.

## What

What can be considered to be a proactive environment? Think of a structure that is composed of hundreds or thousands of components and consider all these components to be an actor. As a metaphor one could think of the structure as a flock of birds, maintaining their dynamic consistency by following a few simple rules. This is the big mental switch that one has to make to understand Hyperbody's concept of proactive environments: the smallest components themselves are the players, they act in real time, and they are looking at their neighbouring components all the time, importing, processing and exporting streaming data. Hyperbody's first conceptual framework for such a proactive structure is what we now call the LOOP. The LOOP consists of 12 nodes and twelve edges connecting the nodes. The nodes are the actors, the edges passive placeholders. Each node has the capacity to rotate in any direction while maintaining its capacity to transfer force, the nodes are the actuators. Think of muscular joints in a bestial body. These nodes and the people are in the same ballpark

of possible interactions. There is nothing more, these are the players, this is the environment, this is the Metabody. To start with there is nothing more, only the shape space induced by possible motions of the nodes of the LOOP and the people, who are considered to be actuating nodes in the same level playing field. Now when one node rotates, it will have effect on all other nodes / players / people. When all nodes move, the complexity of shape space of possible interactions between structural nodes and people nodes is close to unlimited [2 to the power of 12]. That is why we will need simple topdown imposed rules such as to be intuitively understood by nodes, dancers and passers.

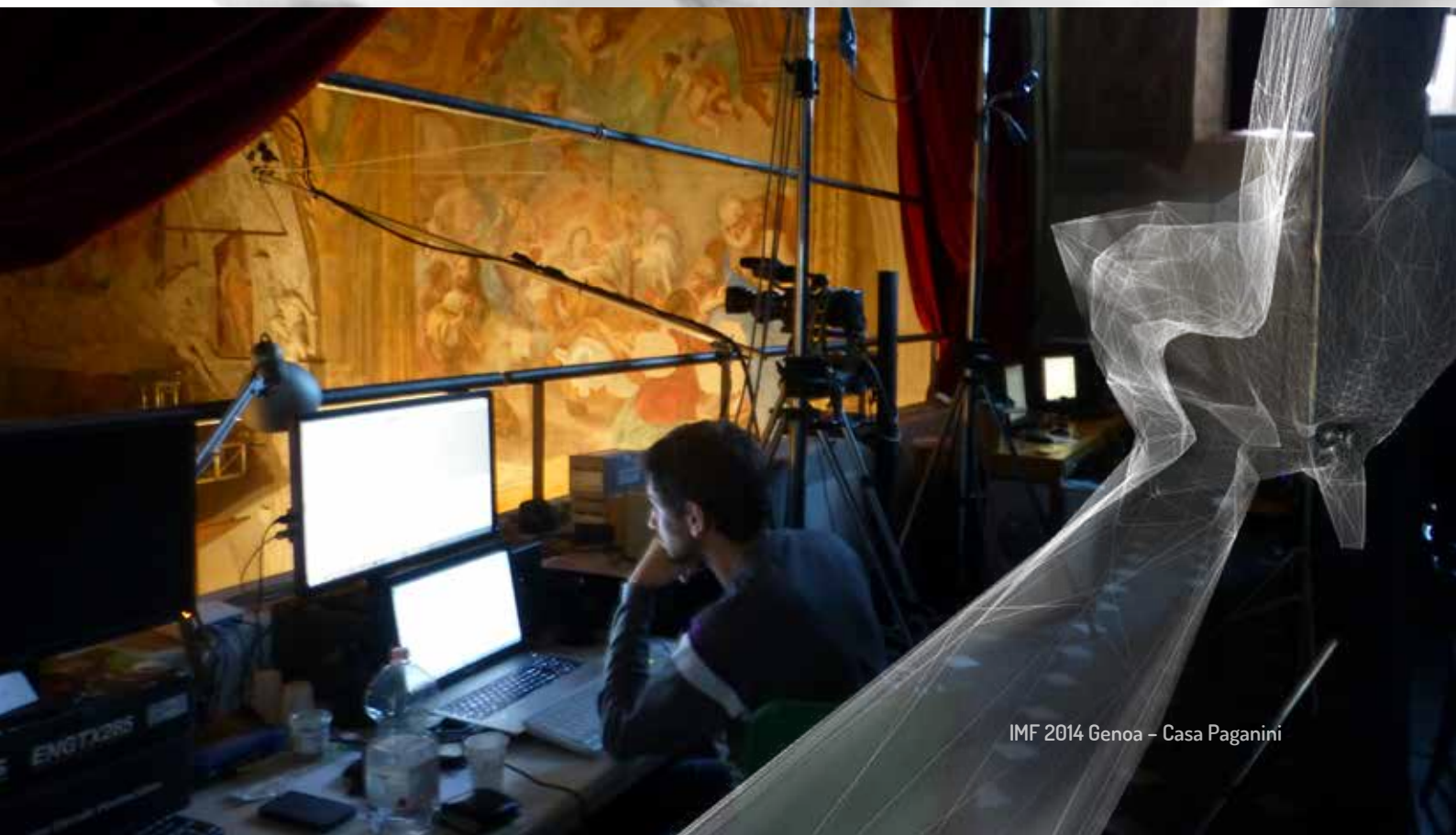
### When

Interactions are by definition one to one and take place in real time. We will have thousands of simultaneously unfolding interactions, therewith creating the local dynamic system, where things and people are on an equivalent level taking part in and are acting in. Meaning that nodes and people, who might use wearables to identify themselves and their individual limbs [as a subgroups of nodes] and communicate their changing positions and in space and time, thus molding the consistency of the dynamic system. Such dynamic system

or complex adaptive system must have the capacity to interact with other such complex adaptive systems, importing data from the world outside their system, processing these data and broadcasting fresh new data into the exterior world. Any flock, any school of fish behaves based on strong internal bonds yet responds to always changing data from its immediate environment. Think of interacting installations.

### Where

The proactive Metabody as defined above as the interplay between things and people, must be seen as an entity that can selfexplore in the context of many different types of external environments. We will start experimenting with indoor situations, based on the LOOP. Sequential to the bone structure of the LOOP we will let the LOOP evolve to become an integrated structureskin being. We will hardwire the skinny LOOP as to resist outdoor weather conditions, and eventually in its last stage of development in the last year of the Metabody project to acquire a complex body that has the capacity to reconfigure itself manyfold in its shape space, as to be able to turn itself literally inside out as is already one of the basic spatial capacities of the bone structured LOOP in both indoor and outdoor environments.



## Atmospheres of Chorographic Design

DAP-Lab – Johannes Birringer and Michele Danjoux – London

The artistic and technical investigations of the Design and Performance Lab, based at Brunel University in London (UK) and co-directed by Johannes Birringer and Michèle Danjoux, have encompassed research into how costumes and specially designed body-worn technologies affect movement expression. They have also addressed the question of designing costumes for use in performative or proactive environments which themselves are conceived as formative, not built or constructed in a stable form.

Within the collaborative pursuit of the METABODY consortium, DAP-Lab's exploration of interactive environments for wearable performance (which had been the focus of its recent dance productions/installations) has linked up with several METABODY research strands:

- Architectural kinespheres and interactional skins [LOOP] (Hyperbody, Reverso)
- Phantom limbs and neural-network generated creature movement (Stocos, Daniel Bisig) linked to the integration of piezoelectric speakers (film speakers) into costume and choreography
- Decomposition of anatomical figuration/doubling through holographic avatars (HOLStage, TMA Dresden) and networked kinaesthetic interaction (Bodynet Hyperenvironment, TMA Dresden, Reverso)
- Mobile sonification (Steim, Marcello Lussana/Palindrome)

We have emphasized the particular affordances and constraints of audiophonic wearable costume-instru-

ments on movement behavior, choreography and characterization (roles) within music-theatre/dance-theatre installations. DAP-Lab now examines the potential extensions of costumes and conductive dresses into participatory constellations (Affording Difference), asking how wearables interconnect with, or depend on, the atmospheres or unstable states of performative environments that afford various possibilities of visitor engagement.

Our research productions are expected to go beyond theatre; they are closer to what Claire Bishop (in *Artificial Hells: Participatory Art and the Politics of Spectatorship*, 2012) has theorized as co-productions of (social) situations, and what the METABODY collaborators now refer to as “disalignments” from deterministic grids of perception.

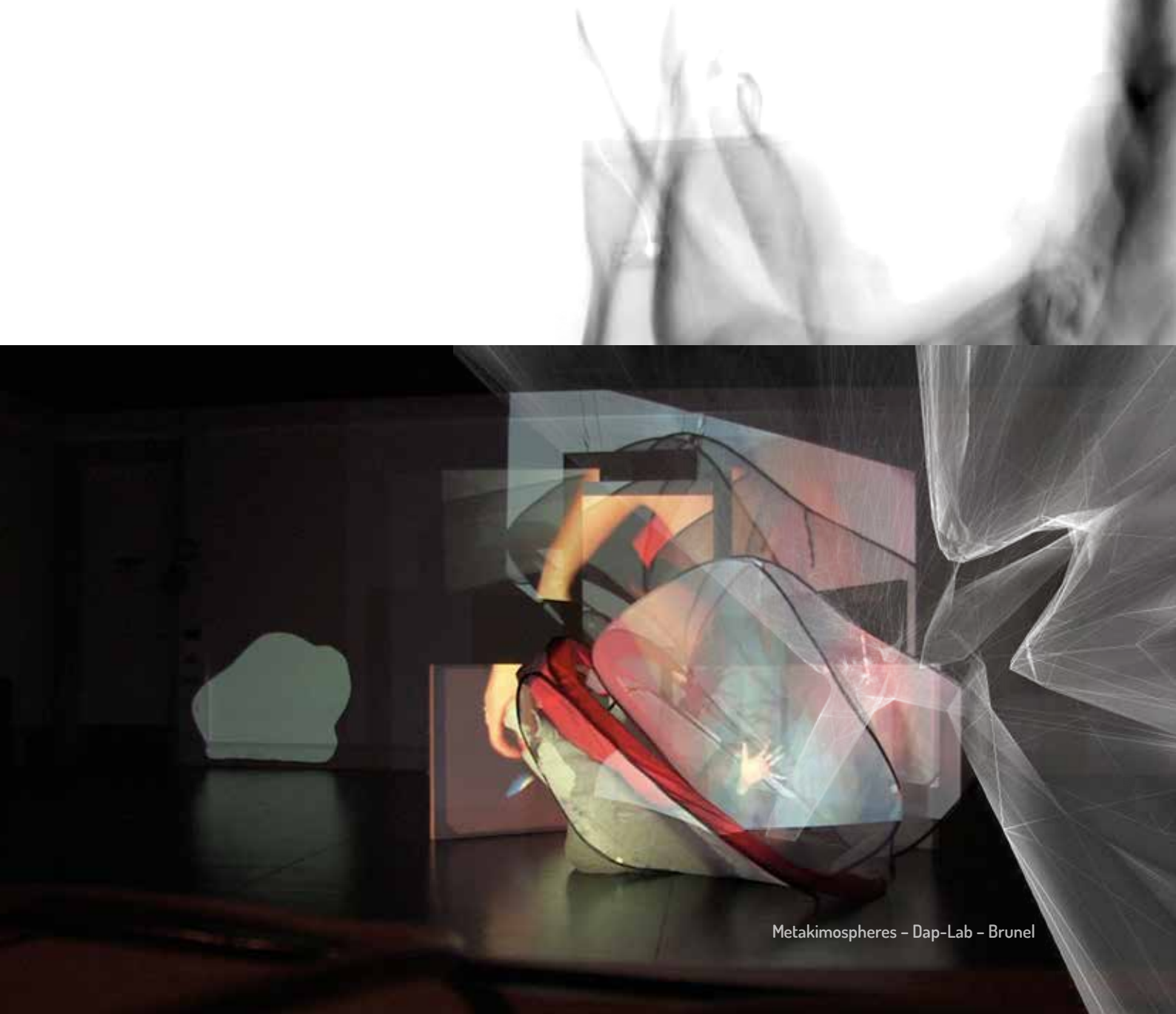
At the same time, DAP-Lab's creations have been part of theatre, dance, performance art and film contexts, operating in a space between art, fashion, technology and the body where differentials of sensory, tactile audibility as well as of disorganizing forces of noise – resisting the permeability of commodified bodies – can be articulated. Costumes and instruments constructed by the DAP-Lab for an actor or participant in an installation therefore should not be considered “wearables” in the sense in which such a term, in techno-fashion or affective computing industries, refers to gadgets and consumer commodity economics.

Rather, we plan to rethink the notion of costume kinaesthetically in regard to body weather (Min Tanaka) and atmospheric “wearability” of cloth and skin

of architectural structures, including projected or telematic dressing and contours. In tests conducted in late 2014 and early 2015, we experimented with barely audible speaker film worn on hand and shoulder in order to test small resonances between perceiving and responding forces, phonographic acts that pertain to the charging of environments. The architectural atmosphere, which we call “metakimosphere,” includes tactile, textural and kinetic-image qualities and high temperature, housing the visitor inside a tent-like structure that is moveable. The visitors are invited to sleep, feel, sense, move, rest, or do other things, supplied with a camera so they could also document their peripheral vision or record the stuttering voices audible in the boomerang-like envelope. This metakimosphere is imagined as a reservoir of mobile loops

(as anticipated for the larger LOOP architecture by the Hyperbody group), except that phonographic movement is here motivated by the aural affects or affective intensity (on a small scale) of the conductivity of voice sounds.

This scenario acts out temporal contours not clearly visible to the participant but driven by tonal refrains (aural loops) and a synaesthesia of white noise which – we suggest – involves varying processes of decomposition that perform a reorganization of sensation and instinct, of temporalities and resonances across the nervous system. The participant’s experience is largely tactile and mental, and DAP-Lab proposes to study such going mental: Going inside, where there is no outside. The noise of this metakimosphere disaggregates the organology of anthropotechnics.





# Phantom Limb – Hybrid Embodiments for Dance

Daniel Bisig, Pablo Palacio, Muriel Romero

Phantom Limb is a dance project that employs simulation-based techniques to alter and diversify a dancer's bodily appearance and movement capabilities. It does so by representing physical and virtual bodies and their movements as actuated mass-spring systems and artificial neural networks. This unified representation of dancers and generative artefacts permits the creation of hybrid embodiments whose morphological, behavioral, perceptual and aesthetic aspects manifest on stage as acoustic and visual co-presence. This publication describes the preliminary investigation and initial experiments in designing relationships between natural and synthetic forms of corporality.

## Introduction and Background

The project Phantom Limb contributes to the overarching thematic context of Metabody by experimenting with simulation-based technologies that allow dancers to alter and diversify their morphological and behavioral characteristics. This approach is based on the representation of a dancer's natural bodily properties via the same computational abstractions that are employed for the simulation of artificial corporeal structures. The abstractions integrate the structural and behavioral properties of natural and simulated body parts into a unified form of hybrid embodiment. The idiosyncratic qualities and capabilities of a particular hybrid embodiment is then as much the result of the dancer's subjective properties and activities as it is of the peculiarities of the simulated body parts. The realization of Phantom Limb is inspired by a long stan-

ding tradition within performance art that experiments with technological means to extend and alter the bodily capabilities of dancers. Historical precedents include the artists Loie Fuller <sup>1</sup>, Oskar Schlemmer <sup>2</sup> and Alwin Nikolais <sup>3</sup>. A further important background constitute simulation-based approaches from the field of Artificial Life that model both the morphological and behavioral properties of life-like entities in an integrated form. For the sake of brevity, only three classical examples are mentioned here: the Evolved Creatures project by Karl Sims <sup>4</sup>, the Artificial Fishes project by Xiaoyuan Tu and Demetri Terzopoulos <sup>5</sup>, and the A-Volve project by Christa Sommerer and Laurent Mignonneau <sup>6</sup>.

## Simulation

A custom developed simulation software is responsible for realising the actuated virtual body extensions. The simulation deals with the following aspects: a body architecture, a neural network system, and sensing and actuation elements. The body architecture is based on a directional mass-spring system and consists of multiple segments that are organized into tree like structures. The computational representations of the dancers' physical bodies that are derived from video tracking and the virtual body extensions are structured in such a way. The simulation software employs time-delayed recurrent neural networks. These networks are used to generate complex temporal activity patterns. The activity patterns affect the properties of the mass-spring system and vice versa. This functionality is realized via the implementation of sensing and actuating elements.

A sensing element perceives changes in the length or orientation of a body spring and modifies the activity of a corresponding neural node accordingly. An actuation element operates in the opposite direction in that it modifies the length or direction of a body spring based on the activity of a corresponding neural node. In the preliminary experiments conducted so far, the morphology of the virtual body extensions has been designed by hand, whereas the neural network has been automatically generated via an evolutionary adaptation process. The fitness function is based on a simple quantitative similarity measure between pre-recorded movements of a dancer and the movements of the body extensions. This measure is based on low level physical movement descriptors such as directionality, velocity, or movement distance.

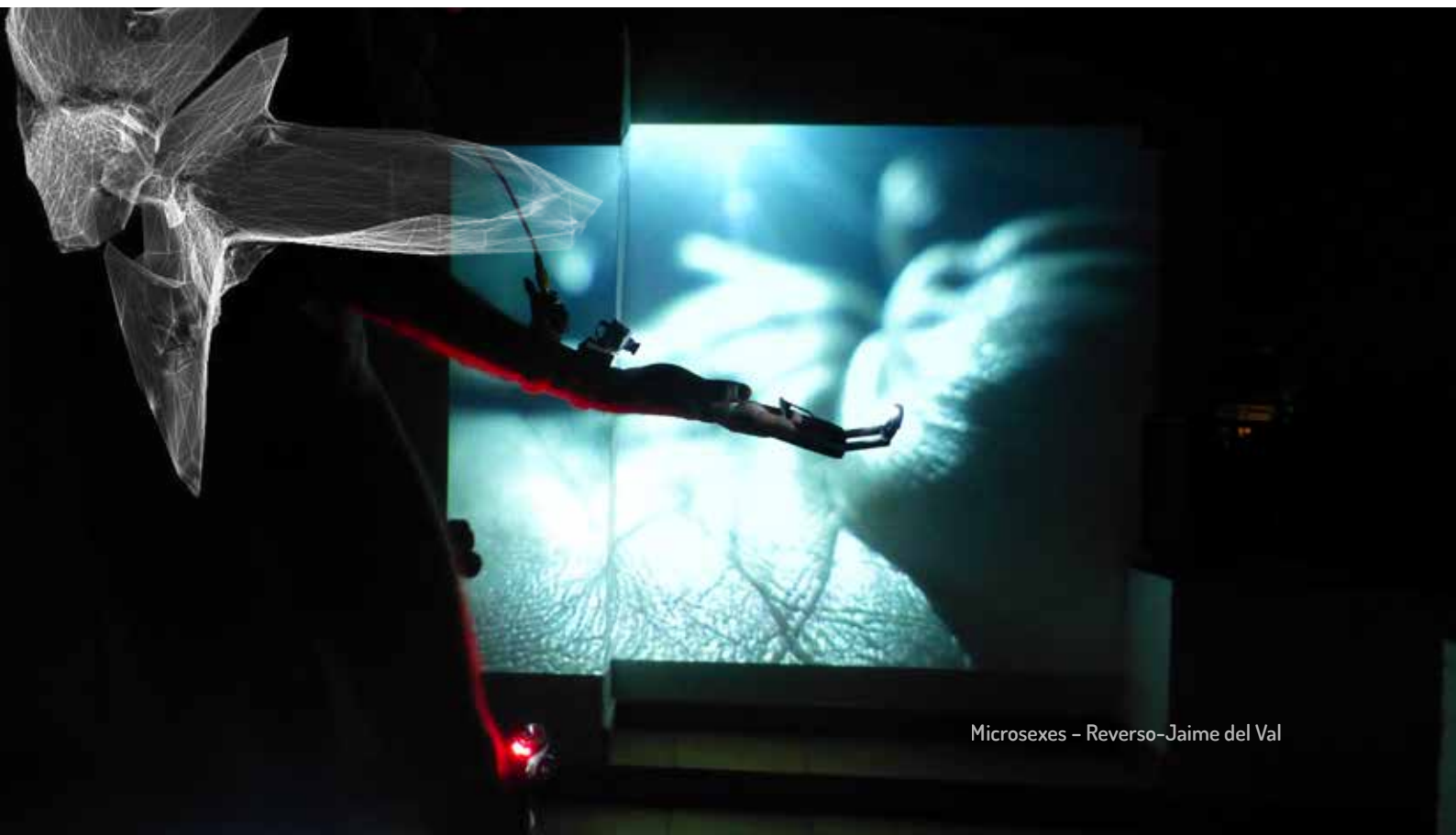
### Hybrid Embodiment

The representation of the dancers' bodies as mass-spring structures within the simulation environment plays a central role for the integration of simulated and natural bodies into a hybrid form of embodiment. On a purely mechanical level, the springs constituting the virtual body elements can be interconnected with the springs representing a dancer's skeletal structure by assigning some of the former springs to mass points

that are directly controlled via the dancer's tracked body centroids. Based on this physical connection, the dancer's movements propagate mechanically through the mass-spring system and thereby cause a movement of the simulated body structure. An additional and more elaborate level of behavioral relationship between dancers and their virtual body extensions can be realized by creating shared neural networks. For each of the springs that correspond to a skeletal representation of a dancer's body, a directional sensor can be added. These sensors control the activities of their associated neurons which then propagates through the neural network. If some of the neurons within this network are part of actuators that control the rest length and rest direction of the springs in a virtual body extension, then the dancer's movements translate into behavioral changes of the virtual body extension.

### Conclusion and Outlook

As part of this project, a first dance piece has been realised that served as a valuable testbed for our ideas and technologies and helped us to outline future improvements and research directions. One of the issues that we would like to address in the short term concerns the level of complexity in the behavioral relationships between dancers and their virtual body



extensions. So far, most body extensions respond to the dancers' movements via simple reflex type reactions. In order to achieve less direct and more diverse forms of behavioral relationships, it might be useful to modify the fitness functions that control the artificial evolution of the body extensions. Rather than to reward simple movement synchronization, the fitness function could be based on Laban Movement Analysis <sup>7</sup>. Some possibly suitable quantifiers for this analysis system have been proposed by Antonio Camurri and his coworkers <sup>8</sup>. As a further goal, we would like to experiment with additional than purely visual and acoustic means of providing feedback to the dancers about the activities of the virtual body extensions. One possibility would be to employ wearable actuators that can generate tactile sensations. The main long-term goal of the project is to combine our simulation-based approach with robotic architectural elements as a

means to deeply interrelate human and architectural form, perception and activity while at the same time emphasizing each other's idiosyncratic capabilities and autonomy.

To summarize, we believe that our research which combines ideas and methods from artificial life, generative art and dance provides ample opportunities to explore new forms of choreographing the human body. By creating and manipulating hybrid forms of embodiment, the performers bodily identity can be transformed into a plurality of morphological and behavioral differentiations and possibilities. The fluid transition between these various bodily manifestations creates a level of malleability that helps to transform a dancer's body characteristics into an expressive medium. As such, our approach continues a tradition of artistic works that experiments with the construction and alteration of the human body.

## Notes/References

- [1] Jody Sperling, *Loie Fuller's Serpentine dance: a discussion of its origins in skirt dancing and a creative reconstruction*. In Proceedings of the Society of Dance History Scholars (U.S.). Conference, Albuquerque, USA, 1999.
- [2] D. S. Moynihan and Leigh George Odom, *Oskar Schlemmer's "Bauhaus Dances": Debra McCall's Reconstructions*. In *The Drama Review*, Vol. 28, No. 3, 1984, pp. 46–58.
- [3] Claudia Gitelman and Martin Randy, eds. *The returns of Alwin Nikolais: bodies, boundaries and the dance canon*. Wesleyan University Press, 2007.
- [4] Karl Sims, *Evolving virtual creatures*. In Proceedings of the 21st annual conference on Computer graphics and interactive techniques, ACM, 1994, pp. 15–22.
- [5] Tu Xiaoyuan and Demetri Terzopoulos, *Artificial fishes: Physics, locomotion, perception, behavior*. In Proceedings of the 21st annual conference on Computer graphics and interactive techniques, ACM, 1994, pp. 43–50.
- [6] Christa Sommerer and Laurent Mignonneau, *A-Volve, an evolutionary artificial life environment*. Artificial Life VC Langton and C. Shimohara (eds.), MIT, 1997, pp. 167–175.
- [7] Rudolf von Laban, *Principles of dance and movement notation*, London, 1956.
- [8] Antonio Camurri, Barbara Mazzarino, Matteo Ricchetti, Renee Timmers, and Gualtiero Volpe (eds.), *Multimodal analysis of expressive gesture in music and dance performances*. In *Gesture-based communication in human-computer*





## Making interactive media environments relevant to the participating visitor

Marije Baalman - STEIM

### Disalignment, metakinespheres and malbodies

In two artistic explorations for the METABODY, we are looking to engage the audience as participants in an interactive environment.

The Disalignment studies, started by Reverso and Stocos, and further developed at STEIM in December 2014, we start with a guided body awareness exercise, where the participants are invited to let their movements be guided by subtle sensations in the body – as the participants move towards the floor, a gauze is drawn over them and light and video projections, influenced by the movements of the participants, are thrown onto this, thus changing the perception of the space and their bodies. This experience transitioned to the metakinespheres, as we brought in ready-mades into the space for the participants to move around in and with.

In the Malbody environment, we create a narrative of a dystopian future, where wearables have evolved to body enhancements, and some have gone wrong and are malfunctioning – or are outside of the norm. A prototype was created in a collaborative session at STEIM, where the audience was engaged by spreading out prototypes of these body extensions amongst the audience, and attaching tentacles to wristbands that were handed out. Both of these explorations are early prototypes for interactive environments, that invite the audience in as participants.

### Roles and expectations

In the context of the theatre, there are strict roles for all involved that make the event happen. Usually the

space is designed in a way that enforces these roles to be performed (the audience or spectators sits in seats facing a stage, upon which the actors are performing). This context is so strong that even when we are outside of the theatre, we tend to follow these roles, as soon as we get the impression of a performance being given, for example when someone in some sort of costume starts to act out of the ordinary in a public space – a crowd will gather and create a circle around the actor<sup>1</sup> and assume the role of spectator. Similarly, in a gallery or exhibition context we assume that we have to be quietly observing the art work, which we normally are not allowed to touch.

Within the world of the work that is performed the actors<sup>1</sup> have roles that have meaning within that world – they are the aggressors and the victims in the world, the story that is told unfolds because of their actions. The spectators are outside of this world, they do not exist and thus have no role in it; they can empathize with the actors in the the story and in that way emotionally engage in the story.

As a spectator comes to see a work, she takes along the role that she has in society and depending on her company going to the event, she will have different social roles (a friend among good friends, a colleague amongst peers on a business trip, a romantic date with a loved one). The social role that she brings along will have an influence on how free she will feel to express herself.

If we want the audience to become an active participant in our work, we need to:

- Enable to break away from the traditional role of spectator.
- Enable to break out of the social roles.
- Give the participant a role within the world of the work.
- Care about the first person perspective of this role – what is the story the participant will experience.

### Interaction and improvisation

In interactive media environments, the interaction will happen on several levels, and these need to work together to make the experience whole. To start thinking about this, it is important to first have an idea of what the role of the participant will be, and what the experience is that the creators want to enable for the participant. After this general idea, the interaction can be broken down to further steps on the different levels:

#### The interaction between participants and the technology

- How can sensors be used to sense actions and/or gestures of the participants?
- How can the data of these sensors be used to shape events in the media within the environment (such as sound, light, video, mechatronics)?
- How do we expect the media events to change the behaviour of the participants?

#### The interaction between the participants and actors

- How can the actors engage participants into the story?
- How should the actors react to actions the participants initiate?

#### The interaction between the actors and the technology

Besides the points raised above on interaction between the participants and the technology, the actors can take on an additional role in guiding the participants into how to engage with the technology, or guide them away from it in case their engagement with the technology becomes too much focused on testing the system, rather than enriching the experience.

### The interaction with the dramaturgical structure

This is perhaps the hardest one to tackle – how can the actions of the participants influence the unfolding of events within the story during the performance?

- Is there a structure with scenes within which actions can be taken, but they do not change the sequence of scenes that will follow?
- Is the structure open to have different directions of scenes: i.e. decisions participants make have a consequence for the scenes that follow?
- Is the structure completely open and are scenes created as they unfold?
- Is the structure open to differences in time (are scenes strictly connected to time frames, or can a scene have a longer or shorter duration depending on what happens)?

Leaving the dramaturgy more open to change, may make the total experience less strong, as it is harder to predict the unfolding of events. On the other hand, enforcing a strong dramaturgical structure may leave the participant feeling out of control and she may lose engagement.

### Improvisation

In all of these levels, improvisation plays an important role. In order to have interaction between the different elements have a meaning (otherwise a classical cue-based system would suffice), there needs to be space for improvisation.

What is the space for improvisation within the dramaturgy, what are the rules for improvisation for the actors, and what are the possibilities for improvisation of the participants.

Perhaps another layer of improvisation is for the media itself: in how far can the designers of the media<sup>2</sup> during the event improvise and change the behaviour of the media.

### Invitation and engagement

To invite audience in as participants, the first thing to do is to invite them to shed their role as spectator and become a participant. Then the next step is to explain the modes of interaction – show them what they can do in the environment and what happens based on

what they do in the environment. This first explanation should be clear enough to invite them to explore the possibilities more – that means that even after the first explanation is made, there needs to be enough that can still be discovered so that the experience stays engaging. Once you understand you can push a button to cause something to happen, after ten times pushing the same button and have the same reaction, it becomes boring and uninteresting.

### **Methods and ideas**

For the spectator to become a participant, the first step is to get the spectator to accept the invitation to become a participant and leave behind their normal zone.

#### ***No luggage***

A visitor to a theatre or exhibition usually brings along a coat and a bag, and in these days their gadgets (such as phones). A first step can be to let them leave these behind in a secure space: give the opportunity to leave their belongings in a locker or another safe place, so they do not have to worry about their coat, their bag and their phone, and are more free to move around.

#### ***Costume***

A next step may be to change their costume, this can be anything between a simple thing like taking of their shoes, to having them actually change into a costume that fits to the role that they are in. The costume will suggest modes of movement to them, and possibly give them a feeling of safety to move and act freely.

#### ***Object***

Give the visitor an object that they can hold, that will have some importance in the environment.

#### ***Split up***

Split groups of friends up in some way, so that every individual feels free to behave without the limitations of their social role within their group.

#### ***A role***

In the description or introduction of the work, do not only mention the world that the visitor is about to enter, but also ascribe a role for the visitor. Rather than “you can interact with the world”, describe who they are within the world. Give them a context from which they can start their imagination.

#### ***A choice***

Give them a choice at the beginning, that gives them a sense of control or agency within the environment.

#### ***A task***

Give them a small task to perform, e.g. to search for something.

#### ***Guidance***

Guide the visitors (individually or in a group) into the environment by giving them instructions on what to do (movement instructions) or what their role is (narrative construction) or what they should pay attention to (awareness), leave more and more space for their own interpretations, so they are slowly guided into acting on their own.

#### ***Workshop***

Give a short workshop at the beginning, which will explain the rules and modes of interaction within the environment (verbally, or in combination with movement exercises)

#### **Notes:**

[1]: The word actor is used for the participants in the event that are involved in the creation of the event before it takes place and play a role within the world of the event. They can be theatrical actors or dancers.

[2]: <http://lac.linuxaudio.org/2013/video.php?id=78> (from about 4m30) for roles of media designers in performance.







## Response to Metabody Residency at STEIM

Lisa Wymore – Associate Professor, UC Berkeley Department of Theater, Dance and Performance Studies

The rainy cold weather of the Amsterdam streets was in stark contrast to the warm and thick air of the Studio for Electro-Instrumental Music – STEIM where the Metabody project convened for a weeklong working session to experiment with sensors, textiles, visualizations, sound, and architectures. The contrast between the internal world of STEIM and the external world of the Amsterdam streets was exaggerated by the work being done by Metabody, which seeks to de-center the human experience away from known and normative routines such as the laws that govern street decorum, pedestrian engagement, and mundane every day gesture, into newer and more provocative ways of being and experiencing the world. The smooth turns of the Amsterdam canals with the bicyclists cruising in masses along well worn paths became contrasted deeply with the sharp and surprising sounds, sensations, and movements being explored in the studios of STEIM.

What the 'body' of the Metabody will be is still amorphous and forming. Like the layers of gauzy fabric used for some of the installation experiments there is not a lot of structural support within the project currently. There is connection, fluidity, layers, atmosphere, light, and sound. The 'body' part of the project has yet to be envisioned by the group, perhaps because the visions within the partner's minds are connected to software and hardware designs that manifest uniquely to each team, or perhaps because the partners coming together come from related but separate fields?

Particles, swarms, crowd informed decision-making, and interactive architectures are the heart of the Metabody project. Sessions at STEIM included collaborative 'mash ups' that would take participants to the ground to

explore how we could de-center our complex human structure and tissues and then later engage in complicated and sometimes circuitous intellectual debates around the interconnectedness of all things. This collaborative process is at the heart of the Metabody project and assumes that no one person has any hierarchal dominance. Moments of pure frustration and pure joy happened within seconds of each other as conversations shifted and gave way to clarity, or instruments that worked moments before failed or miraculously began working again.

The very process of being at STEIM and doing the work in the studios felt like witnessing the conception of the project – as if the first cells of the project were beginning to divide, differentiate and at the same time find relationship to the whole of the organism – the Metabody. Human and machine connections abounded, as did connections to objects and wearable designs. One could say the project is in an early state of being and this state is sensate, budding, and alive with potential. Real time energy networks were being formed between people, as project partners were able to work side by side, sharing wires, machines, software and ideas. The togetherness and the intimacy of eating and working together all day felt important and productive.

One could say that the project is in a kind of "techno genetic spiral" or a "co-evolution." It is forming right now and the promise of the project is enormous and essential to human understanding of our ever changing and emergent world paradigm. It will be great to see if some 'tent poles' could get the fabric of ideas off the ground. This might require a more dominant leader to emerge and make design decisions in order for the project to find its form in the world.



## First Metabody study work by K. Danse: the “Monster” prototype

K. Danse

The “Monster” project is one of the experimental platforms feeding the global Metabody project. “Monster”, K. Danse’s first Metabody based « study work » was inspired by Jorge Luis Borges’ *The house of Asterion*, from his collection of short stories *The Aleph*.

With *The house of Asterion*, Borges rewrites the myth of the Minotaur, but from the point of view of the monster rather than that of Theseus, the killer of the monster. The gaze is thus displaced allowing for a critical reading where the monster is heard and seen – the monster which hitherto has been mute and hidden.

Asterion, a double character, fake hero / monster, is situated outside the standards of homogenization which are a result of today’s omnipresent media technology. Resisting modalities permeating our world, through systems of education, work, leisure etc., which encourage imitation in ways of thinking, moving, and behaving, Asterion is empowered by his imagination. Inventing another self allows Asterion to conceive of the world as his house.

Duplications and visions of multiplication are omnipresent. This principle of duplication recalls this same principle so characteristic of our contemporary usage of communication technology. If the house is the world, as Asterion claims, the labyrinth is no longer an architectural structure in the world. It is the world. Asterion needs to feel it. The only way he can feel it is through a physical confrontation with a contemporary Ariadne (the other character gaining agency throughout time). The physical presence of dancer/dancers

confronting themselves with the physical world is a way of questioning the body in technology. Asterion thinks of himself as imprisoned in the labyrinth that is the world beyond comprehension. He lives the illusion of total liberty, incorporated liberty, but he is in reality free nowhere.

Integral to this research under the headings of the Metabody project, which provide the conditions for the emergence of new technological paradigms, and which opens spaces of perception where the body is radically valued in its irreducibility and unpredictable and changing diversity, we work on an inter / intra-active scenographic space that allows for this question of being in the world/labyrinth to be perceived by the audience.

Throughout 2013 and 2014, via the Metabody based « Monster » prototype / study case,

K. Danse has been concentrating on continuous choreographic research and concept development pertinent to the scenographic design, visual mapping and sound design.

Research on movement has dealt mainly with what we call « dual dances », i.e. dances which carry, in their own compositional way, different intentional qualities. Variable sets of rules have been invented for instantaneous movement composition in order to maintain an open ended approach.

Research was done on scenography, experimentation for multiple projections and different vantage points of view, allowing the audience to « live » the performance both from inside and outside. A particular

attention was given to « subjective images » and their integration with the choreographic writing.

An important point of attention was put into what we call the « life of the Monster », i.e. how to give the scenographic set a « life » on its own, a sort of « breathing monster ».

The continuity of the project in 2015 focuses on the interactivity per se: live alterations, diversions and disruptions of the whole system, through the dancers activity and audience's changes.

In that way the « Monster » prototype constitutes a relevant base of research for the artistic contextualization of the Metabody architectural prototype to come. Bearing in mind the common concerns about the architectural structure, the “labyrinth” of “Monster” proposes to be some sort of living creature with which both performers and dancers can dialog.

The objective is to achieve a sort of “a non-automatic relationship” with a given environment (the final architectural structure) and everything that it contains, sound, images, lights, etc.

### Questions about “new movements and spaces”

Since we are dealing, in Metabody, with movement in many ways, questions about “new movements and spaces” represent a rather concrete field of research, amongst others.

Following a series of comments on intra-active movement related problematics K. Danse shares the following questions: “What are the gestures for?” “What is the very reason to move?” “What makes us move?”

Through a project called “Gameplay” ([www.k-danse.net/en/gameplay](http://www.k-danse.net/en/gameplay)) K. Danse has been concerned with these issues of how to deal artistically with semi-autonomous digital creatures. This project deals with the making of a choreographic environment where the dance and the dancer attempt to find their “raison d'être”.

In Metabody we are tackling this extremely interesting issue about “new movements and spaces”. What can be considered as “new”? “New and novel movement”?

Beyond the 2nd, 3rd, etc. degree we want to give to those two terms, in the context of the theoretical approach of the Metabody project, it is particularly interesting to deepen this question, from the practical point of view of choreography, in the large sense.

### A first round of ideas and questions:

- What does genuine mean? (See criteria for difference, or originality)
- What can be considered spectacular and virtuosistic? (a tendency today many people, in general, consider as brilliant, mesmerizing, etc. visually impressive movement which does not carry necessarily any meaning, intention... a tendency towards “decoration”?)
- What is different from everything seen and felt before?

This of course depending on one's expertise and lived experience of the multi-cultural field of dance and choreography.

Here are a few fields of possibilities that K. Danse develops (or has developed) work with:

- Movement informed by rules and specific constraints, contexts
- Movement produced in situations which propose and force the body to move in “extreme” ways (ex. extremely slow movement of the whole body with every part moving at the exact same speed)
- Movement as the improvised results of extremely precise indications given to the movement of each and every part of the body, limbs, etc. (ex. scores elaborated with high level of strong randomness)
- Movement as the improvised results of precise indications given to the performers, in terms of how to evolve in time (articulation of almost musical instructions devised in short periods of time, together with instructions on distribution of energy in time)
- Work on the “monsterisation” of movement : looking at all possible ways to produce deviation, distortion, deformation, disjunction , etc.
- Through lags in time and space
- Through extreme oppositions in terms of: qualities of movement, speeds, utilization of space, opposed intentionalities (double binds?)

It is in this context, through a collaboration started with Jaime del Val on the study-case “Illegible Affects” that the idea for analyzing highly diversified qualities of movement was developed as collaboration with Infomus.



### **Movement analysis – Tools for awareness of Diversity. Illegible Affects/Monster – collaboration with Infomus and Reverso**

This parallel project proposes to push the boundaries of what Infomus is working on: refined ways of analyzing and recognizing highly diversified movement qualities.

K. Danse, over the past years, has been developing a substantial body of work based on a map of 19 possibilities of combined sets of movement qualities. This is being proposed to Infomus for research and EyesWeb developments.

5 of the 19 units were tested in Madrid, July 2014: “Heaviness”, “Contracted-extended”, “Without direction by divergence of information”, “Run-up” and “Fall”. 5 sets of tasks, open to much diversify of interpretation and to be experienced by any moving body.

The objectives being: to try very hard at not reproducing well-known movements, clearly codified or too “comfortable” ones, to experience different routes, unknown territories, risks, unexpected qualities, etc.

Will there be software capable of recognizing different qualitative situations of movement, thanks to machine learning? Interesting paradox between sophisticated control, levels of confidence and awareness of diversity.

Indeed this mode of multilevel real time feedback analysis affords an awareness of the multiplicity of expressive levels of movement, and of the system that analyses as an agent with more or less confidence rather than a provider of absolute truths.

The objective of this collaboration is to develop a higher level integration of features for the analysis of expressivity of gesture and movement, in order to achieve an intra-action which deals with differentiated behavior, rather than just the usual low level parameters we tend to work with.

### **Tactile objects – Audience intra-action**

Audience participation and involvement is another important issue, within the continuous research for Metabody.

K. Danse is interested in seeing how to implement that aspect of research so that audiences can affect through their small movements and/or contact the existing mappings via subtle changes in the visual-sonic material.

As somehow a prolongation-transformation of Monster-Metabody K. Danse envisions developing both aspects: the before the contact and the contact itself, either between two people or between a person and an object.

### **Prospects for 2015 – “Errance\_Metabody”**

“Monster”, as a prototype, is both a finalized performance and a choreographed-visual piece, with its own “narrative”, potential for evolution and transformations, etc.

The next phase of research, called “Errance\_Metabody” is an Integration/expansion of the “Monster” project: a new research involving work on the triangular relationship between performers, audience members and intra-active environment, the three considered as an open ended totality.

This encompasses various aspects:

- Choreography (continuous research on the “monsterisation” of movement)
- Intra-action between audience and environment (augmented cushions, overhead camera, etc.)
- Playful physical rules to be experienced between performers and audience members via shared sensors
- Intra-action between performers and the architectural “living” creature dealing with technology applied to qualitative recognition of movements and gestures, integration of data when contact takes place (including what happens when the “going towards” before the touching takes place)
- Behavioural programming for semi-autonomous visual and sonic mappings.

Besides K. Danse’s continuous tasks dedicated to choreography, dramaturgy and work on typologies of movement K. Danse wants also to intervene at an early stage with choreographic informed input connected with the work done on relational architecture by Hyperbody because it can be quite useful for computational directions to be undertaken from the point of view of the involved Robotics. K. Danse is particularly interested in the various aspects of potential openended behaviors that the architectural structure will be able to develop.

These behaviors can be variable depending on perceived qualities of movement and relational-conversational scenarios.

The question remains: what types of relationships? How to generate open ended modes?

The new experimental work done in 2015, which aims at deconstructing the choreographic, visual and sonic material from the Monster project, is an attempt to address a triangular relationship between environment, audience and performers.

A way to approach the embodiment of the complete environment we are part of.

For this we investigate:

- Situations of invitation towards disalignment and proprioception for audience members and performers as “guides”.

- Situations that will allow the dancers to discover, transform and alter movement during the running performance-installation. e tc.

These investigations make sense within the research being undertaken towards the real size future prototype. The results of this continuous artistic and technological investigation will be shared during the Forum in Weimar, March 2015 and will be the ground base for the preparation for the Madrid Forum, July 2015.



# Interactive Art Question

Robert Wechsler

My question concerning interactive art is, how is the user (visitor, performer, etc.) made to feel that they are part of the music? This experience, which is synaesthetic in nature, arises when the mover's role is both, 1) meaningful, significant and palpable, and 2) musical, dancerly or of some other artistic value. Achieving both in one fell swoop is deceptively complex. By looking at how lay dancers and musicians become engaged in dance/music events (of all kinds), some patterns begin to arise.

## Introduction

We have been working on this problem for over 20 years. Our conclusion is that it is possible, though not necessarily in the ways one expects. First of all, you will notice that it is not one task we face, but two; the user's role must not only be convincing, it must be artistic (sensually interesting). The first task requires:

1. Directness
2. Clarity, exactness
3. Repeatability
4. Discreetness (discreet action and discreet response)
5. Low latency
6. The physical gesture or movement involved must be likely, comfortable

These criteria are quite strict. Making music through gestures in space is not like playing a musical instrument where there is some tangible, tactile experience. The bar for attaining a sense of causality is higher than one thinks.

The second task, that what comes out is in some way pleasing, has its own set of demands

1. Musical harmony, or sounds that go well together
2. Musical melody, or sequences of sounds
3. Themes and variations
4. The beauty and subtlety of the sounds themselves
5. The fun or interest of the sounds
6. Rhythm
7. Movements that are kinesthetically and/or visually interesting, e.G. Varied, dynamic, extended (requiring the user to stretch themselves out), rhythmic, etc.

Not only is the second list potentially in conflict with the first, but there is the added problem that the second list is not trivial. For many users, this author included, it is like saying,

1. I want to sit down at the piano and choose my notes
2. I want them to sound good together, and oh, by the way,
3. I'm not a musician.

If we take as our starting point the idea that software and hardware should play music for us, whence do we derive a sense of participation? The dilemma is clear.

## Difficult, but not Impossible

We want systems that neither "play the notes for us", nor allow us the level of control of, say, a classical instrument. There is a middle ground - actually there is quite a lot of middle ground. And this middle ground,

to finish the metaphor, is fertile. Human beings have a natural desire to be part of dance-music events. This means that even when their role is quite small, they can still feel fully-involved, indeed synaesthetically involved in the event. I.e. they may feel, just as accomplished professionals do, that they have the music in them. I saw a back-up singer once playing a tambourine. She had maybe 3 notes to sing and otherwise merely hit the tambourine and danced. It looked quite easy what she was doing, but you know what? She was great! The rules that normally govern the importance of virtuosity are bendable within the context of the artistic event. The “best” musician or dancer, may not be the one with the most training. Duh.

A device like the MotionComposer is neither a tambourine nor a piano. Rather, it has its own criteria. Still, there are principles at work in all music/dance activities and these are where we want to focus if we want to design compelling interactive systems for music and dance.

## General Principles

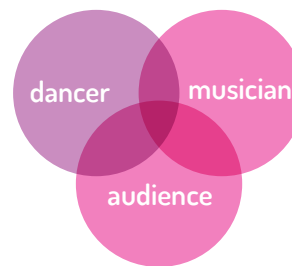
### *Alternation of Control and Freedom*

In dance/music events, there is often an alternation between in terms of level of control. Ask an accomplished musician or dancer how it feels to do what they do and they might tell you that sometimes they control it (the music or dance) and sometimes it controls them. In many music and dance forms there is a deliberate alternation between exactly programmed sequences, and those which are more unpredictable and may even surprise its creator. The point here is that it is two pro-

cesses, not one, and the goal is not to combine them, but rather to alternate between them.

### *Role Transposition*

In a traditional Western music performance, roles are clear: musician, conductor perhaps, audience. The same can be said of classical ballet. In most music and dance traditions of the world, however, roles overlap:



Furthermore, roles shift, or transpose during the event. This is the pattern in most dance/music events (in the world, if not necessarily in Western cultures).

### Conclusion

Thus, we have the beginnings of a model for interactive performance which doesn't so much depend on combinations of experience, as it does on alternations. The implication for interactive art (of this kind) is clear. We need to provide both kinds of experiences to the user, but not at the same time. The challenge, then, is to find transition strategies. If it occurs too abruptly or soon into the event, the user is confused and loses interest. Too slow or late, and they get bored and leave.





## Music of Perception

Marcello Lussana

The experience of listening to music has always been connected to some kind of bodily activities, often dance. Moving and listening are a kind of knowledge that is based on experience and perception, a continuous mixing and exchanging that generates a perception loop between these two activities.

Interactive technology offers the possibility to strongly link body movement and music composition: this opens up new questions and possibility for artists, technicians, philosophers and any intersection between this closed roles, redefining them.

A better understanding of these changes, is possible just starting from experience, both first person or other

people experience: this is a way to find the wet technology that Roy Ascott deeply explored.

How we experience music and movement? What does it happen if we strongly link these two human activities? Are we able to extend our perception through this connection? What are we experiencing?

Your movements create music, are louder, beautiful – the environment is now rich of little sounds around you. You perceive yourself through the movement and the effects on the music. You touch the music and the music touches you, the sounds change your movement, your movement changes the sound: a perceptual loop.



Metakinesphere – Reverso-Jaime del Val and Cristian García



## Research themes relevant for MetaBody

Casa Paganini- InfoMus research Centre

New paradigms and computational models of expressive gesture, emotional embodied communication, social signals, including entrainment (in its temporal and affective components), empathy, functional roles such as leadership.

### **Multimodal outputs include sound and music, visual media, living objects and architectures**

Conceptual models and computational models of non-verbal, full-body, multimodal communication, including integrated visual, auditory, haptics and physiological sensing, are a means to investigate the subtle, implicit sensorimotor signals that characterize individual as well as social behavior in interactive living adaptive environments.

Expressive, emotional, and social non verbal multimodal components are of paramount importance

- For the understanding and modelling of novel interactive living, adaptive environments,
- For the design of models of narrative structures for such environments,

- For the design of novel adaptive interactive architectures,
- For the development of novel interactive performances and of novel mapping strategies,
- For the understanding and design of active experiences of audiences in environments where space is moulded by the joint actions of artists and audience,
- For the study of social inclusion, of therapy and rehabilitation strategies based on engagement and “aesthetic resonance” of human subjects.

In this way, main themes of MetaBody can be approached from novel artistic, cultural, and scientific-technological perspectives.

These directions of investigation, where Casa Paganini-InfoMus research centre plays a central role, require a profound intersection of scientific research in human-centric computing with artistic and humanistic research, of scientific and technological research where art and humanistic culture are a fundamental source of inspiration.

## 15 METAPROGRAMMES of the PANCHOREOGRAPHIC

KINETHOLOGICAL ANALYSIS. DISIDENTIFY – DEVISUALIZE – DEFORM

SELECT THE METAPROGRAMMES YOU ARE ALIGNED WITH AND FILL IN THE FORM:

<input type="checkbox"/> 1. Meta-programme: <b>rationalist, autonomous, superior, colonizing human</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:
<input type="checkbox"/> 2. Meta-programme: <b>individualistic, possessive, proprietary subject</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:
<input type="checkbox"/> 3. Meta-programme: <b>binary gender and binary sexual orientation</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:
<input type="checkbox"/> 4. Meta-programme: <b>prudery, shame and compulsory intimacy, compulsory monogamy, genital-oriented sex, sex-oriented love, love-oriented sex</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:
<input type="checkbox"/> 5. Meta-programme: <b>functionality, ability, competence, capacity and success</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:
<input type="checkbox"/> 6. Meta-programme: <b>identification by background, aspect, age or form</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:
<input type="checkbox"/> 7. Meta-programme: <b>submissive to social norms, given legal regimes and traditional education</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:
<input type="checkbox"/> 8. Meta-programme: <b>accepting and believing in the given epistemes and perception of technopositivism</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:
<input type="checkbox"/> 9. Meta-programme: <b>acceptance of surveillance and control, compulsive picture taking, compulsive rationalization and search for meaning</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:
<input type="checkbox"/> 10. Meta-programme: <b>addicted to social networks and believer in Information</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:
<input type="checkbox"/> 11. Meta-programme: <b>devoted to the mandates of disciplinary institutions of medicine and pharmaceutical industries</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:
<input type="checkbox"/> 12. Meta-programme: <b>aligned with leisure, fun, happiness, love, fear and future programmed by the system</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:
<input type="checkbox"/> 13. Meta-programme: <b>complicit with wars, and global violences at the basis of consumer culture, (like the coltan wars in Africa, by purchasing computers, game consoles or phones built with coltan)</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:
<input type="checkbox"/> 14. Meta-programme: <b>addiction to Spatio-temporal linearity, controlled and measured space and time</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:
<input type="checkbox"/> 15. Meta-programme: <b>[Add your own description of programmes and disalignments]</b> Choreographies through which I reproduce the metaprogramme:	Potential kinethic tékhnes to disalign from this metaprogramme:









# A METAHUMANIST MANIFESTO

by Jaime del Val and Stefan Lorenz Sorgner

[www.metahumanism.eu](http://www.metahumanism.eu)

**§ 1.** What is Metahumanism? Metahumanism is a critique of some of humanism's foundational premises such as free will, autonomy and the superiority of anthropoi due to their rationality. It deepens the view of the body as field of relational forces in motion and of reality as an immanent embodied process of becoming that does not necessarily end up in defined forms or identities, but may unfold into endless amorphogenesis. Monsters are promising strategies for performing this development away from humanism.

**§ 2.** The world as relational complex – The Metahuman as Metabody: Metahumanist critique proposes to deepen the understanding of reality as an unquantifiable field of relational bodies, or metabodies, in changing and constitutive relation with one another. Herewith, we attempt to finally overcome the Cartesian split between body and mind, object and subject, by proposing a view of the mind as an embodied relational process, and of the body as relational movement, that operates from the molecular and bacterial, through the individual and psychic, to the social, planetary and cosmic levels, and in other dimensions of experience. There is no possibility to map a totality or limits of the forces that constitute a metabody and there is no ultimate exteriority to them, though they may gravitate around provisional nodal points that account for an immanent perspectivism and the formation of power relations.

**§ 3.** Towards a Common Relational Body: Traditionally relationality has developed into or been subjected to a variety of systems of intensive regulations. In contemporary capitalism of affects relationality is increasingly being subjected to control through technologies which produce global standard affects by distributing discreet choreographies. The Panchoreographic is the biopolitical meta-system of control in which metabodies are being preemptively appropriated. Possibilities to reappropriate and redefine technologies of becoming need to be shown.

**§ 4** Towards a politics of movement and radical pluralism: A radical pluralist politics is a non paternalist movement that works through power structures to avoid the retotalitarianisation of politics. It does not aim at an ideal final state but stresses the need to permanently overcome contemporary challenges that arise by necessity through combining the immanentism proposed by the metahuman with the perspectivism of the posthuman, stressing the importance of movement versus identity.

**§ 5.** The metahuman as postanatomical body: We propose to challenge the anatomies, forms, cartographies or identities that constitute the humanist concept of the anthropos, and the technologies that allow for such representations to take form. Anatomy, as a map of human and social bodies, can only be articulated from an external perspective to the body. We challenge the Cartesian split that situates us as subjects external to an objective reality and to other subjects. Through reappropriating and subverting technologies of perception we may dissolve the condition of exteriority and therewith anatomy and the destiny of the body, not for the sake of a new anatomy, but of a postanatomical body. Metahumanism thus proposes an aesthetics of the amorphous, by considering metamedia, metaformance and metaformativity as possibilities to permanently redefine sensory organs.

**§ 6.** Metahumans as metasexual: Metasexuality is a productive state of disorientation of desire that challenges categories of sex-gender identity and sexual orientation. A metabody is not ultimately categorisable in terms of morphological sex or gender but rather is an amorphogenesis of infinite potential sexes: microsexes. It is postqueer: we are beyond the understanding of gender as performative. Metasex not only challenges the dictatorship of anatomical, genital and binary sex, but also the limits of the species and intimacy. Pan-



sexuality, public sex, poliamoria, or voluntary sexwork are means to redefine sexual norms into open fields of relationality, where modalities of affect reconfigure the limits of kinship, family and the community.

§ 7. Redefining science and knowledge: Immanence and perspectivism do not need to be self contradictory concepts – we hold both of them! Yet, we propose the need to introduce immanence into knowledge production, and the revision of encrusted structures. Perspectives are contingent nodes within stratified intensities of the metabody. We propose both to explode and dissolve existing strata and to move through its nodes reconfiguring perspectives as well as immanence.

§ 8. Towards a relational ecology – Metahuman Ethics: A metabody is to be understood as a sustainable relational body that includes anthropoi, other species, technology and the environment. Metahuman ethics avows to bring about forms of interaction that avoid the permanent superiority of a force over others, so that a certain non-violent equilibrium is reinstated over and over again.

§ 9. Towards the transformation, amorphogenesis and emergent becoming of metahumans: There is no need to distinguish between procedures of genetic enhancement and classical education. Both rely on untimely distinctions or use given representations of a normative regime which are not universal but the result of paternalist political technologies of affective production. We understand alteration processes of the metahuman as flowing types of amorphogenesis of the relational body, all being equally subject to ongoing critique.

§ 10. What is the Metahuman?: The metahuman is neither a stable reality, essence or identity, nor a utopia, but an open set of strategies and movements in the present. It implies the need to deterritorialise strata of power and violence and induce new forms of embodied relationality by producing a frontier body that is operating on existing boundaries and redefining them. A micro-recherche considers the genealogies of bodies, movements and affects for the purpose of both challenging existing regimes and producing new forms of resistance and emergence.

metu  
body



# UN MANIFIESTO METAHUMANISTA

por Jaime del Val y Stefan Lorenz Sorgner

[www.metahumanism.eu](http://www.metahumanism.eu)

**§ 1.** ¿Qué es el Metahumanismo? El Metahumanismo es una crítica de premisas fundamentales del humanismo clásico como el libre albedrío, la autonomía y la superioridad del *anthropos* en función de su racionalidad. Profundiza en la visión del cuerpo como campo de fuerzas relacionales en movimiento y de la realidad como devenir relacional, encarnado e inmanente que no necesariamente se orienta a la producción de formas e identidades definidas sino que puede proliferar en una amorfogénesis permanente. Los monstruos son estrategias prometedoras para desarrollar este alejamiento del humanismo.

**§ 2.** El Mundo como complejo relacional – El Metahumano como Metacuerpo: La Crítica Metahumanista propone profundizar la comprensión de la realidad como campo no cuantificable de cuerpos relacionales, o metacuerpos, en relación constitutiva y cambiante unos con otros. Con ello pretendemos superar finalmente la división cartesiana entre cuerpo y mente, objeto y sujeto, proponiendo una visión de la mente como proceso relacional encarnado y del cuerpo como movimiento relacional, que opera desde lo molecular y bacteriano, a través de lo individual y psíquico hasta lo social, planetario y cósmico y en otras dimensiones de la experiencia. No es posible trazar un mapa de la totalidad o los límites de las fuerzas que constituyen un metacuerpo y no hay una exterioridad absoluta respecto a ellas, aunque pueden gravitar en torno a nodos provisionales que dan cuenta de un perspectivismo inmanente y de la formación de relaciones de poder.

**§ 3.** Hacia un Cuerpo Común relacional: tradicionalmente la relacionalidad se ha estado sujeta a diversos sistemas de regulaciones intensivas. En el actual Capitalismo de los Afectos la relacionalidad está siendo crecientemente sometida al control a través de tecnologías que producen afectos globales estandarizados por medio de la distribución de coreografías discretas

en los cuerpos. El Pancoreográfico es el metasistema biopolítico de control en el que los metacuerpos son apropiados preventivamente. Es necesario mostrar posibilidades de reapropiarse y redefinir las tecnologías del devenir.

**§ 4.** Hacia unas políticas del movimiento y el pluralismo radical: una política radicalmente pluralista es un movimiento no paternalista que opera a través de estructuras de poder para evitar la retotalitarización de la política. No busca un estado final ideal sino que enfatiza la necesidad de superar constantemente los desafíos que surgen por necesidad combinando el inmanentismo propuesto por el metahumano con el perspectivismo del posthumano, subrayando la importancia del movimiento vs. la identidad.

**§ 5.** El metahumano como cuerpo postanatómico: Proponemos cuestionar las anatomías, formas, cartografías o identidades que constituyen el concepto humanista del *anthropos* y las tecnologías que permiten que se constituyan estas representaciones. La anatomía, como mapa de cuerpos humanos y sociales, solo puede articularse desde una perspectiva externa al cuerpo. Cuestionamos el dualismo cartesiano que nos sitúa como sujetos externos a una realidad objetiva y a otros sujetos. A través de la reapropiación y la subversión de tecnologías de la percepción podemos disolver la condición de exterioridad y con ello la anatomía y el destino del cuerpo, no para construir una nueva anatomía, sino un cuerpo postanatómico. El metahumanismo propone así una estética de lo amorfo, considerando la metaformance, el metamedia y la metaformatividad como posibilidades de redefinir permanentemente los órganos sensoriales.

**§ 6.** Metahumanos metasexuales: La metasexualidad es un estado productivo de desorientación del deseo que cuestiona categorías de identidad sexual y de

género y de orientación sexual. Un metacuerpo no puede ser completamente definido en términos de sexo morfológico o de género, sino que es una amorfogénesis de infinitos sexos potenciales: microsexos. Es post-queer: estamos más allá de la figuración performativa del género. El metasexo no solo cuestiona las dictaduras del sexo anatómico, genital y binario, sino también los límites de la especie y la intimidad. La pansexualidad, el poliamor, el sexo público o el trabajo sexual voluntario son medios de abrir las normas sexuales hacia campos relacionales abiertos donde las modalidades de afectos reconfiguran los límites del parentesco, la familia y la comunidad.

**§ 7.** Redefiniendo la ciencia y el conocimiento: Inmanentismo y perspectivismo no son conceptos contradictorios – defendemos ambos! Pero proponemos la necesidad de introducir la inmanencia en la producción del conocimiento y la revisión de estructuras solidificadas. Las perspectivas son nodos contingentes en las intensidades estratificadas del metacuerpo. Proponemos al mismo tiempo disolver estratos existentes y moverse a través de sus nodos reconfigurando tanto las perspectivas como la inmanencia.

**§ 8.** Hacia una ecología relacional – Ética metahumana: Un metacuerpo debe entenderse como un cuerpo relacional sostenible que incluye anthropoi, otras es-

pecies, la tecnología y el entorno. La ética metahumana plantea favorecer formas de interacción que eviten la superioridad permanente de una fuerza sobre las otras, de manera que un cierto equilibrio no violento se reafirme una y otra vez.

**§ 9.** Hacia la transformación, amorfogénesis y devenir emergente de los metahumanos: No distinguimos esencialmente entre “mejora genética” y educación clásica. Ambos dependen de distinciones arbitrarias o utilizan representaciones de un régimen normativo que no son universales, sino resultado de tecnologías políticas paternalistas de producción de afectos. Entendemos los procesos de transformación del metahumano como modos fluidos de amorfogénesis del cuerpo relacional, siendo todos ellos sujetos a crítica permanente.

**§ 10.** ¿Que es el metahumano?: El metahumano no es una realidad estable, esencia o identidad, ni una utopía, sino un conjunto abierto de estrategias y movimientos en el presente. Implica la necesidad de desterritorializar estratos de poder y violencia e inducir nuevas formas de relacionalidad encarnada produciendo un cuerpo frontera que opere en los límites existentes y los redefine. Una microrecherche considera las genealogías de los cuerpos, movimientos y afectos tanto para cuestionar regímenes existentes como para producir nuevas formas de resistencia y emergencia.

meta  
body











## Introductions to METABODY and the International Metabody Forum

### Media Embodiment Tékhne And Bridges Of Diversity

**Meta** – in-between / through / accross / becoming / with / emerging / incipient / embracing / exceeding...

**Body** – relation/movement/affection...

**Metabody** – field of affective and kinetic relations in any mode or scale

**Media** – mediations, inbetweens, intra-actions, intra-faces

**Embodiment** – the world as bodily process of movent relations – bodily, procedural character of all reality

**Tékhne** – inseparable bond of art and technology

**And** – conjunction, togetherness, multiplicity

**Bridges** – inbetweens, crossovers, transversalities, relationalities

**Of** – situatedness, situation, context

**Diversity** – difference, plurality, multiplicity

**Y** – “ípsilon”, undefined openness, indeterminacy, movement, becoming, emergence, [...]

A Metabody is an emergent body of affective and kinetic relations in any mode or scale, from the quantum to the cosmic: and ontology, epistemology, aesthetics, ethics and politics of movement and becoming.

There is no body or mind as given substance, there are metabodies as relational processes of becoming, ontogenetic and technogenetic. The world is made of metabodies.

A Metabody is a Spinozian Machine and a Nietzschean Machine for generating differential affections while undoing trajectories and genealogies-movements of control.

A Metabody is Metaformative and Amorphogenetic, it undoes 2.500 years of platonic tyranny of form.

Metabody, the body-network, is the Reverse of Internet as presumed disembodied network of minds.

Rather than homogenising, preempting and controlling, Metabody will pay attention to the radical differences and changes of bodies, movements and contexts in order to generate conditions for a new social ecology.”

*Jaime del Val*

## Introducciones a METABODY y al Foro Internacional Metabody

### Tékhnes Mediales Corpóreas Y Puentes De Diversidad

**Meta** – cambio/mutación/entre/a través/devenir/con/incipiente/que abarca/que excede...

**Cuerpo** – relación/movimiento/afección...

**Metacuerpo**: campo de relaciones kinéticas y afectivas en cualquier modo y escala.

**Media** – medios, dispositivos de comunicación e información, de mediación.

**Embodiment** – corporeización, encarnación, carácter corpóreo y procesual de toda acción y realidad.

**Tékhne** – antiguo término griego que fusiona las nociones de arte y tecnología.

**And** – conjunción “y”, suma, multiplicidad.

**Bridges** – puentes, intermedios, cruces, transversalidad, relacionalidad.

**Of** – “de” – denota contexto, situación, carácter situado de los cuerpos y expresiones.

**Diversity** – diferencia, pluralidad, multiplicidad, diversidad, emergencia.

**Y** – ípsilon, i griega – conjunción de multiplicidad, equivale a apertura indefinida (...), movimiento, cambio, emergencia.

Un Metacuerpo es un cuerpo emergente de relaciones afectivas y kinéticas en cualquier modo y escala, desde la cuántica a la cósmica: una ontología, epistemología, estética, ética y política del movimiento y devenir.

Un metacuerpo es una máquina spinoziana y nietzscheana (no platónica, ni cartesiana).

Un metacuerpo es amorfogenético, deshace 2.500 años de tiranía platónica de la forma y 300 años de tiranía funcional mecanicista.

Un metacuerpo no constituye relaciones basadas en la forma sino en afecciones emergentes de movimientos-fuerzas.

METABODY, la red de cuerpos, es el reverso de Internet, como red de mentes. Una red de cuerpos que en lugar de homogeneizar y controlar, prestará atención a las diferencias cambiantes de cada cuerpo, movimiento y lugar, para una nueva ecología social.”

*Jaime del Val*

METABODY is a 5 years European project starting July 2013, with the participation of 38 partners from 16 countries, coordinated by Reverso.

Metabody elaborates a critical study of cultural homogenisation, social control and global surveillance in Information Society and develops new technocultural paradigms that highlight embodied differences: the irreducible and changing differences of bodies and contexts, expressions and relations, not for the sake of predicting, but of developing a social ecology that foregrounds unpredictability and emergence, exceeding current trends of appropriation, preemption and control.

The project is undertaking a critical study of contemporary aesthetics of control, in which quantification of all activities via reduction to information patterns permeates all areas of life, subduing it increasingly to a regime of control while being presented as a desirable condition.

At the same time Metabody is developing new technological paradigms that take into account the changing differences of bodies, contexts and movements in their irreducibility, valuing and highlighting the importance of unpredictability for a livable life and generating the conditions for a sustainable social ecology.

METABODY addresses the importance of non verbal communication and embodied expressions for cultural diversity as a fundamental form of cultural heritage that is not adequately taken into consideration, and which is being undermined by current information technologies, which induce unprecedented forms of homogenisation of non verbal expressions while subjecting people to an increasing control, thus undermining fundamental freedoms.

93% of our expressions are in the form of non verbal communication, yet current media reduce non verbal interactions to a highly reduced set of standardized and traceable gestures of interaction through interfaces. This is inducing an unprecedented impoverishment of cultural expressions at global scale and undermining diversity and civil rights while expanding the possibilities for ubiquitous and invisible surveillance worldwide.

The project seeks to address this problem, elaborate a critique and propose alternatives through the production of new kind of media that highlight the diversity of embodied expressions, bodies and contexts, foregrounding cultural diversity. New multidisciplinary or transdisciplinary communication platforms will be developed in the convergence of the arts (dance, music, architecture and visual arts), and social minorities with the mediation of technosciences and humanities.

METABODY develops technologies, tools, techniques and devices that will be integrated in the first fully interactive architecture that will be built in the 4th year touring throughout Europe in the 5th year as an observatory of diversity and a laboratory of difference that will seek to open perceptions, relations, movements and behaviours up to indeterminacy, for a social ecology to come.

METABODY develops radically embodied technologies that take into account irreducible and changing differences of embodiments, bodies and contexts, for new expressive, kinetic, relational, communicational and socio-cultural paradigms, while addressing the problems inherent to contemporary disembodied culture of prediction and control.

METABODY – Tékhnes Mediales corpóreas y puentes de diversidad – es un proyecto europeo de 5 años de duración (2013-2018) con la participación de 38 entidades de 16 países, coordinado por Reverso.

METABODY estudia los procesos de homogeneización cultural de la Sociedad de la Información y desarrolla nuevos conceptos y tecnologías de comunicación que pongan de relieve la pluralidad cambiante de expresiones, cuerpos y contextos, con una nueva red social de comunicación corpórea y nuevos dispositivos de comunicación multisensorial y corporal integrados en un pabellón móvil de arquitectura interactiva, que itinerará por 9 ciudades europeas.

El 93% de lo que expresamos es a través de la comunicación no verbal, pero las actuales tecnologías de la información, junto con otras tecnologías (industriales, mecánicas, digitales, discursivas, normativas, disciplinares y de control) reducen expresiones y cuerpos a gestos homogéneos, repetidos, estandarizados, rastreables, controlables (mirar la pantalla, hacer click y arrastra con el ratón, gestos diseminados por la televisión y el cine, emoticonos, poses fotográficas, gestos funcionales, gestos que identifican géneros, capacidades y clases, etc.)

Metabody es un proyecto preocupado por la protección y defensa de la diversidad cultural y, en particular, por proporcionar respuestas y alternativas ante la actual homogeneización de la comunicación no verbal, la estandarización y borrado de las formas de expresión corporal (gestual y sonora) en las actuales tecnologías de la información y la comunicación.

Esta homogeneización estaría en el fundamento mismo de un proceso de debilitación de las libertades, de regímenes de vigilancia y control ubicuos y de agresiones medioambientales y sociales a escala planetaria, pues lo que sustentaría todos estos procesos es una concepción del mundo que menosprecia cuerpos y contextos, intentando reducir su pluralidad cambiante a patrones controlables e identidades rastreables.

La estandarización de movimientos y expresiones corpóreas sería un elemento clave de este problema crucial en la sociedad actual, un problema que no recibe actualmente la atención que merece. Metabody quiere rescatar y reinventar la riqueza, indeterminación y pluralidad de movimientos, cuerpos, contextos y expresiones corpóreas para desarrollar una ecología social sostenible. Las artes son las herramientas clave de este proceso.

### ¿Cuál es la novedad del proyecto?

habitual a la información y la comunicación al considerar que las expresiones (que son comunicación no verbal y corpórea en un 93%) no son reductibles a patrones controlables y predecibles, y que la indeterminación de la expresión es el sustrato de toda creatividad a escala individual, y social. Es preciso por lo tanto poner en valor la comunicación corpórea y su indeterminación fundamental para asegurar una sociedad plural y sostenible que no borre las diferencias, con la violencia que ello implica.

### ¿Cuál es la nueva tecnología del proyecto?

Metabody promoverá el desarrollo de una comunicación corpórea “de código abierto”, de un uso y producción del espacio, el tiempo, los afectos y relaciones, la percepción y el movimiento, donde todos los aspectos que habitualmente damos por sentados, como el funcionamiento de nuestra percepción, nuestro deseo, o la funcionalidad del cuerpo y de la arquitectura, podrán redefinirse permanentemente en una interacción crítica y creativa.

## IMF - INTERNATIONAL METABODY FORUM

IMF is a transdisciplinary event in the convergence of arts, technosciences, humanities and social minorities that proposes a critical reinvention of communication technologies highlighting the importance of nonverbal and embodied expressions as substrate of cultural diversity, which is being undermined by the homogenising impact of current information technologies.

The forum embraces the numerous events and activities taking place over the 5 years of the METABODY project along two interconnected branches:

### **Metamedialab**

- Presentations, exhibitions and performances of the artistic works, prototypes and devices developed in the project
- International meetings of the project partners
- Production, research and creation workshops
- Metaformance studies
- Conference series
- Educational workshops

### **IMF 2013 – Metabodies: movement, emergence, relationality.** In Madrid and Dresden.

International METABODY Forum 2013 focused on a general philosophical and transdisciplinary enquiry into the notion of Metabody as substrate for redefining the body and the worlds in terms of movement, emergence and relational processes: a Metabody as an emergent process of movement relations. This concept appears as a crucial tool to understand how power operates in contemporary capitalism, which functions choreographing bodies at all scales: social, affective, perceptual and cognitive.

### **IMF 2014 – Open source Bodies-Spaces** In Genoa, Madrid and Amsterdam.

International METABODY Forum 2014 proposed on the one hand a redefinition of both space and the body as processes open to permanent and critical reinvention, on the other the inseparability of space and body as co-constitutive elements of a relational process: the metabody.

It is generally taken for granted that body and space are material entities that preexist movement and change: this is part of a long platonic tradition that attempts to fix the movement of reality in traceable patterns, a foundation of contemporary control society.

Metabody proposes to rethink both space and body as process of becoming that emerge from movement relations thus placing the emphasis in the plasticity of the world and our own capacity to intervene in how certain power operations craft our field of relations.

### **MetaMedialab**

Metamedialab is the nomadic workshop module of the metabody project embracing

- International meetings
- Research, creation and production workshops
- Public presentations

Metamedialab proposes a critical reinvention of technology from a transdisciplinary perspective involving the arts, humanities, sciences and social minorities. The ontological, epistemological, ethical, aesthetic and political substrate of technology is studied and alternatives for ecological reinventions of technocultural paradigms are proposed.

## IMF - FORO INTERNACIONAL METABODY

EL FORO INTERNACIONAL METABODY es un evento artístico multidisciplinar preocupado por la protección y defensa de la diversidad cultural a través del arte y la cultura con la involucración de las nuevas tecnologías. Es una plataforma interdisciplinar europea de investigación y creación artística que explora la generación de nuevas creaciones y plataformas artísticas con el uso de las nuevas tecnologías, con un enfoque innovador basado en potenciar los aspectos no verbales de la comunicación que las actuales tecnologías minimizan, y que puede recuperarse desde el cruce renovado de artes y tecnología.

El Foro consta de dos aspectos interrelacionados:

- El Metamedialab o taller y evento de encuentro, creación y exhibición colaborativa, que incluye la performance y exhibición de proyectos de creación e investigación.
  - Encuentro internacional de socios
  - Talleres de producción y creación
  - Performances, metaformances, presentaciones, y exhibición pública de dispositivos, prototipos, conceptos y creaciones en performances, presentaciones e instalaciones en LCE y Medialab Prado, así como intervenciones urbanas a domicilio y en Internet, con la exploración de nuevos formatos y públicos. Encuentro Internacional de los socios del proyecto – una semana en Medialab Prado
- Metaformance Studies
  - Conferencia en la Universidad Autónoma
  - Talleres de formación y experimentación

### **IMF 2013 – Metacuerpos: movimiento, emergencia y relación.** En Madrid y Dresden.

El Foro internacional Metabody 2013 propuso una investigación filosófica y transdisciplinar en el propio concepto de Metacuerpo como sustrato para redefinir el cuerpo y la realidad en términos de movimiento, emergencia y relacionalidad: un metacuerpo como proceso emergente de relaciones de movimiento. Este concepto se plantea como herramienta crucial para entender el funcionamiento del poder en el capitalismo actual que opera coreografiando movimientos de los cuerpos en todas las escalas, sociales, afectivas, perceptuales y cognitivas.

### **IMF 2014 – Espacios y cuerpos de Código Abierto** En Génova, Madrid y Amsterdam.

El Foro internacional Metabody 2014 propuso por un lado una redefinición del espacio y del cuerpo como procesos abiertos a una permanente reinención, por otro la inseparabilidad de espacio y cuerpo como elementos co-constitutivos de un proceso relacional: el metacuerpo.

Se asume generalmente que espacio y cuerpo son entidades materiales que preexisten al movimiento y el cambio: esto es parte de una larga tradición platónica que intenta fijar la realidad en patrones rastreables: un fundamento de la actual sociedad del control.

Metabody propone repensar espacio y cuerpo como procesos de devenir y movimiento, poniendo el énfasis en la plasticidad del mundo y nuestra capacidad de intervenir en él y en como ciertas operaciones del poder conforman nuestro campo de relaciones.



### Metaformance Studies

The Metabody project inaugurates a transdisciplinary field of research-creation, a Metadisciplinary field of movements that do not attempt to define a new stable regime of knowledge.

Metahuman makes reference to the Metahumanist Manifesto, by Jaime del Val and Stefan Lorenz Sorgner, as alternative to posthumanism and transhumanism. Metaformance points to the redefinition of perception and relations as form-independent process.

Metahuman makes reference to the Metahumanist Manifesto, by Jaime del Val and Stefan Lorenz Sorgner, as alternative to posthumanism and transhumanism pointing to an ethical and critical opening of the human up to undetermined potentials, to multiplicities to come, to movements not foreclosed in their trajectories, to neverending amorphogenesis.

Metaformance is a neologism proposed by Claudia Giannetti and further developed by Jaime del Val to identify the processes of ongoing transformation of perception and proprioception.

Metahuman Metaformance Studies comprise emergent topics such as:

- Neocolonial studies - postcolonial studies - Decolonization studies - Microcolonial studies
- Metaformance and metaformativity studies -Performance and performativity studies
- Post-queer and queer studies
- Post-ability and disability studies - afunctional studies
- indeterminacy studies - apeironics - clinamics
- Metahuman studies
- Comparative posthumanisms: Humanism, Posthumanism, Hyperhumanism, Transhumanism and Metahumanism
- Feminisms, transfeminisms, postfeminisms, microfeminisms
- Postgender and sexual disorientation studies
- Postmonogamy studies, post-intimacy studies, sex work studies, post-genital sex studies
- Metacultural studies
- Metahumanities
- Metahistory
- Metasciences
- Matatekhnes & Metamedia studies
- Metaphilosophy
- Metaontology - Metaepistemology
- Metaethics
- Meta-aesthetics
- Meta-arts
- Metadisciplinary studies
- Metaperception & Meta-affordance
- Post-cyborg & Post-species studies
- Metacognitive studies
- Affect theories and meta-emotion studies
- History of animal and human emotions, posthuman and non human affects
- Minoritarian affects and embodiments (queer, postcoloniality, feminisms, disabilities)
- Kinethics, Ontokinethics, Kinethology, Panchoreographic studies
- Epistemology and ontology of movement
- History of perception and post-consciousness studies
- Amorphogenetics
- Commons/precommons/metacommons
- Hyperreality and hyperhumanism studies
- Embodiment and information - History of cybernetics, information and media
- Enaction, affordances, proprioception, premovement and other fields of cognitive science

### MetaMedialab

El MetaMedialab es el espacio de experimentación del proyecto METABODY, plantea una reinención de la tecnología, la comunicación y el cuerpo desde una planteamiento crítico y transdisciplinar, en la convergencia artes, tecnociencias, filosofía y humanidades, y minorías sociales. Se estudia el sustrato filosófico, ontológico, epistemológico, ético y político de las tecnologías y se proponen usos alternativos y posibilidades de reinención e invención de nuevos paradigmas tecnológicos.

### Metaformance Studies

Los Estudios de Metaformance constituyen un programa de estudios con los que el proyecto Metabody abre nuevas líneas de pensamiento. Incluye la Conferencia Metabody y el MetaMedialab.

Los Estudios de Metaformance hacen referencia al Metahumanist Manifesto de Jaime del Val y Stefan Lorenz Sorgner. La metaformance apunta a una transformación continua de la percepción, el movimiento y con ello el cuerpo, las relaciones, los afectos.

Los Estudios de Metaformance Metahumana comprenden campos emergentes como:

- Estudios neocoloniales / postcoloniales
- Estudios de metaformance y metaformatividad - de performance y performatividad
- Estudios Post-queer y queer
- Estudios de post-capacidad, afuncionalidad y diversidad funcional (discapacidad)
- Metahumanidades y posthumanidades - Estudios metahumanos, posthumanos
- Posthumanismos comparativos: Humanismo, Posthumanismo, Hyperhumanismo, Transhumanismo y Metahumanismo
- Feminismos, transfeminismos, postfeminismos, microfeminismos
- Estudios Postgénero y de desorientación sexual
- Estudios se Postmonogamia, postintimidad, y postgenitalidad.
- Estudios de trabajo sexual.
- Estudios metaculturales.
- Metahistoria
- Metaciencias
- Matatekhnes & Estudios Metamedia
- Metafilosofía
- Metaontología - Metaepistemología
- Metaética
- Metaestética
- Meta-arts
- Estudios Metadisciplinares y Transdisciplinares
- Metapercepción & Meta-affordance
- Estudios Post-cyborg & Post-especie
- Estudios Metacognitivos
- Teorías de los afectos y meta-emociones
- Historia de emociones humanas y animales, afectos posthumanos y no humanos, humaniales
- Afectos y cuerpos minoritarios
- Kinética, ontokinética, kinetología
- Estudios del pancoreográfico
- Epistemología y ontología del movimiento y el devenir
- Historia y genealogía de la percepción
- Estudios postcognitivos
- Amorfogenética
- Comunes/precomunes/metacomunes
- Intra-acción, ontología relacional.
- Antibiomética
- Filosofía antiobjetual
- Capitalismo afectivo
- Ecología posthumana y metahumana
- Estudios de ilegibilidad y cuasi-ilegibilidad

- Agential realism, Relational ontology, Ontologies of becoming, Transduction
- Emotion simulation, capture, analysis, militarization and capitalization
- (Ir)reducibility of affects to universal patterns of emotion and information
- Aesthetics of global surveillance
- Affective Capitalism
- Bioethics, media ethics and kinethics
- Posthuman ecology and metahuman ethics, Cyborg ethics
- Uncanny Valley studies
- Boundary non-object studies
- Illegibility studies and near-legibility studies
- Information vs. in-formation
- Cybernetics vs. cybernetics
- Antibionics









## GLOSSARY

**Amorphogenesis:** the ongoing emergence of movement without form. An ontology of movement and becoming. A reversal of 2.500 years of parmenidean-platonic-aristotelian domination.

**Intra-action:** as proposed by Karen Barad, whereas interaction is conceived as the relation between preconstituted entities, intraaction points to the emergent co-constitution of agencies.

**Meta-:** mutation, change, in between, movement-across, incipient, exceeding, embracing...

**Metabody:** emergent field of kinetic and affective relations. Transductive, intra-active kinetic field.

**Metaformance:** ongoing transformation of perception and proprioception beyond visual domination. Intra-active, transductive opening up the potentials of a body to affect and be affected within ecologies of differential difference. Ontology of becoming.

**Metahuman:** critical and ethical transformation of the human into an undetermined potential, an endless amorphogenesis, opening up the potentials of a body to affect and be affected within ecologies of differential difference.

## GLOSARIO

**Amorfogénesis:** concepto fundacional de la ontología del movimiento que apunta al movimiento incipiente como devenir que excede sus actualizaciones parciales en formas. Se contrapone a la morfogénesis como proceso de materialización del poder e invierte la lógica de la metafísica occidental.

**Intra-acción:** según propone Karen Barad, donde la interacción es de cosas ya definidas, la intra-acción es de procesos emergentes que se constituyen mutuamente.

**Meta-:** cambio/mutación/entre/a través/devenir/con/incipiente/que abarca/que excede...

**Metacuerpo:** campo emergente de relaciones afectivas y kinéticas en cualquier modo y escala, desde la cuántica a la cósmica: una ontología, epistemología, estética, ética y política del movimiento y devenir.

**Metaformance:** proceso continuo de transformación de la percepción y la propiocepción y su apertura a la indeterminación, a la multiplicidad indeterminada. Proceso de redefinición permanente de la percepción como sustrato de procesos relacionales (afectivos) y cognitivos.

**Metahuman:** transformación crítica y ética del humano hacia un potencial indeterminado, abriendo los potenciales de afectar y ser afectado en ecologías de lo indeterminado.



## PARTNERS

### Coordinador:

Spain - Asociación Transdisciplinar REVERSO - Jaime del Val

### Co-organizadores:

1. Italy - Infomus -Università di Genova - Antonio Camurri
2. Germany - Trans-Media-Akademie - Hellerau - Thomas Dumke
3. UK - DAP\_Lab - Brunel University - Johannes Birringer
4. France - K-Danse - Jean Marc Matos
5. Netherlands - STEIM - Marije Baalman
6. Portugal - Fabrica de Movimentos - Alberto Magno
7. Germany - Palindrome - Robert Wechsler
8. Spain - Universidad Autónoma de Madrid - Eva Botella-Ordinas & José Luis carles
9. Spain - Instituto STOCOS - Pablo Palacio & Muriel Romero
10. Netherlands - Hyperbody Research group - Dr. Nimish Biloria
11. Germany - IMM Group - Bernd Schaedlich

### Associated Partners:

1. Denmark - CAVI - Aarhus University - Jonas Fritsch
2. Czech Republic - New Technologies Research Centre - Jan Romportl
3. France - IRCAM - Andrew Gerzso
4. Switzerland- ICST - Daniel Bisig
5. Netherlands - dtr\_lab - Dieter Vandoren
6. UK - Goldsmith's University - Luciana Parisi
7. UK - Oxford Brookes University - Federica Frabetti
8. UK -De Montfort University Leicester School of Media and Communication - Beatriz Pichel
9. Germany - Leuphana Universität - Yvonne Foerster-Beuthan
10. Spain - Medialab Prado - Marcos García
11. Spain - Seminario Nietzsche Complutense (SNC)- Facultad de Filosofía (Universidad Complutense de Madrid) - Mariano Rodríguez, Oscar Quejido y Laura Rodríguez
12. Spain - ESMUC - Rubén López Cano
13. Spain - Fundación Música Abierta - Rosa Aguilar
14. Spain - Universidad de Valladolid - Alicia Peñalba
15. Turkey - Amber Platform - Ekmel Ertan
16. Canada - SenseLab - Concordia U. - Erin Manning&Brian Massumi
17. USA - Duke University - Literature Programme - N. Katherine Hayles
18. USA - Duke University - Dance Programme - Thomas F. DeFrantz
19. USA - UC Berkeley - Lisa Wymore
20. USA - UC Santa Cruz - Elizabeth Stephens - Art Department
21. USA - NYIT - New York Institute of Technology - Kevin LaGrandeur
22. Colombia - Facultad de Artes ASAB - Adrián Gómez
23. Chile - INTERFACE - Arte, Cuerpo, Ciencia y Tecnología - Brisa MP
24. Chile - FIDET - Sergio Valenzuela
25. Chile - Moodlab - Fernando Ocampo
26. Korea - Myongji University - Ralph Beuthan

**Advisory Board:** Donna Haraway, Katherine Hayles, Allucquère Rosanne Stone, Karen Barad, Stelarc, Brian Massumi, Erin Manning, Annie Sprinkle, Elizabeth Stephens, Luciana Parisi, Federica Frabetti, Liana Borghi, Harmony Bench, Claudia Giannetti, Stefan Lorenz Sorgner, Francesca Ferrando, Yunus Tuncel, Evi Sampanikou, Marlon Barrios Solano, Isabel Valverde, Cristina Palmese.







Edition: Asociación Transdisciplinar Reverso - Jaime del Val - 2015

C/ Aguila Real 24. 28232 Las Rozas, Madrid

Traslations: José Luis Moisés and Jaime del Val

Videos: Tais Bielsa and Cristian García

Design: LaRana Gráfica

Printer: Anciones Artes Gráficas, S.L.

Depósito legal: M-11018-2015

[www.metabody.eu](http://www.metabody.eu)

[www.imf2014.eu](http://www.imf2014.eu)

[www.metabodyforum.eu](http://www.metabodyforum.eu)

# meta body

N. Katherine Hayles, Brian Massumi, Erin Manning, Federica Frabetti, Stefan Lorenz Sorgner, Yvonne Förster, Eva Botella Ordinas, Oscar Quejido and Laura Rodriguez, Kevin LaGrandeur, Ralf Beuthan, Beatriz Pichel, Rubén López Cano, Alicia Peñalba, María-José Valles, Elena Partesotti, Rosario Castañón, María Ángeles Sevillano, Brisa MP, Kas Oosterhuis / Hyperbody, DAP-Lab – Johannes Birringer and Michele Danjoux, Daniel Bisig, Pablo Palacio, Muriel Romero, Marije Baalman, Lisa Wymore, K. Danse, Robert Wechsler, Marcello Lussana, Casa Paganini- InfoMus research Centre, Jaime del Val

## SUPPORTS



Culture

WITH THE SUPPORT OF THE CULTURE PROGRAMME OF THE EU



## COORDINATOR



brisa casa Paganini – infoMus

TMA

Brunel  
UNIVERSITY  
LONDON



STEIM

Kdanse  
Jean-Marc Matar  
Anne Hout



FABRICA DE MOVIMENTOS



HYPERBODY

TU Delft

UA



[WWW.METABODY.EU](http://WWW.METABODY.EU)  
[WWW.IMF2014.EU](http://WWW.IMF2014.EU)  
[WWW.METABODYFORUM.EU](http://WWW.METABODYFORUM.EU)