



# METABODY

**Media Embodiment Tékhne And Bridges Of Diversity**

FOR EU CULTURE PROGRAMME 2007-2013  
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Coordinator:

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## Introduction

METABODY will be a laboratory and observatory of cultural diversity that will highlight the importance of non-verbal communication and embodied expressions as a primary substrate of cultural heritage. The project will generate an understanding of the threats posed by the homogenising processes of globalisation and Information Society. Furthermore the project will produce new cultural, communicational and technological paradigms through interdisciplinary developments in new media and the arts, which foreground embodied expressions and interactions.

This will be accomplished through interdisciplinary research and creation by continuous collaboration between the partners; involvement of local communities of artists, researchers, social groups and wider audiences through workshops and public presentations; and the final construction and touring of a mobile laboratory, an experimental architectural structure that will contain interactive multisensory environments.

Metabody takes as a premise that bodily motion and non verbal communication, understood as changing repertoires of emotional expression and cognition, constitutes a foundation of sustainable cultural diversity, a changing matrix of embodied knowledge in permanent formation. This diversity is being undermined by the impact of information technologies, which are inducing an unprecedented standardisation of non-verbal, bodily and kinaesthetic communication processes, through the increasing reductionism of movement and the non-verbal spectrum to patterns of imitation and functionality.

Diversity is also undermined by the ways in which people across Europe and the world reproduce more and more the standardised gestures, ways of speaking and moving induced by mass media, publicity, interfaces, ubiquitous moving images, commercial music or video games; while in domains such as Robotics, Biometrics, Virtual Reality, Human Computer Interaction, Ergonomics and Artificial Intelligence there is an increasing and problematic attempt to simulate and repeat reduced repertoires of human emotions.

This homogenisation operates not only with regard to traditional cultural patterns but to the singular variations of each body, which accounts for the changing nature of cultural expressions as process of diversification.

Metabody builds upon the many fields of cognitive sciences that affirm that cognition and affects are embodied and relational processes, which take changing forms in different environments and are irreducible to standardised patterns of imitation, information and fixed meaning. Metabody aims at exploring the hitherto underestimated end of the communicative spectrum: the expressiveness of gesture and movement that exceeds categorisation and fixation into meaning structures as foundational for sustainable cultural diversity.

It is a common assumption in communication studies that in any interpersonal relations non-verbal communication constitutes 93% of what is being transmitted, and only 7% relates to verbal acts of meaning production. Yet the bodily spectrum of communication is minimized in Information Technologies, where functionality, textuality, identity and fixity of meaning production tend to leave aside or radically

reduce the open resonances that give their openness and flexibility to communication and relations.

What happens if we invert the habitual process undertaken in information technologies, so that instead of foregrounding meaning and function, we foreground the embodied expressive elements of communication, and the ways in which these *exceed meaning structures*? What new relational, cognitive and affective frameworks could be generated in this process through radically highlighting the openness of expressive qualities? How could this bring about an improvement for the lives of people who do not match the dominant structures of functionality and meaning, from disabled people to people from diverse cultural backgrounds, gender, or age groups?

Metabody will operate as a *tékhné*, a new bond of art and technology, which will generate new kinds of perceptions and embodied knowledge that puts more emphasis on movement, multiplicity and change, rather than homogenisation.

The project will embrace a highly transdisciplinary field, from dance and music to experimental architecture, from visual and media arts to cognitive sciences, from philosophy to alternative mathematics, from communication technologies to history of emotions, from the disabled to gender and cultural minorities. Over five years it will develop novel concepts of cultural diversity, embodiment, and technologies that will propose an alternative definition for traditional concepts such as space and social relations, based on movement and multisensory interaction.

The result will be an experimental architectural structure touring the 9 cities involved in the project that will host the laboratory and observatory of diversity. This structure is conceived as a sensitive space that can modify its characteristics according to certain expressive movement parameters that will be provided by the bodies interacting with it, transforming both its external appearance and internal elements of the structure such as digital sounds, videos, 3D compositions and lighting effects.

By expanding the awareness and potentials of embodied expression through interdisciplinary networks of artists, researchers and local communities it will generate unprecedented forms of cultural cross-fertilization.

The Metabody structure will be both a living archive of minoritarian cultural and affective expressions, an instrument for raising awareness of this fragile and changing yet fundamental heritage. It will also be a laboratory for new forms of embodiment, perception and awareness that highlight embodied specificity, hosting performances and installations, residencies with local artists, workshops and educational projects, developing new networks and communities of bodies, places and institutions in interaction with the Metabody, that will continue evolving after the project.

Metabody will outline and develop two novel domains of research and production:

- to develop new approaches for the understanding of expression, emotion and cognition that do not aim to classify patterns, which always involves a reductionism, but to understand processes of change and diversification; to understand the processes of affective and cognitive homogenisation in current globalisation; and to foreground the changing features of embodied expression that are foundational to cultural diversity, sustainability, and heritage.

- to generate new kinds of multisensory media environments, a novel technocultural paradigm for communication and the arts, which foregrounds embodied knowledge and cognition, augmenting our experience of the environment, generating new forms of awareness and (tele)presence, and opening up new horizons of diversity for cultural and embodied expressions, where the oldest and primary cultural heritage enters a sustainable, ecological and creative relation with new technologies.

## Methodology

Metabody will seek to generate not only a **new technological and artistic platform** but a new human and institutional **research and production network** that will implement a **new methodology for interdisciplinary research and artistic creation** addressing both wider audiences and new specialised target groups:

- The arts (music, visual arts, dance, performance, theatre, architecture and design) will be the framework for developing and presenting the creative environments where the expressive potentials in terms of sound, vision, movement, sensation, space, objects, and multisensory perceptions will be explored.
- The ICT (Information and Communication Technologies) and neurosciences will provide expertise and means for the generation of new technologies, building upon existing fields of movement and expression analysis, interactive and responsive systems. Alternative mathematics and non-linear time-space conceptions will provide means for transforming existing techno-cultural paradigms.
- The Human sciences and cognitive sciences will provide understandings of consciousness, perception, emotion and affects and their historic and contextual specificity, providing the framework for a new **media ethics**.
- Philosophy will bring in a fundamental critique of the ontology and epistemology inherent to the different technocultural paradigms.
- The social groups involved (disabled people, gender minorities and people from diverse cultural backgrounds) will highlight the need to provide new landscapes of interaction that open up to the irreducible difference of bodies and their potentials.

The project will build upon the experience of previous European Projects in the fields of Culture and ICT, such as: **ETP, CoMeDia, SIEMPRE, SAME, ISEARCH, ASC INCLUSION, MIROR, ILHAIRE.**

The project will last over a period of 5 years, starting July 2013 and ending June 2018.

The project will set forth a novel **networking structure** whose main activities will be:

- Interdisciplinary Research Workshops or Seminars, every 4 months. There will be at least one workshop in each partner city, involving all partners, including an open call for local participants, and focusing on one or more aspects of the project on each occasion. Workshops will close with public presentations of the provisional result.

- Continuous research, production and collaboration through online network connection (Skype, Mumble and email continuous connection and collaborative sessions), through an experimental network (Bodynet), and with occasional travelling for on site collaboration.
- Touring of the final mobile laboratory throughout the last year with public presentations in all cities including installation-performances, trials and residencies with local artists.
- Conference and publication of Book and DVD at the end of the project.

The touring in 9 cities of 7 countries will involve a **team** consisting of:

30 dancers, musicians, choreographers, composers, visual and new media artists and technicians

On-Site participants will Include:

900 teachers, therapists, communication and art teachers and other specialists

900 professionals from arts and sciences

1.500 participants from cultural, gender or disability minorities

9.000 students from the arts and sciences

15.000 young and elderly people

150.000 public spectators

## **Working programme by topics/milestones:**

### **1. YEAR 1: Bringing together background issues of the research.**

- a. Defining the theoretical, methodological and conceptual framework.
- b. Building of the website and online collaboration tools.
- c. Generating a common theoretical background in the conjunction of previous experiences of the researchers involved.
- d. Generating a common scientific and technological background bringing together existing tools.
- e. Working on artistic concepts of space, movement, vision, hearing and other forms of perception.
- f. By end of the first year: presentation of the preliminary research.

### **2. YEAR 2: Integration of systems and start of pragmatic research.**

- a. Continuation of academic research and development of artistic concepts.
- b. The building of an integrated interaction system consisting of
  - i. camera based motion and emotion analysis,
  - ii. sensor based wireless systems for dance,
  - iii. sound, video and 3d Digital architecture interaction tools.
- c. Start of the pragmatic research through testing with the integrated system.
- d. Tests including disabled people, trained dancers, common users and others; and exploration of limitations of the existing systems
- e. By end of second year: presentation of the integrated systems for body interaction in the form of performance and conference.

### **3. YEAR 3: Development of interaction design through movement relations.**

- a. Continuation of academic research and development of artistic concepts.
- b. Continuous research, testing and modification of the prototypes around the concept of abstract presence, including:
  - i. movement improvisation techniques in interaction with sound, video and 3D - feedback relations

- ii. further exploration of expressive qualities and microgestures
  - iii. further exploration of non-linear movement-space-time relations
- c. The gradual transposition of interactions with digital environments to design of physical amorphous structures-objects
  - 1. wearable interfaces and interactive sculptures
  - 2. wearable architecture and interactive space modules
- d. Setting the preliminary testbeds for telematic connection and abstract telepresence.
- e. By end of third year: presentation of the prototypes of interactive environments in the form of performance and conference.

**4. YEAR 4: development of the physical and netconnected laboratory.**

- a. Continuation of academic research and development of artistic concepts.
- b. Exploration of abstract telepresence through net connecting of two laboratories.
- c. Continue the building of physical spaces and objects.
- d. The design and building of a full architectural structure for open or closed spaces incorporating all previous aspects of the research, in collaboration with the associated partner Hyperbody Research Group, from Delft University.
  - i. Mobile modular structures, starting from the previous experimentation with wearable architectures
  - ii. A mobile resistant architectural structure for outdoors spaces.
- e. Creating and Rehearsing with dancers-choreographers, composers and artists for the development of interactive modules.
- f. Experiences with disabled people and subjects of different kinds.
- g. By end of 4th year: presentation of the interactive environments in the form of networked performance-installations.

**5. YEAR 5: touring of the laboratories, conference, publications and future sustainment.**

- a. Finalising the development of the physical independent structure of the Laboratory as a mobile structure to set up in open spaces.
- b. Touring of the Laboratory in all the cities involved for a period of about 2-3 weeks in each place. The tours will include:
  - i. installations and performances
  - ii. working with social groups, trained dancers, students, teachers, professionals from the care sector and others, working in diverse environments, from urban centres to suburbs and rural areas.
  - iii. collaborations with local artists for the development of new potentials and instruments for the Metabody lab.
  - iv. workshops and seminars
- c. Designing a strategy for sustainment of the network and future research into further developments and implementations of the project.
- d. Developing the publication of a Book containing the academic research, a Catalogue documenting the process, a DVD, a White Book for culture and media ethics policies, and online documentation of the whole process.
- e. By end of the year a large conference summarising all topics of the project and outlining the continuation of future research.

## Consortium

The project counts with some of the worlds leading artists, researchers and specialists in dance/performance and technology; interaction design; motion and emotion analysis; electroinstrumental music; experimental architecture; studies on embodiment, emotion, affects and perception; history of cybernetics and media ethics; disabilities and queer theories.

### Coordinator:

Spain - [Asociación Transdisciplinar REVERSO](#) - Jaime del Val

### Coorganisers:

1. Italy - [Infomus -Università di Genova](#) - Antonio Camurri
2. Germany - [Trans-Media-Akademie - Hellerau](#) - Thomas Dumke
3. UK - [DAP Lab](#) - 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
9. Spain - [Kouros](#) - Pablo Palacio y Muriel Romero
10. Spain - [Innovalia](#) -Oscar Lázaro

### Associated Partners:

1. Netherlands - [Hyperbody Research group - Delft University](#) - Kas Oosterhuis
2. Denmark - [CAVI - Aarhus University](#) - Jonas Fritsch
3. Czech Republic - [New technologies Research Centre - University of West Bohemia](#) -Jan Romportl
4. France - [IRCAM](#) - Andrew Gerszo
5. UK - [Goldsmith's University](#) - Luciana Parisi
6. Germany - [Leuphana Universität](#) - Yvonne Foerster-Beuthan
7. Spain - [Medialab Prado](#) - Marcos García
8. Spain - [Esmuc](#) - Rubén López Cano
9. Canada - [SenseLab - Concordia University](#) - Erin Manning and Brian Massumi
10. USA - [Duke University](#) - Literature Program - Katherine Hayles - Professor and Director of Graduate Studies /// Corporeality Working Group - Thomas F. DeFrantz, Professor of Dance - Director - SLIPPAGE: Performance | Culture | Technology, Director.
11. USA - [Berkeley University - Theatre, Dance & Performance Studies](#) - Lysa Wymore
12. USA - [NYIT - New York Institute of Technology](#) - Kevin LaGrandeur
13. Chile - [FIDET - Festival Internacional de Escena y Transdisciplina](#) - Sergio Valenzuela
14. Chile - [Festival Interface Danza y Tecnología](#) - Brisa Muñoz Parra
15. Chile - [Moodlab](#) - Fernando Ocampo
16. Colombia - [Facultad de Artes ASAB](#) - Adrián Gómez
17. Korea - [Myongji University](#) - Ralph Beuthan

**Advisory Board:** Donna Haraway, Allucquére Rosanne Stone, Katherine Hayles, Stelarc, Brian Massumi, Erin Manning, Luciana Parisi, Federica Frabetti, Liana Borghi, Harmony Bench, Claudia Giannetti, Stefan Sorgner, Francesca Ferrando.

## Outcomes

The outcomes of the project include:

- A new sustained platform and network and a new methodology for interdisciplinary research, creation, dissemination and learning.
- Tools for understanding and raising an awareness of cultural diversity
- Tools for fostering embodied communication for a sustainable culture

The main result will be **an interactive mobile architectural structure for outdoor spaces** that will be presented in all the cities with performances, interactive installations, workshops and seminars, immersive durational experiences, artistic and research residences, education and care projects, experiences with disabled people and other social groups. It will include both analogue and digitally mediated environments consisting of space modules, objects modules and wearable modules, working both locally and telematically, with the possibility of connecting with other cities hosting smaller independent modules of the laboratory.

The physical structure of the building, involving novel techniques of interactive architecture, as well as its digital sound, image and light projections will be constantly transforming, in relation to the bodies that interact with it, as a sensitive space, a living body of relations, an archive of accumulated interactions, a collective repository of embodied expressions.

The mobile structure will be an **embodiment laboratory and observatory of diversity** that will host a permanent team of artists, technicians, scientists, researchers and social workers doing permanent research in the two areas of the project:

- as an observatory of the forms of unsustainable homogenisation of bodily expressions induced by media, Information technologies and structures of other kinds, a new kind of affective archive of bodies and diversity across Europe registering in critical manners and raising an awareness of the ways in which diversity is often erased or preempted.
- as an experimentation laboratory for new kinds of embodied affective expression and cognitive specificity in relation to different communities, places and minoritarian cultural expressions.

The Metabody's changing structure will be the expression itself of this twofold process of observation and experimentation, reflecting, expanding and adapting itself not only to the bodies inhabiting it, but to its environment, looking for new concepts of ecological architecture. The Metabody will be a selfmanaged, selfsufficient body, built on the basis of sustainable, clean and ecological technologies, both in energy, building and maintenance, as well as in the use of electronics.'

The space will include:

- living area for the permanent team
- working area for the observatory and for new developments
- main platform for installations, performances, workshops for receiving the interacting audience



- vehicle module, energy module and other modules needed for the self managed structure.

Conceptually the architectural module will make reference to multiple historic pioneering experiences of European Culture, from the itinerant theatre of La Barraca, by Federico García Lorca, which toured the villages of Spain before the Civil War, to the Phillips Pavillion designed by Xenakis and Le Corbusier for the 1958 Brussels Universal Exhibition. The project will hybridise and take further these previous experiences into a mobile laboratory of perception.

The tour will include all of the 9 participant cities: Madrid, Genoa, Dresden, London, Amsterdam, Toulouse, Weimar, Bilbao and Porto. The adaptation to environment will address the sedimented emotional history of each space (from wars to cultural blossoming) the invisible memory of emotions and its traces in the bodies, exploring the interconnection of cultural processes and structures, climate, animal and human migrations and information technologies amongst others.

Metabody will bring together new communities of artists, choreographers, musicians, architects and scientists in relation to local communities where each participating body becomes an active producer (not consumer or prosumer) developing aspects of the metabody's sound, visual, movement, spatial, multisensory and synesthetic interaction, producing interactive modules for the Metabody that will be a living museum of embodied diversity. The Metabody will keep transforming and evolving with the interaction of bodies in specific places, and expanding and growing as small wearable modules, wearable architectures or larger spatial modules evolve and become independent in the process, generating an unprecedented network of bodies that may expand into new communities in both urban and rural environments.

## **Dissemination**

Presentations will be framed in local festivals, conferences and institutions of Media Arts, Performings Arts, Visual Arts, Music as well as universities and research institutions. In particular the project will be linked to the festivals organised by the coorganisers and associated partners: Cynetart festival in Dresden, Technarte Conference in Bilbao, and the yearly conferences on Humanism and Posthumanism organised by several partners, amongst others. Dissemination will include:

- Metabody - touring of the mobile laboratory
- Bodynet - the building of an experimental network
- Public presentations in the form of installation-performance
- Research workshops, seminars and a conference
- Artistic and Scientific Residencies.
- Interaction with local communities.
- Academic research outlining a new crucial field for the understanding of cultural diversity, in the domain of non-verbal communication, expression and emotion.
- Publications and documentation in a book, web and DVD
- Traditional media, press, TV, Radio, Online media, posters and flyers.

## Sustainability

The Metabody Lab will be the basis for the continuation of the network built throughout the project, outlining future research lines and implementations. This will be done by defining a network of hosting institutions and communities for future iteration and expansion of the mobile laboratory that may operate as a space for multiple artistic performance-installations, disabled people, learning and education, creativity, experimentation with neurosciences, and other fields. The hosting institutions and communities will constitute a sustained network of connected Metabody laboratories.

The Metabody network will explore future implementations of the project in:

- The arts: as interdisciplinary platform for new creative processes
- Environments for people with special needs and disabilities
- New techniques in the care sector
- Architecture and design
- Education and learning
- Research in emotional, affective and cultural diversity
- Experimental communication systems
- Research in cognitive sciences
- Environments for developing creativity
- Environments for therapies and treatments for illnesses of physical, cognitive and nervous kind
- New concepts in the domains of Robotics, Virtual Reality, Artificial Intelligence, Games, Online Communities and Social Networks.
- Policy guidelines for culture, communication and media ethics

The research network will continue organising a yearly event including workshops, arts and science residencies and a conference, disseminating the results in future publications in books DVD and online, sustaining the experimental network Bodynet.

The educational nature of the workshops done during the project will allow local artists, students, teachers, and communities for a continued practice after the project. Their participation forms the basis for a larger network of users in the future.

The Metabody laboratory will continue touring throughout Europe and beyond in the following years after the project, through a network of hosting institutions and communities, expanding the transdisciplinary research and the creative work into new communities as well as through on-going publications and events.

# METABODY Project

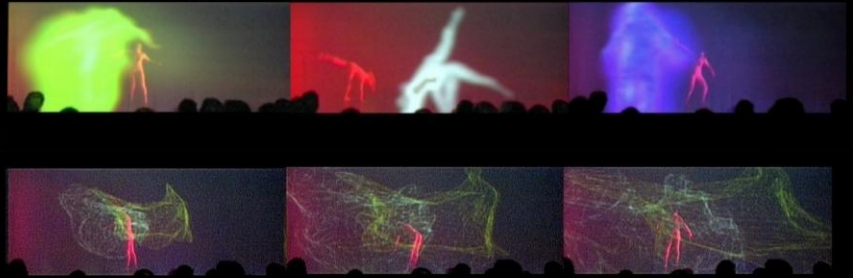
## 1st YEAR

integration of basic system



## 2nd YEAR

design of movement relations  
with audio, video and 3D



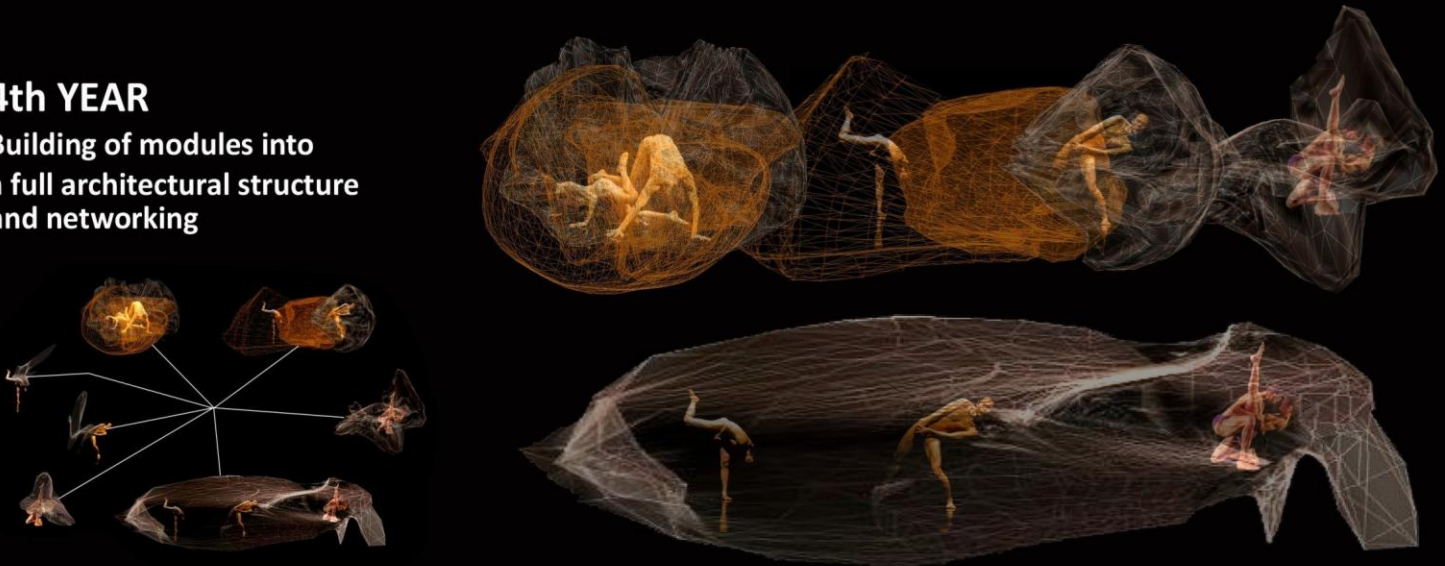
## 3rd YEAR

Development of Wearable Modules



## 4th YEAR

Building of modules into  
a full architectural structure  
and networking



## 5th YEAR

Touring of Laboratory







