Joint Improvisation Meeting JIM 2015
The Science of Joint Improvisation

November 4-6, 2015, Paris, France
Centre Pouchet
59, rue Pouchet - Paris 17ème
Subway: Line 13 Guy Môquet or Porte de Clichy
Bus: Line 66 La Jonquière

organized by:
Asaf Bachrach (SFL UMR 7023 CNRS / Paris 8 / labodanse.org)
Ivan Magrin-Chagnolleau (CNRS / p-e-r-f-o-r-m-a-n-c-e.org)
Lior Noy (Theatre Lab / Weizamnn Institute of Science)

Wednesday, November 4th	**Thursday, November 5th**	**Friday, November 6th**
9:00-10:00 Getting together Frame-setting Introduction of participants 10:00-10:45 Invited talk 1: Christian Keysers 10:45-11:15 Coffee break 11:15-12:00 **Invited talk 2: Patrick Healey** 12:00-13:00 **Short talks 1: "Quantifying JI"** Saul Albert Tommi Himberg Ashley Walton 13:00-14:00 **Lunch** 14:00-14:45 **Invited talk 3: Ivan Magrin-Chagnolleau** 15:00 -16:30 **Workshops 1+2:** **(1) Ella Ben-Aharon** **(2) Thomas Greil** 16:30-18:00 **Discussion in small groups & Brainstorming 1** 18:00-19:15 **Conference open event 1: Uri Alon** 19:30 **Reception + Performance**	9:00-9:15 Getting together 9:15-10:00 I**nvited talk 4: Valeria Gazzola** 10:00-10:45 **Invited talk 5: Guillaume Dumas** 10:45-11:15 Coffee break 11:15-12:00 **Invited talk 6: Michael Schober** 12:00-13:00 **Short talks 2: "Beneficial JI"** Neta Spiro Julien Laroche Rachel-Shlmoit Brezis 13:00-14:00 **Lunch** 14:00-15:00 **Parallel mini talks and presentations 1** 15:00-16:30 **Workshops 3+4:** **(3) Joelle Leandre** **(4) Ati Citron** 16:30-18:00 **Discussion in small groups & Brainstorming 2** 18:00-19:15 **Conference open event 2: Erin Manning** 20:00 **A performance by the "me-lieu" collective (off site)**	9:00-9:30 Getting together 9:30-10:15 **Invited talk 7: Steven Brown** 10:15-11:00 **Invited talk 8: Natalie Sebanz** 11:30-12:30 **Short talks 3: "Improvising together"** Caroline Cance David Rothenberg Ati Citron 12:30-14:00 **Lunch** 14:00-15:00 **Parallel mini talks and presentations 2** 15:00-16:30 **Workshops 5+6:** **(5) Matthieu Gaudeau** **(6) Célio Paillard, Frédéric Mathevet** 16:30-18:00 **Collection of Brainstorming & Final discussion** 18:00-19:00 **Farewell**

Wednesday, November 4th

Invited talk 1: Christian Keysers
Brain to Brain approaches to joint actions
Joint actions require an ability to understand and predict the actions of others far enough into the future to have time to plan and execute matching motor programs. Here I will review experiments in which we have tracked information flow from one brain to another to show that the motor system seems to play a key role in these functions. I will embed this experimental data in a Hebbian learning model, which posits that predictions are the result of synaptic
plasticity during self-observation. Jointly this talk will aim to trigger thoughts on how we can study the involvement of the motor system in coordinating actions across individuals.

Invited talk 2: Patrick Healey
Improvising Interaction
Even the most tightly scripted solo performances involve improvisation; the detailed execution of each note or word cannot be completely determined in advance. In joint performances the challenge of co-ordinating the actions of multiple people in real-time becomes even more complex. One response to this challenge has involved appeal to prediction using 'forward models' from computational models of action planning. These models involve automatic activation of motor representations of the future perceptual consequences of an unfolding action. Although normally associated with action production, if a person perceiving the action can also produce a forward model they can predict what word or note will come next. An important problem with this approach is that it is by definition conservative. It only works for familiar or rehearsed actions and cannot account for the production of novel or improvised responses. Using case studies from free jazz improvisation and conversation I will illustrate this problem for natural co-ordinated action. Rather than relying on access to pre-established shared representations, constructive engagement in these situations requires mechanisms that enable people to adapt and create new conventions on the fly i.e. improvise. I will argue that the key processes through which this is achieved are the interactional processes of 'repair' that we use to detect and deal with things that do not go as expected. These mechanisms are not auxiliary but rather provide the fundamental foundations on which all successful human interaction depends.

Short talks 1: "Quantifying JI"
Short talk 1.1: Saul Albert
Extemporary movement: an interactional account of partner dance improvisation
Clear empirical distinctions can be drawn between joint improvisation and choreography in dance by exploring the rhythmical coordination of dancers and audience members in a partner dance performance. Novice dancers typically learn footwork patterns or 'basics' that help them move in time to music together. Experts' familiarity with basics, as well as conventional variations and set-piece moves form a set of compositional structures that can be linked together to fit complimentary rhythmical patterns in music on the fly. In a 'social dance' performance such as the Lindy hop, (an African American vernacular jazz dance from which the data for this study is drawn), dancers link together basics with set-piece moves along with moments of joint improvisation. These improvised movements are literally extemporaneous - they move out of the temporal regularities of mutually learned patterns and rely on
other kinds of interactional resources and methods to achieve coordination. This paper analyses rhythmical coordination between dancers and audience members clapping along to a Lindy hop performance in a naturalistic setting using data drawn from a Youtube
video. This empirical starting point enables a tractable analysis of the haptic, visual, and semantic structures and processes used for coordinating extemporaneous dance movements. Audience members' rhythmical responses to these processes also provides insight into long-standing problems of measurement and

meaning in empirical aesthetics. Music and dance psychology tend to emphasise psychophysical measures and post-hoc report as proxies for aesthetic response. This paper proposes new ways to use the observable patterns of rhythmical
coordination to explore joint improvisation as part of an interactional sense-making practice.

Short talk 1.2: Tommi Himberg
Mirroring improvised hand movements in a dyad
We studied coordination and movement kinematics in a mirror game. 32 participants (18 f, 14 m; mean age 25.2 years, range 19–37) performed circle-drawing and freely improvised hand movement mirroring tasks in dyads. The participants were standing face-to-face, right index fingers pointed at each other, fingertips 10–15 cm apart. In turn, one of the participants
was appointed the leader, or the dyad was instructed to share leadership. Hand movements were recorded using an optical motion capture system. Joint leadership resulted in smoother performances than the leader–follower condition; the follower participant would often hesitate or correct their movements, resulting in oscillatory 2–3 Hz jitter. In joint leadership tasks this jitter was 23% lower than in followers ($p < 0.01$). This corresponds with the “co-confident
motion” observed in joint leadership mirror task by Noy et al. (2011). In leader-follower tasks the follower trailed the leader by approximately 0.3 seconds. Joint leadership trials resulted in mutual adaptation, with both participants “following” each other at similar lags. Windowed analysis revealed that the direction of the lag varied at sub-second intervals. Hand movements were faster in circle drawing than in free improvisation, but there were no velocity differences
between the leadership conditions. These findings imply that dyads that share leadership perform smoother movements and exhibit stronger mutual adaptation than dyads where one participant is externally assigned as the leader. Our study on coordination of three-dimensional movements extends the scope of previous dyadic interaction studies that used rhythmic tapping and 1D movements.

Short talk 1.3: Ashley Walton
Musical Improvisation: Spatiotemporal patterns of coordination
When jazz musicians perform an improvisational piece of music their behaviors are not fully prescribed in advance. Nonetheless their actions become so tightly coordinated and their decisions so seamlessly intertwined that the musicians behave as a single synergistic unit rather than a collection of individuals. A fundamental aspect of such musical improvisation is the bodily movement coordination that occurs among the performing musicians, with the embodied interaction of musicians both supporting and constraining musical creativity. Here we consider the ability of pairs of piano players to improvise, to spontaneously coordinate their actions with co-performers. We demonstrate the ability of the time-evolving patterns of inter-musician movement coordination as revealed by the mathematical tools of non- linear time series analyses to provide a new understanding of what potentiates the novelty of spontaneous musical action. Cross wavelet spectral analysis is applied to the musical movements of pairs of improvising pianists, a method that isolates the strength and patterning of the behavioral coordination across a range of nested time-scales. Additionally, cross-recurrence quantification analysis is applied to the series of notes produced by each musician to assess when and how often they visit the same musical states throughout the improvisation. Revealing the sophistication of the previously unexplored dynamics of movement coordination between improvising musicians is an important step towards understanding how creative musical expressions emerge from the spontaneous coordination of multiple musical bodies.

Invited talk 3: Ivan Magrin-Chagnolleau
Joint-Improvisation in Music and Dance: Some Preliminary Phenomenological Considerations on Improvisation as an Enactive Process

I have been a practitioner of solo- and joint-improvisation in music and dance for a while. And I have always wondered what the main differences were between the two. What I am particularly interested in are the type of experiences that allow me to cognitively function in a different way, that is, that allow me to explore new (cognitive) territories. In particular, there is always a moment, in an improvisation, be it solo or joint, when I am in the « zone », that is, in a type of trance where my conscious mind is not in control anymore, or at least seems not to be in control anymore. And my experience is that I reach that state faster in joint improvisation than in solo improvisation. In this presentation that will be more in the form of a conversation, I would like to try to describe the experiences I have been through as an improviser from a phenomenological point-of-view, and emphasize the differences between solo- and joint-improvisation. I will formulate some hypotheses on brain remapping in both situations, solo- and joint-improvisations, hypotheses that rely for now only on my own phenomenological experiences and my own interpretation of them. I will also describe how I believe that solo- and joint-improvisations provide an excellent framework to illustrate the concept of enaction proposed by Francisco Varela, and how this concept is activated slightly differently in both cases.

Workshop 1: Ella Ben-Aharon
Persecuting your Matter to Move
As the creative process unfolds, the keen observer [may it be the creator, spectator, or the performer] can get an insight into the psyche of participants in joint improvisation, as they exist in a phenomenological landscape that invites the subconscious into play. Based on Erin Manning's suggestion of the incipient action; "There are always at least two bodies. These two stand close, facing one another, reaching toward an embrace that will signal an acceleration
of the movement that has always already begun..." this workshop will look at the possible interaction amongst the supposed four bodies during an JI. These 'two bodies' are approached here as the 'persecutor' [demanding an action] and the 'matter' [the material body, which reacts to fulfill a demand]. Between these two instances exists a vibrant infinite frequency of presence; "This means you are never stopped. To move is to engage the potential inherent in the preacceleration that embodies you... Preacceleration: a movement of the not-yet that composes the more-than-one that is my body. Call it incipient action." (Manning, 2009) Through a series of improvisational tasks, we will mutually explore the following hypothesis: During a Joint intent of Improvised interaction, the 'persecutor' of person A is, in fact, demanding and influencing the 'matter' of person B to move; the mechanics of the incipient action is expanded beyond the personal boundaries of one human being, and is now shared with and ignite the potential inherent in the other.

Workshop 2: Thomas Greil
Mind of the Group
Teaching movement requires an attunement with the group and a facilitation of the attunement between the members of a group. Creating a group mind is important to explore together a certain quality of movement, touch or expression. Learning in a group is based on tone, timing and phrasing. The vagus nerve plays a critical role in this attunement, because it modulates the sympathetic response. "Vagal tone" describes how much a person is able to modulate his/her defenses in order to share with others to allow creation of a common mind, a shared space, where everybody can contribute and does not feel directed by the teacher. This allows the access of more primitive behaviors based on earlier developmental and evolutionary stages, and the balance with more cortical, higher organizations of movement and expression, to enhance ones ability to interact with more resilience, flexibility and creativity. The principles explored in this workshop are based on Body-Mind Centering, an approach to somatic movement education developed by Bonnie Bainbridge Cohen.

Conference open event 1: Uri Alon
Going into the unknown in science and art

Scientists must grope into the undefined place beyond the known. So must improvisation theater actors walking onto the stage with no idea what will happen next. Improvisation theater developed practices that help groups of actors create a new scene on the spot, by focusing on mutual support: saying yes to each others ideas and bypassing the inner critic that spoils our spontaneity. I'll describe how as a scientist by day and improvisation actor by night, I learned from theater how to do better science. The concepts are universal and can apply to unexpected situations across disciplines.

Thursday, November 5th

Invited talk 4: Valeria Gazzola

From me and you to we: how our brain integrates our actions and emotions when we interact

It is now well known that areas in the brain that are active when we act or feel become active again when we observe other people act and express their emotions – as if we would internally re-live what the other person is doing and feeling. In our daily lives though we hardly behave as passive observers, but rather interact with others. During my talk I will guide you through a series of experiments that try to investigate how our brain integrates our perception of others within a more realistic dyadic interaction in which such perception is transformed into a behavioural response to the state of the other.

Invited talk 5: Guillaume Dumas

Operationalizing Social Neuroscience through Human-Human and Human-Machine Interactions

How are neural, behavioral and social scales coordinated in real time so as to make possible the emergence of social cognition? Answering this question requires to study the dynamics of coordination in real human interactions. However, even at the simplest dyadic scale, methodological and theoretical challenges remain. Several theories have been proposed
to infer the link between neurobiology and social psychology, but the dynamical components of human interaction are still poorly explored because of the difficulty to record simultaneously the brain activity from several subjects. This is the goal of hyperscanning methodology. I will first present how the combination of situated social paradigms with hyperscanning allowed to demonstrate that states of interactional synchrony at the behavioral level correlate with the emergence of inter-individual synchronization at the brain level (Dumas et al. PLoS ONE 2010). These inter-brain synchronization appeared to reflect in different frequency bands different aspects of social interaction, such as interactional synchrony, anticipation of other's actions and co-regulation of turn-taking. Then, I will present how such phenomena can be simulated with biologically inspired numerical simulations (e.g. using direct measures of brain connectivity with DTI) and how the human connectome facilitates inter-individual synchronizations and thus may partly account for our propensity to generate dynamical couplings with others (Dumas et al. PLoS ONE 2012). Finally, I will present another tool called the Human Dynamic Clamp (HDC) (Dumas et al. PNAS 2014). This HDC integrates equations of human motion at the neurobehavioral level. A human and a "virtual partner" are then reciprocally coupled in real-time, which allow controlling the dynamical parameters of the interaction while maintaining the continuous flow of interaction. This technique scaled up to the level of human behavior the idea of dynamic clamps used to study the dynamics of interactions between neurons. Combining human-human and human-machine interactions thus presents new approaches for investigating the neurobiological mechanisms of social interaction, and for testing theoretical/computational models concerning the dynamics at the neural, behavioral and social scales.

Invited talk 6: Michael Schober

How much do jazz improvisers share understanding with each other and with their listeners?

To what extent do collaborating improvisers understand what they are doing in the same way as each other? And to what extent do their listeners understand the improvisation in the same way as the performers? This talk reviews evidence from two case studies (with Neta Spiro and Amandine Pras) of piano-saxophone duos, one improvising three versions of a jazz standard ("It Could Happen to You") and one carrying out an extended free jazz improvisation. In both studies, immediately afterwards the performers were separately interviewed, from memory and prompted by audiorecordings, about their detailed characterizations of the performances. Outside listeners (expert musicians in the same genres) were also interviewed for their characterizations. Later, the performers and outside listeners rated the extent to which they endorsed anonymized versions of statements by all participants, based on close relistening to the recordings. 239 internet listeners also rated their levels of endorsement of the jazz standard characterizations. In both cases, performers endorsed statements they themselves had generated most often, but they endorsed statements by an outside listener more than their performing partner's statements. Overall levels of agreement among the performers were greater than chance but quite low. Among the 239 listeners to the jazz standard improvisations, only a very small number agreed with the performers' characterizations at a level greater than chance. The implication is that fully shared understanding of what happened is not essential for successful joint improvisation, and that performers' interpretations are not necessarily privileged relative to an outsider's.

Short talks 2: "Beneficial JI"

Short talk 2.1: Neta Spiro
Joint improvisation in music therapy: characterising interaction in individual sessions with children with autism spectrum disorders
Some types of music therapy, such as Nordoff Robbins, involve improvisation by the client and therapist and the relationship between the participants' music making is prioritised. Some children with a diagnosis of autism who attend these kinds of music therapy sessions often have difficulties speaking and can be referred for a range of reasons (including difficulties in communication). What does improvisation look like in this context? Does it differ between sessions and if so how? Can charting what improvisation in the sessions looks like help assess changes in the client and/or the relationship between the participants? Studies of music therapy sessions often analyse short moments. This focus makes it difficult to understand the context of results and assess what the moments are representative of. In this study of case examples we annotate - according to an annotation protocol - videos of complete music therapy
sessions of 4 client-therapist pairs. Each pair has two videos: one early and one late in the series of sessions. Characteristics annotated include: where players are facing, whether they are making sounds, and the sounds' pulse characteristics. A range of patterns for each of these parameters was identified for different client-therapist pairs. This exploration of the types of possible patterns and relationships in music therapy sessions helps to characterise, at a general level, what happens in sessions; provide a context for moments that might be analysed in more detail; and identify what differs between players and their shared characteristics both across pairs and between pairs of sessions.

Short talk 2.2: Julien Laroche
Being together when time is improvised: interactive coordination in pedagogical improvisations
Improvising music toghether involves coping in real-time with unprecedented patterns of behavior of an other. The goal is to achieve and share a meaningful co-performance, and this is done by interacting. Therefore, processes underlying improvisation cannot be fully grasped by musical analysis only. Behavioral patterns and collective dynamics that underlie joint improvisation encourage the scientific study of the co-performance itself. This is important to understand how improvisers can coordinate their behavior

together in a meaningful fashion. However, improvising is first and foremost a practice that requires learning, experience and expertise. Objective measurements aren't sufficient : integrating the phenomenological point of view of the improviser is also necessary. For this reason, we work as a dyad of researchers: a cognitive scientist, and a professor of pedagogy who makes use of improvisation to foster learning. We then track interactive processes underlying joint improvisation during their very learning by novices and with the guidance of an expert. In this talk, we describe our pedagogical method of interactive improvisation (the Kaddouch pedagogy) and its underlying system of thought. We present our system of qualitative analyses of musical interactions
and frame our observations during lessons in a dynamical, enactive framework. Then, we show how we capture interaction processes by quantitative and dynamical analysis. More specifically, we are currently interested in the coordination of tempo fluctuations during performance. On the basis of our concepts, observations and results, we discuss the role of the process of interaction as a source of coordination between improvisers' behavior.

Short talk 2.3: Rachel-Shlmoit Brezis
Testing the limits – and potential - of joint improvisation: Motor skills, social skills and interpersonal synchronization in adults with autism spectrum disorders
Research on joint improvisation has shown that expert improvisers, as well as neurotypical individuals, can jointly create novel complex motion, synchronized to less than 180ms (Noy et al., 2011; Hart et al., 2014; Golland et al., 2015; Feininger-Schaal et al., in review). Presumably, this ability relies on these individuals' motor skills and social skills – yet little is known about the preconditions and correlates of successful joint improvisation. Here, we employ the Mirror Game paradigm (Noy et al., 2011) with a population of adults with Autism Spectrum Disorder (ASD). ASD is defined by a deficit in social and communication skills and a tendency for routinized behaviors yet recent research has been pointing to a possibly more primary difficulty with sensory-motor synchronization in ASD (Gowen & Hamilton, 2013), which may in turn impede individuals' ability to synchronize with others, leading to reduced social and communicative skills (Marsh et al. 2013; de Jaegher, 2013). 40 individuals with autism, and 40 age- gender- and IQ-matched Typically Developing (TD) control participants played the Mirror Game against the same expert improviser. The study aims to determine: (a) whether individuals with ASD have a reduced capacity for sensory-motor synchronization compared to TD participants; and (b) whether the ability of both TD and ASD participants to synchronize their motions with another player is related to basic motor skills (i.e., motor coordination, proprioception and imitation) on the one hand, and participants' everyday social skills (conversational rapport, empathy and autism symptom severity) on the other.

Parallel mini talks and presentations 1

Chia-Huei Tseng
Walking in pairs: synchronization in joint improvisation
Two people walking side by side while talking can be seen as one form of joint improvisation commonly experienced by all of us on a daily basis. Both walkers have to adjust their walking habits, either consciously or unconsciously, to make the communication
possible. Scientifically, the foot steps between two people can be seen as two oscillation systems connected with a shared purpose. My team examines whether we can develop a measurement sensitive enough to capture the foot step entrainment between
two walkers during this form of improvisation, and use this measurement to investigate the social consequence and the participants' personal profile to the improvisation.

Sabaï A. Ramedhan-Levy, Ariel B. LIndner

Sincronia: Qualifying observers recognition of facial mimicry

We are interested in how a third person ('audience') identifies and reacts to exposure to facial mimicry in an improvisation framework resembling a staring contest. Concretely, subjects are faced with two types of videos consisting of the following settings: (i) Two individuals staring at each other and improvising facially for several minutes. A camera captures each individual's torso and her/his background. The resulting videos are mounted side by side into a single
movie. Importantly, the backgrounds are distinctively different so that the actual scene is masked. (ii) The same two individuals mimicking facially the video of their counterpart. As in (i), with distinctively different background. The resulting movie is mounted side-by-side with the original mimicked video of two persons (similarly, filmed with different backgrounds). The experiment consists of showing the two types of videos to different individuals. Eye tracking, video recording of these individuals to provide objective measure of facial mimicry of the 'audience' and post-experiment interviews will be used we will compare people's reaction to both types of movies, their realization (or not…) of the staring contest settings as well as what specific cues in the joint improvisation video sequences facilitate this realization. In parallel to the research aspects of this project, the videos will be used for an art installation. By looking at oneself in the eyes of the other,Syncronia aims at describing the totality of a person and its environment through the perception of the other.

Romain Bigé

... mutual freedom within mutual reliance...

Dancer and choreographer Steve Paxton describes the dancer's experience in contact improvisation (CI) as "a state of being or mind permitting mutual freedom within mutual reliance." I would like to examine the nature of this paradoxical disposition fostered
by the constantly maintained contact between the dancers. One of the specificities of CI within the realm of improvised dancing is its focus on the physical, weight aspects of the masses, trying to shortcut intentionality or narrativity. Although this can only remain an ideal, this cartography of weight sensations creates an environment where neither I nor my partner seem to be deciding anything: a third entity emerges from our dance, whose movements we are both following. My hypothesis is that CI achieves the creation of this third entity in putting disequilibrium at the center of the dance: unbalancing the movementand the self, CI creates what French philosopher Gilbert Simondon calls "metastability", a state of apparent kinetic stability (stillness or flow) but loaded with potential energies ready to discharge if called upon by even the smallest thrust. This state corresponds, for Simondon, to a disposition of matter
that precedes its individualization in a living beingor function: it is, for instance, the state of stem cells before they are specialized; it is, more accurately, the state of supersaturated liquids right before they receive the thrust that will turn them into crystals.Tapping into this pre-individuality through the partner, contacters achieve what Simondon called trans-individuation: an individuation that is realized on top of the biological and functional individuation, and that can only be mediated by a cultural or psychical milieu. My goal will be to understand the joint improvisation in which contact invites the dancers as a case of transindividuation, akin to the social discovery of self as part of the group as well as constitutive of it.

João Da Silva

Risk-taking and/in dance improvisation

In this talk I examine the nature of risk engendered within large group dance pieces that include improvisation as well as the widely accepted role 'not-knowing'
plays in it (risk-taking). Polemicizing this role, my research develops a critical understanding of dance improvisation as art practice at the same time that it makes a contribution to the broader socio-cultural discourses about risk in advanced capitalism, where risk-taking appears, paradoxically, simultaneously as a high demand and something to be averted. I propose that non-dichotomous approaches to large-group dances—in which improvisation and choreography

are always already in dynamic relation, tangled up in the various ways of knowing a dance they foster and require, also the knowing of the potential encounter with the 'unknown' in it— can allow for an affirmative and non-naïve mode of engaging with risk-taking in a culture that greatly capitalizes on fear, especially the fear of failing to perform according to the logic of innovation and entrepreneurship so omnipresent in advanced capitalism. Risk-taking then, beyond being apprehended either as a negative force to be avoided or as a commodity that sells, may perhaps be perceived and engaged with as a positive force, as a dynamic and enabling condition for transformation that goes beyond the individual self.

Odillon Regnard

Une approche empirique des enjeux de l'improvisation conjointe

Portée maïeutique de l'art en tant que recherche intérieure tournée vers le monde. Sa pratique nous amène à affiner notre conscience sur tous les plans (physique, mental et social) : le champ expressif particulier fournit un contexte qui devient prétexte/lieu d'une telle démarche. L'interaction des catégories fondamentales du schéma général de la communication
(qui veut qu'un message soit transmis d'un émetteur à un récepteur sous l'espèce d'un canal et au moyen d'un code) peut être révisée pour souligner le rôle actif du récepteur ; son implication est d'autant plus évident dans le cas d'une performance. Au delà des contraintes liées au domaine sensoriel, des cadres sociaux formels et des codes culturel, l'art est fondé sur l'intégration des procès sensorimoteurs dans une dynamique fluide centrée sur un "objet évoqué" (qu'elle qu'en soit la nature) appréhendé en associant les modalités instantanée/globale et temporelle/discursive de la perception. Cet objet évoqué à partir contexte de l'expression émerge dans une dimension expressive projective qui se déploie à cette occasion : les sensations temporelles et spatialey sont orchestrées par l'enchaînement d'évènements vécus comme tels selon mode discursif de perception, dans la forme générale ressentie selon le mode global de perception. L'improvisation conjointe repose sur un consensus voué à l'élaboration dans l'instant de l'objet évoqué. L'aspect social fondamental de notre humanité y est exacerbé. La rencontre est assumée de manière fédératrice dans sa portée génératrice, avec une ouverture qui offre d'aborder le "jeu de miroir" relationnel dans toute sa subtilité : les notions d'implication et de responsabilité s'y illustrent au service d'un équilibre relationnel voué à alimenter une synergie à la faveur de laquelle émerge l'objet évoqué.

Hila Gvirts

The role of interpersonal synchrony in emotion regulation of Parkinson patients

The current study examines the emotional effects of dance for people with Parkinson. We focused on interpersonal synchrony during dance and examined whether synchrony acts as a tool for interpersonal emotion regulation. A total of 16 couples, in which one partner had Parkinson and the other partner was a healthy control, underwent mood induction. Parkinson group underwent a sad mood induction; whereas healthy controls underwent a neutral mood induction. Following the mood induction process, couples were asked to dance for 3 minutes. The controls were instructed to synchronize their movements with those of their partners. All participants completed mood questionnaires three times: at baseline, after mood induction and after dancing with their partners. As expected, sad mood tended to be higher after mood induction for the Parkinson group [$t(15)=-2.010, p=.064$] but not for controls [$t(15)=.772, p=.452$]. Importantly, following the dancing task, a significant reduction in sadness was found for the Parkinson group [$t(15)=2.306, p=.036$] but not for healthy controls[$t(15)=.677, p=.508$]. These findings indicate that synchrony during dance may serve as a tool for interpersonal
emotion regulation in Parkinson.

Workshop 3: Joelle Leandre

TBA

Workshop 4: Ati Citron
Building Blocks for Physical Improvisation
In this type of work, movement leads the mind, contrary to the common way of acting, in which the mind plans ahead and leads the moving body. The work begins with a single, simple movement chosen and performed by each participant. The movement is repeated many times until it begins to develop and eventually, to transform. This movement is one building block of physical improvisation. We shall explore it individually and in a group, with a leader and a chorus mirroring the leader's movements. The moving, breathing body will also produce sound, which adds meaning and purpose to the developing movement. From that, a movement-phrase emerges, and often, a dramatic situation, even a character in a dramatic situation. A single word can then be applied to the sound, and repeated until another word is added, and the single performer is ready to interact with another, who went through a similar journey. We witness the composition of a scene that emerged and developed from a single movement.

Conference open event 2: Erin Manning
Carrying the Feeling
Carrying the Feeling explores autistic Lucy Blackman's use of "carrying" as an expressive force in her writing. Continuing to delve into what I have called autistic perception - the force of perception that doesn't yet parse out the environment but attends to the emergent qualities of an environmentality in act - in this paper I explore how else we might think concepts
such as volition, intentionality and agency. Of particular interest here is the concept of facilitation, and the improvisatory nature of what I call a "facilitation of facilitation." If carrying is a force that already composes with language, perhaps there is a productive way to consider an environmentally propulsive concept of agencement as operator in experience rather than the ubiquitous first-person account of agency? Challenging what I call "neurotypicality as first identity politics," I propose to open up a discussion of where else a conversation of relation might begin.

Friday, November 6th

Invited talk 7: Steven Brown
Deconstructing "joint improvisation"
What is "joint" and what is "improvisational" about joint improvisation? The "joint" aspect can be contrasted with solo improvisation, such as that of a jazz pianist. Even when jazz pianists improvise in the context of an ensemble, the arrangement of these improvisations
is often serial, rather than simultaneous: each instrumentalist improvises in turn while other members of the ensemble play relatively fixed parts. This is in contrast to forms of improvisation in which two or more performers improvise simultaneously, either as separate entities (as occurs in contemporary dance) or as a collective unit (as in 2-person improv acting or contact improvisation). To understand all of these cases, we need to think about the partnership
arrangement of the performers and their leader/follower dynamic. Next, to explore the "improvisational" aspect, we need to realize that improvisation is, first and foremost, a form of creativity, in particular the type that occurs online during performance. This is in contrast to online types of creativity that occur away from performance – such as brainstorming
sessions – as well as to long-term (offline) forms of group creativity, such as technology development or the production of an opera. As such, we need to examine established models of improvisation in order to understand how joint improvisation might occur. Influential models from the study of jazz include Pressing's model of recombining pre-learned structures, and Johnson-Laird's model of rule-based improvisation.

Finally, I will examine neural aspects of the “joint” and the “improvisational” by describing the results of the first two-person functional MRI study of improvisation during partnered movement.

Invited talk 8: Natalie Sebanz
Acting together without planning ahead?
Experiments on joint action have given us insights into the mechanisms that allow people to coordinate their actions with each other, be it making music, dancing, or cooking a dish together. One key finding is that people engage in predictions about their interaction partner’s actions. For example, when someone is about to hand over a candle to us, we anticipate the start and the timing of her action. A further key finding is that people systematically modulate
their actions in ways that make it easier for their interaction partners to predict them. For example, if you don’t know whether I am about to go left or right, I may veer further to the left to signal where I am going. While these mechanisms work well for joint actions
where the goals and the tasks that need to be performed are specified in advance, less is known about the role they play in joint improvisation where predicting others’ actions can seem impossible or detrimental. I will discuss the benefits and limits of action prediction in joint improvisation.

Short talks 3: “Improvising together”

Short talk 3.1: Caroline Cance
There could be ten seconds where everyone
is connected and you feel really joined by the same thread and it’s really magical
We collected musicians’ discourse about their practices of joint improvisation within listening sessions that we conducted with 3 established free jazz trios a few days after the recording of their concert performance. In keeping with the self-confrontation method of Theureau, we asked the musicians to exchange collectively about what they could remember of their experience and feelings on stage, and what they thought about the musical result while listening to the recording. We will present a multi-layer analysis of these verbal interactions. Our methods combine discourse and interaction analysis with semantic-prosodic analysis. In addition to shedding light on joint improvisation in music, this linguistic and cognitive approach also investigates joint improvisation in discourse. We will illustrate our analysis with examples where the trios (re)build what happened during the performance based on their individual memory and through recurrent collective listening. We will focus both on deep interpersonal synchronization moments and on problematic moments where the improvisers identified discrepancies
between their interpretations of each one’s actions on stage and their retrospective understanding of the musical event. To involve musicians in group discussions building on a playback of their own performance allows us to draw out collaborative reconstructions
of their experience, and thus contributes to a better understanding of verbal and musical improvisation processes. This study takes place in a wider research and creation project that involves outstanding free improvisers from the jazz scene of New York City. It extends a first study based on individualinterviews about free improvisation practices, for which we have developed the multi-layer analysis that we present here.

Short talk 3.2: David Rothenberg
Improvising with the Animal World
For many years now I have been improvising live performances with songbirds, humpback whales, cicadas and katydids investigating improvisation as a tool in interspecies communication. There is a way in which making music with animals is easier than trying to decode their sounds as language, because the meaning of music is far more fluid than linguistic and semantic communication. Though my interest in this process is

primarily artistic and musical, I have also worked closely with neuroscientists to demonstrate how understanding avian communication as music can lead to an expanded notion of the structure of animal signaling. This is one specific way in which artistic insight can aid scientific insight. In Paris I would like to present somewhat detailed analyses of some of my recent performances live with nightingales and humpback whales, to demonstrate how joing improvisation happens between species and what we may conclude about this process.

Short talk 3.3: Ati Citron
Improvising in Sign Language and Gestures
The Sign Language Theatre Laboratory is a practice- based artistic research group that began operating in 2014 as part of the Grammar of the Body (GRAMBY) Interdisciplinary Research Project led by University of Haifa linguist Wendy Sandler and funded by the European Research Council. Most of the nine Lab actors are deaf and hard-of-hearing, and all of them use Israeli Sign Language (ISL) on a daily basis. We use ISL combined with expressive gestures and physical theatre in order to develop a form of visual theatre that is aimed at both deaf and hearing spectators. Improvisation is our principal method of operation. We play with the mimetic component of ISL, highlighting facial expressions and body language, and experimenting with gestures that are normally performed and understood by hearing and deaf people alike. We are inspired by deaf culture as well as by the work of 20th Century theatre experimentalists such as Meyerhold, Artaud, Grotowski and the Living Theatre. We also draw from the language of two forms of traditional Indian dance theatre, Kutiyattam and Kathakali, which employ combinations of codified hand movements (mudras) and facial expressions (rasas) to present the dramatic
action. When our group was introduced to these genres in a workshop, we discovered a surprising affinity between the signs of traditional Indian theatre and those used in ISL. From this potpourri we devise our theatrical materials. We improvise within certain movement routines and exercises, realizing that free group improvisation can only stem from clear, at times even rigid structures and rules. Also necessary, of course, are “comprehensive listening”, which deaf actors practice visually, the ability to lead and be led, and finally, the skill of contributing to a collective creation. These will be demonstrated in my presentation through an analysis of a few short videos of our work.

Parallel mini talks and presentations 2

Lilla Magyari, Natalie Sebanz
Coordination in joint dance improvisation
In joint dance improvisation, it is a shared intention of all dancers to create a coherent dance together. However, a dance performance based on improvisation is unique, not planned, it does not follow a particular step routine. Therefore, it is an intriguing question how dancers coordinate their movements during improvisation and what influences spectators’ aesthetic experience of an improvised performance. The present study aims to determine what makes coordination during joint improvisation possible, testing the hypothesis that agents make their own actions more predictable for one another in the context of joint action. The study also explores whether audience members’ perception of the joint coordination increases their liking of dance movements. To test movement predictions and aesthetic preferences, video-recordings of movement sequences of a single dancer are shown to participants
on a computer screen. The video-recordings are excerpts from moments where the dancer either improvised the movements alone (solo condition) or together with another dancer (duet condition). In the duet condition dancers were instructed to only use one half of the dance floor, so that they could not touch each other. In this way, movement sequences of each dancer can be extracted from the recordings separately (i.e. without seeing the other dancer on the recordings). Movement-sequences from these recordings are used to test movement predictability and aesthetic preferences by observers.

Avner Miriam Amit

Contact Poetry

When we think of Joint Improvisation in the Arts, we rarely think of the field of poetry. Poetry in our times is usually linked with the image of the lone genius, writing in bursts of “muse” and sole inspiration. But in some places in time/history, poetry was (and is) an outcome of creative collaboration. Contact Poetry is a term that I use to include all poetry that stems from the meeting/dialogue/touch of two-or-more live voices. Contact Poetry is also the name of a specific
practice that integrates the art of writing-together with the art of moving-together. For now I will use the term only in its general sense. In the talk I will give: • a short historical review of joint improvisation in the field of poetry: Japanese Renga, the early French Surrealism, Medieval court poetry (the contest model), and collaborative poetry in the age of the Internet.
• a theoretical overview of the unique qualities of Contact Poetry, in aspects such as synchronicity, performativity, social dynamics and conflicts (multicultural and multilingual dialogue), therapeutic and educational potential, long-distance improvisation, and more. During the talk I plan to screen two animated examples of new original forms of Contact Poetry that takes the concept of poetic JI to the next level. I also wish to curate a short printed “manual” of Contact Poetry games/exercises, and to share it with the participants of the conference.

Michael Kimmel

The empirical phenomenology of improvising dyads – synergies and somato-systemic prerequisites under a quasi-experimental lens

Based on pair dance and martial arts I present a synergetic model of coalescing sensorimotor, expressive, and interactional skills underlying joint improvisation. The constraints to be matched in real-time stretch across several timescales – from system “grammar” to situated “vocabulary” – and ecological scales – taking care of one’s own body for indirect joint benefit and dyadic regulation proper. Notably, the model inquires into the potential differentiation between creativity related and interaction related aspects. I discuss the interplay of constraints from both levels and how this relationship plays out in two different framing theories: improvisation as serialized choice of modules with salient transitions („chunking view“) and as continuous following of adaptive principles. The talk’s second part presents micro-genetic think-aloud methods rooted in empirical phenomenology, which address sub-skill synergies and interpersonal synergies rather naturalistically. Couples are invited to spar together and, under the researchers’ guidance, systematically vary “moves”, adapt attentional and creative strategies, cope with different external constraints, intentionally introduce perturbations and explore adaptive reactions. Participants comment on sensorial triggers and micro-intentions under an increasing temporal zoom, employing video-feedback whenever desired. Thereupon, both individuals’ remarks are interrelated on a timeline capturing the emergent behavioral dynamic.

Lauren Mark

Multiple Generations Moving in and through One Another’s Memories

In the United States, senior citizens are increasingly marginalized in society, even in their own families, often relegated to nursing homes and assisted living.While music and dance are sometimes offered as recreational activities, they are seldom used to connect people across generations. The Visible Histories Project gathered two groups of participants
spanning 7 decades, from age 19 to 80, over the course of 3 months, to share intimate memories in the form of writing and storytelling. The group, mostly comprised of novice dancers, was then given improvisation tools to transform these memories into a collective body of movement. They then created short dances based on this body of movement in small groups while also engaging in large group improvisation for

increased rapport. In addition to performing their works before family and friends, continual reflection on the memory sharing and joint movement exploration process revealed several social implications for participants. Infusing relationship building with the creative process deepened existing friendships, influenced career choices and on the job demeanors for students and a nurse participant, and even helped others come to different terms with long buried memories by reliving them through movement. (191) Through the experience of movement, not only were deep friendships built across nationalities and generations, people of all ages were able to claim creative agency in a form new to them, despite various physical limitations. They also succeeded in reliving and reshaping parts of their identities with others.

Pavel Goldstein, Irit Weissman-Vogel, Simone G. Shamay Tsoori
The role of touch and pain in regulating inter-partner physiological synchronization
Human's ability to synchronize with other individuals has important evolutional significance and in the development of social behavior. Recent research has shown that physiological inter-personal synchronization may underline the behavioral synchrony. However,
the factors that may modulate this synchronization are mostly unknown. Given that social touch and empathy for pain may enhance inter-personal physiological synchronization, the main goal of this study was to investigate the role of the social touch, pain and their interaction on inter-partner heart rate (HR) and respiratory rate (RR) synchronization. ECG and respiration recordings were performed on twenty two romantic couples, facing each other, under 'pain'\'no-pain' and 'touch'\'no-touch' conditions. During the pain conditions females recieved 120 sec of contact heat pain stimulation. Our analysis was based on Coupled Linear Oscillator (CLO) model that enables an estimation of bi-directional inter-partner relationship (females to males and vice versa) between acceleration (change of change) and velocity (change) parameters of HR and RR (totally four models). The results indicate that the touch condition, as compared to no-touch condition, increased RR synchronization during both pain and no-pain conditions. However, HR synchronization showed increased pattern of synchronization in the partner's touch vs. no touch condition only during pain. These findings were similar in both directions (female and male models). In addition, all models showed consistent disruption effect of pain on synchronization in the absence of the partner's touch. Moreover, we found that inter-dyad variability in the level of synchronization during the pain and touch condition was moderated by the level of the partner's empathy and the analgesic effect: high empathy and the level of analgesic touch enhanced synchronization.

Guido Orgs & Staci Vicary
Aesthetic perception of movement synchronisation
in live dance performance Synchronised movement is an essential and perhaps universal aspect of performing dance. Synchronising movements with others enhances interpersonal cooperation, trust and liking. For the first time, we investigated whether movement synchronisation can also influence the aesthetics of dance. During a live dance performance, we recorded synchronisation among performers using wrist band accelerometers. At the same time, we measured continuous enjoyment and heart rate in a group of spectators. We predicted that continuous aesthetic judgement and psychophysiological measures of arousal would vary as a function of perceived and performed movement synchronisation amongst performers. Using Granger causality statistics, we show that performed and perceived movement synchronisation predict subsequent aesthetic judgements over shorter and longer periods of time. This suggests that aesthetic appreciation of movement synchronisation can be linked to the prosocial effects of joint action and behavioural coordination, suggesting a role of the performing arts in promoting social bonding and group affiliation in society.

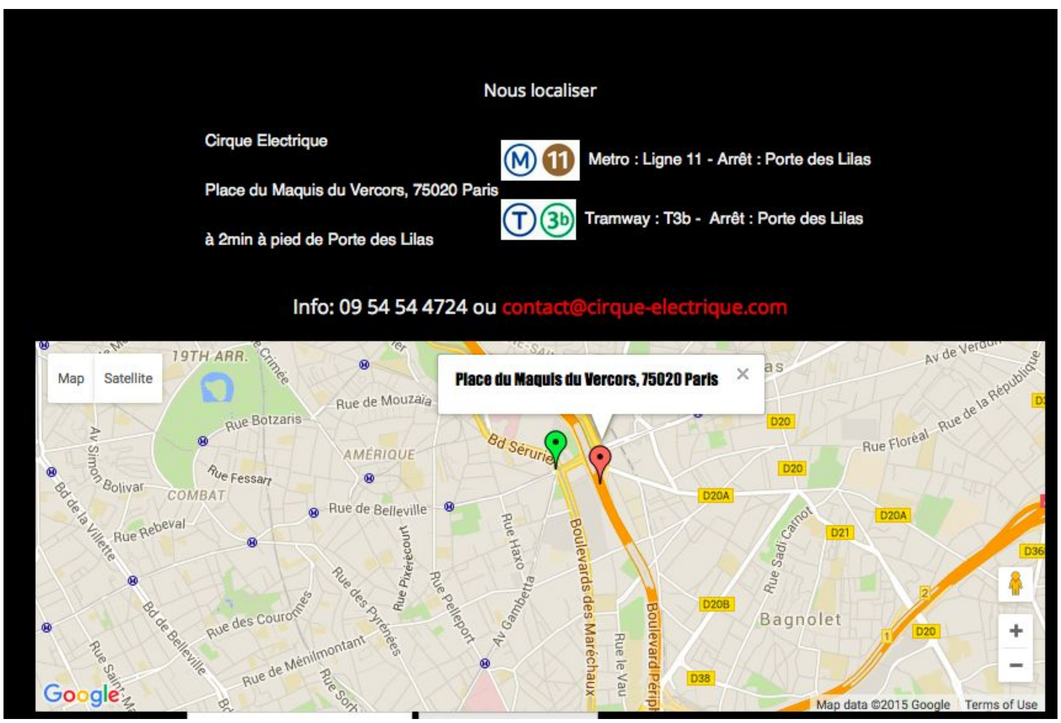
Workshop 5: Matthieu Gaudeau

Suspendre en acte.
Partons de la proposition que l'improvisation dansée repose sur « la conscience de… », et sur la condition principielle de celle-ci : la dissociation ou scission. Au cours d'explorations en contact Improvisation (duo ou trio) et de processus sur la vision et le tonus nous essaierons d'approcher une idée centrale à la technique Alexander : la « construction d'un témoin » qui permette de s'informer de ce qui se passe pour suspendre -sorte d'*épochè* phénoménologique- puis de recadrer l'attention en mettant la priorité sur l'émergence versus l'anticipation et le contrôle. Cette activité attentionnelle permet de s'informer non seulement de soi au moment de l'agir mais aussi d'apporter de nombreuses régulations. « La construction » de ce témoin est facilitée par un toucher partagé (entre praticien et patient mais aussi entre partenaires de contact improvisation) caractérisé comme une *haptique* (J.J Gibson), coexistence d'une perception extéroceptive - le milieu -, et d'une perception intéroceptive - corps engagé dans l'action et orienté dans l'espace. La proposition est donc d'explorer ce processus de « réfléchissement en action » où chaque corporéité distincte remet en jeu *les référentiels égo- et éxo-sensitifs*.

Workshop 6: Célio Paillard, Frédéric Mathevet
Pratiques et poétiques des partitions comme outils d'improvisations collectives
We plan this workshop for at least two steps. We will start by a group joint improvisation of a graphic score composed from the specificities of the place and its proper "music". After that first improvisation, we will organize — also collectively — new possibilities
from the initial partition, while questioning this first collective improvisation. We will finish the workshop with a discussio, to analyse our collective practice. We will question in particular the link between
writing work upstream, and the inter-relationships
that emerge from this particular device: the visual
and interactive stimuli as support for collective improvisation.

Thursday Night *off* program


LES MESOZOAIRES: ASAF, CLEO, DAVID, GABRIELE,
GERRY, LIONEL, MATHIEU, MATTHIEU, ROMAIN, YANN
ME-LIEU
@
CIRQUE
ELECTRIQUE
JEUDI 5 NOVEMBRE
20:00
P. DE ILAS
ENTREE LIBRE
RESTAURATION SUR PLACE
MOUVEMENT, SON, LUMIERE


Nous localiser
Cirque Electrique
Place du Maquis du Vercors, 75020 Paris
à 2min à pied de Porte des Lilas
Metro : Ligne 11 - Arrêt : Porte des Lilas
Tramway : T3b - Arrêt : Porte des Lilas
Info: 09 54 54 4724 ou contact@cirque-electrique.com
Place du Maquis du Vercors, 75020 Paris
Map data ©2015 Google
Terms of Use