

Transdisciplinary encounter with the more-than-human: how to dance with robots, atmosphere and matter

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Abstract

This panel presents a study on Montreal's Popmolle collective, known for blending dance, digital arts, and robotics into immersive performances. Emphasizing a collaborative approach, the collective fosters artistic hybridization and creativity. The discussion explores the integration of human and mechanical agents within a dynamic, atmospheric space using light and fog. In Part 1, "Dictionary of atmospheres" and auto-ethnographic vignettes offer methodological tools for capturing the essence of the collective's creative process and the atmospheric spaces of their performances. In Part 2, the research extends into the realm of "hyper-contemporary" performance, highlighting the aesthetic shift caused by integrating technology with live art. It scrutinizes the altered dynamics of co-presence on stage, where technological entities increasingly intersect with human performance. In Part 3, researchers explore how a somatic approach can influence the creative process in choreography, seamlessly integrating human and non-human elements within live performances. This somatic method dissolves boundaries between performers and their mechanical counterparts, highlighting an embodied strategy used in dance practices when engaging with technology, thus fostering a new dramaturgy in performance. In Part 4, to synthesize these concepts and methodologies, we will discuss these topics with performers in an attempt to cross theory and practice.

Keywords

Collaboration, transdisciplinary, scenography, dance, digital arts, new media dramaturgy, hyper-contemporary, somatic approach, research-creation, atmosphere, performance.

Introduction

Montreal collective Popmolle, made up Danny Perreault along with, Simon Laroche, Liliane Moussa, Marine Rixhon, and Anne-Flore de Rochambeau, has been dedicated to artistic creation since 2015. The reunion of this team generated a transdisciplinary performance also called Popmolle. [1] Collective's work is based on a bold fusion of dance, digital arts and robotics, and is characterized by a

collaborative, non-hierarchical and adaptable approach. The artists challenge each other to push the boundaries of their respective disciplines to encourage the hybridization of art forms and the liberation of creativity.

Their interdisciplinary performance involves interaction between human dancers, mechanical and scenic elements. Three choreographers-performers use rubber bands to delineate the stage space, while robotic mechanical structures alter the configuration by retracting or extending the stage. Light and fog act as interactive elements, transforming the elastic bands into walls and waves of light. Danny Perreault has been a collaborating artist and researcher on the project, experimenting with scenographic composition and improvisation using light in relation to the choreographers-performers, mechanical elements, and other scenic components. The performance explores concepts of agency affecting both human performers and scenic elements.

The panel is presented in four parts: the first outlines the use of "atmospheric dictionary" [1] and auto-ethnographic vignettes [2]. as tools to capture the essence of the collective's artistry. The second part investigates the impact of technology on contemporary performances, examining the changing dynamics of performer and technology co-presence. The third part delves into somatic choreography methods, showing how performers interact with flexible and robotic components, creating a complex performer-technology relationship. The last part will address questions and topics with performers. The study provides a deep insight into hyper-contemporary performance art, where humans, atmospherics and technological elements are intertwined.

Part 1) Unfolding Popmolle: a collaborative research-creation approach from collective narratives to dictionary of atmospheres.

Danny Perreault invited the collective's artists, along with experts in dance, technology, and new scenography, to identify conceptual frameworks and methods for approaching both production and the creative process. He began this work by inviting Popmolle's performers and experts to experiment with a method of writing short vignettes to gather information on both the creative



Figure 1 – Popmolle, *Agora de la danse*, Montreal. Dancers, matter and light. Photo credit : David Wong ©

process and the atmospheres produced by the scenography of the show. The experts attended a studio rehearsal and a performance of Popmolle. Two methodological approaches were suggested: the auto-ethnographic vignette [2] and the atmospheric dictionary. [3] Elaboration around the development of a collective narrative about their practice is inspired by the auto-ethnographic vignette. "An autoethnographic vignette is a window that allows readers to access, in its sensory and emotional dimensions, the intensity of a significant moment." [2] While this gives access to the protagonists' personal experience, another type of vignette, aimed at describing the atmosphere of the performance, establishes a vocabulary around the artistic object.

The dictionary of atmospheres is a methodology based on the concepts of attractors, elements and atmospheres. The idea is to leave feelings and emotions aside and concentrate on the space itself. There are three principles of atmospheric aesthetics: temporary/intermittent, immediately apprehensible, and nebulous half-entities. "The challenge for the aesthetic worker is to gain understanding of "the connection between the concrete properties of objects ... and the atmospheres they radiate." [3] Performative explorations of space aim to reveal the material foundations of one's experience by 'inhabiting' the environment. By combining people's stories, what they say about their experience, and combining their in-depth lived analyses in a group phenomenological phase, the method provides an embodied, multi-layered approach to experiencing and recording the pre-reflexive constitution of atmospheric experience.

Following the Popmolle show, presented in June 2023, artists and researchers met to share their stories and establish a dictionary of atmospheres. The discussion provided an opportunity to explore complementary methodological avenues for unpacking the process and production of Popmolle with the artists, these will be discussed through this panel.

Part 2) Challenging the conventional understanding of scenic co-presence with hyper-contemporary performance.

Even though neither the immersive environments nor the merging of bodies and technologies are a new scenic phenomenon, their use in the latest artistic practices in our hyper-contemporary moment produces a large aesthetic shift within the arts. We could mention Karel Čapek's robotic drama *R.U.R.*, [4] Jean Tinguely's kinetic "machine-sculptures", [5] works from Japanese roboticist Hiroshi Ishiguro [6] or Ken Rinaldo's "kinetic environments" [7] and myriad others who utilize complex technologies in order to produce machine spectacles. Performing machines, site-specific devices and screens, robots on stage, as well as prosthetic objects that enhance the body's form, are all examples of the growing number of stage techniques that today destabilize our understanding of various binaries (e.g. human/non-human, natural/artificial, presence/absence etc.). Indeed, the increasing use of machine agencies – such as robots, technological devices, and artificial appliances – challenges the conventional understanding of scenic co-presence, which has always relied on the assumption of there being a live, human, bodily presence on stage, as opposed to the projected figures and technologies which more and more tend to undermine that presence.

As a means of providing a better account of the most recent artworks that incorporate multiple forms of performing atmospheres and machines (as in recent productions from Sofian Audry [8], Bill Vorn [9] and Louis-Philippe Demers [10]), in this panel we mobilize the term "hyper-contemporary". This term is to be understood both as a theoretical framework and aesthetic vector. Hyper-contemporality attests to what Jennifer Parker-Starbucks [11] calls "the lure of technology's promise on stage"; a promise which allows the investigation of utopic possibilities through the medium of art. The primary reason for using this specific terminology is to bring out for discussion the way in which technology and human beings converge in modern theatrical

performance, site-specific installations, and new media art. This in turn, it is hoped, might aid us in formulating better theoretical and practical models for engaging with art that utilizes machine technologies to a high and systematic degree. In order to examine the changing landscape of hypercontemporary performance within the context of different technologies, we will be referring in our talk to the latest collective production Popmolle [1] conceptualized by Danny Perreault with its collaborators, Simon Laroche, Anne-Flore de Rochambeau, Liliane Moussa and Marine Rixhon.

Part 3) New media dramaturgy and somatic as methods: how did the performers/choreographers approached movement and choreography within this specific system.

The *Popmolle* project, adopting flat ontology, emphasizes the convergence of the human and non-human realms within its creative content and overarching framework. In this perspective, introducing the term New Media Dramaturgy [12] supports and frames the team's approach, implying that there is "an agency that operates through - or often mobilizes collaborations between - artists and things". [12] This concept underscores the emerging collaboration between artists and objects. In the following section, the objective is to analyze how the three performers/choreographers, each with a dance background, explored and developed their choreographic content in relation to the robotic and technological elements (sound, lights, smoke). As Alexia, performer, suggested: "During the first rehearsals with the elastic bands, I experienced a kind of fascination with the material. How did this new material react when it encountered my body? I wondered about its reactivity to my weight, to the attack or softness of a movement, of a momentum". This example serves as a testament to the intricate interplay between human creativity and the material world, reflecting the essence of flat ontology in action.

Upon recognizing the evolving connection between bodies and objects, my aim is to disclose strategies that informed and guided the choices made from the performer's perspective in favor of a *New Media Dramaturgy* to arise. Through the collection of writings and reflective insights, it becomes apparent that improvisation played a central role in generating movement patterns and choreographic elements. This improvisational approach fosters a dynamic interplay between freedom and structure, enabling the work to unfold "at the speed of a thinking body and mind". [13] Moreover, I identify that their improvisation process was deeply influenced by a somatic approach. As Eddy points out, the soma concept doesn't dichotomize the mind and body but instead emphasizes that "we think and act as total, unified organisms". [14] This inseparability of thought and action encourages the emergence of choreographic content, allowing for an embodiment that articulates itself in relation to both

human and non-human components, fostering a heightened sensitivity towards the entire environment.

Finally, a somatic approach appears to promote the development of an embodiment that interweaves gestures in connection to both humans and non-humans, resulting in a qualitative state of presence resonating as a unified whole. As Anne-Flore, performer and creator, suggests: "The tension created by bodies of different natures, with robots anchored to the ground versus vaporous dancers in smoke, generates a sense of mystery and anticipation (suspense)." Furthermore, the embodiment and tactile aspects seem to play a pivotal role in blurring the boundaries within these interactions. "Focusing on the temperature and texture of the metal, the speed of movement and the positions of the robot gave me sensory tools to develop this intimate, and absurd, relationship with the object" Liliane Mousa says. Drawing from the performers' experiences is allowing to establish an embodied relationship with the material becoming an integral part of their practice, becoming inherent to their dances.



Figure 2. Popmolle - Agora de la danse, Montréal 2023. Photo credit : David Wong ©

Part 4)

This panel delves into the evolving relationship between performers, robots, atmosphere, and matter within the more-than-human paradigm applied in dance and creation. During this last part of the panel, experts and Popmolle performers will freely discuss some questions related to the previous topics. Examples of the types of queries that will be explored include: "What strategies did the performers and media creators use to generate artistic content?" "How was the language of Popmolle developed by the team?" "What does it mean to dance and interact with non-human presence within a live performance?" And, "Did knowledge of the body inform or influence the relationship with technological propositions?"

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Filip Dukanic hold a double PhD from Université de Montréal and Université Paris 3 Sorbonne-Nouvelle. He is currently conducting additional training at Université du Québec à Montréal as a

postdoctoral research fellow. His work mainly deals with contemporary performance trends within the scope of intermedial studies. He has published extensively in Europe, North America, and Asia on relationships between new technologies and human presence on stage.

Simon Laroche is a media artist and teacher at Concordia University. He creates installations, audio and video performances, robotic and body artworks. Co-founder of the art collective, Projet EVA, he takes a critical perspective on socio-technical hybridization, focusing on problematics related to relationships between individuals, computer systems, and their physical extensions. His work has been presented in Asia, Europe, South and North America, and the Middle East.

Caroline Laurin-Beaucage joined the faculty of UQAM's dance department in 2020, where she is currently advancing the field of dance and new technologies. As a choreographer, performer, and teacher with 24 years of experience, her repertoire includes installations, In Situ performances, projections, and a virtual reality film. She analyzes how somatic approach can inform site-oriented art practices through media.

Liliane Moussa is a dance artist interested in engaging bodies to question the notions of performance, health, and productivity. Her multidisciplinary and collaborative practice based on the crossbreeding of dance, performance and sport, has led her to present her work around the world. Author / Panel participant # 4 is co-founder and co-organizer of the Lots of love LOL Festival. Also practicing physiotherapy since 2006, she anchors her practices in a desire to raise awareness and actions towards a healthy ecology of the performing arts scene in Montreal.

Danny Perreault is a professor at UQAM's *École des médias*. He recently co-founded the mXlab, a research laboratory on more-than-human media creation. His research-creation approach focuses on the collaborative processes at work in the co-creation of digital scenography. His works explore the possibilities of images and light in three-dimensional space to create singular affective atmospheres.