Discourses of Intervention: A Language for Art and Science Collaboration

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ABSTRACT
This article explores how two different kinds of subjects, an architect-cum-digital media artist and an engineer, tease out and negotiate ideas from alien contexts. Brought together by a desire to explore the cybridity of physicality through artistic expressions, we recognise the need for a new language and ways of speaking that open potentials for the creation of new realities. Postcolonial discourse and the concept of vertical and horizontal discourses theorised by educational sociologist Basil Bernstein will provide the lenses by which we describe our collaboration, which is partially performed herein through language. We propose to describe our discourse of intervention as discourses in which each dialogue is a deliberative "language game" played out through the metonymy of ideas in our fields (e.g. belonging and fuzzy membership functions) to produce a subject always different to itself. By interjecting interventions between and among our respective territories of knowledge, we hope to create a new mode of practice that is neither trapped by our territories nor a duplex copy of them, but rather multidimensional transmissions reinterpreting our meaning structures.

INTRODUCTION
In psychotherapy, an ‘intervention’ is brought upon a person undergoing self-destructive behaviour by people who are socially meaningful to the person. In architecture, an ‘intervention’ is brought upon a space to reinvent space and form by rejecting bonds to the history of space and place and the historicity of norms of architecture. In collaboration, an ‘intervention’ is brought upon fields of knowledge to unmap and destabilize official knowledge such that notions of specialised methods, canonical definitions, and established identities constituting a field of knowledge are eschewed in favour of uncircumscribed potentials.

This paper explores how we rupture our respective disciplines through what we term ‘discourses of intervention.’ Our ‘discourse of intervention’ is like a half-way house between the games of word association and Chinese Whispers. Each dialogue is a deliberative “language game” in the Wittgenstein sense played out through the metonymy of ideas in our fields (e.g. belonging and fuzzy membership functions) to produce a subject always different to itself. The smearing of the edges between fields of knowledge regularly features in our style of collaboration. The focus is not on creating a discourse that is individuated, that is inscrutable to others, but rather individualizing the discourse to produce a voice that is contextualized to the object of study and legitimized by standpoints of our respective experiences as ‘members’ of specific bodies of knowledge. The discourse in our collaboration moves away from a high degree of classification and tight framing to a pedagogy of incoherence. The dialog that we produce must at once be structured by our respective fields of knowledge as well as structuring the structure of the new fields of knowledge we can produce. The language of our collaboration is a microcosm of ‘languages of legitimation’ [1] that struggle to overcome the institutional spaces carved out by occupational categories and accumulation of canonical facts.

The article begins by describing our current collaborative artwork, which itself performatively produces a discourse of intervention. From the description of the artwork, we then describe in our own voices each of our perspectives, territories of knowledge, and language, and the dynamics of our discourse of intervention that participates in relating ourselves to the artwork and our engagement to each other. The theme of the ‘incoherent’ and the ‘intervention’ is reflected in both the process and production: that is, the discourse and the artwork. We consider the implications of our discourse of intervention as a way of working and thinking that neither de-legitimizes our respective territories of knowledge but allows for new ‘lines of flight’ [2] from them. In seeing the differences in the way that we deploy language and terminology to the ‘common’ notion of ‘discourses of intervention’, we can theorize a shift from lines of division and separation to those which might carry us across unknown thresholds.
**THE WORK**

Our current artwork, ‘Impossible Geographies 02: Urban Fiction’ (IG02: Urban Fiction) is concerned with the development of a mobile topographical network that reads, remaps, shifts and rewrites multiple (urban) geographies. The work follows on from ‘Impossible Geographies 01: Memory’ (Fig. 1), an interactive installation that explores the creation and manifestation of memory where the physical interfaces the virtual [3]. Using networked, location-aware mobile devices, the second series of ‘Impossible Geographies’ situates itself in the field of Locative Media that emerges from the paradox of surveillance technology used for social control and a critical engagement with the underlying mechanisms of the information society. The work recognises the ambiguity and tension between the ‘placed’ and ‘displaced,’ ‘marked’ and ‘unmarked’ territories, and political, cultural and geographies of desires. By moving beyond a single-site bound gaze to multiple sites of observation and participation by audiences, the resulting work is both inside and outside the worlds of the viewers. That is, it is itself an enabler of discourses of intervention by displacing and replacing images of what counts as cultural encounters.

The medium of the work consists of integrated mobile phones that are becoming ubiquitous. These devices integrate wireless communication protocols such as Wi-Fi and Bluetooth for data and GPRS and 3G for voice and data with personal digital assistant features and multimedia capabilities including a digital still and video camera and polyphonic sound. Additionally, we include a global positioning system (GPS) sensor, a 6 degree-of-freedom (DOF) gyroscopic accelerometer, and temperature sensor. The device becomes the instrument for the participants to read and to interact with the urban fabric and at the same time the window (or lens) to pass through a virtual, continuously adapting geography that weaves in the physical fabric. Moving through and sweeping along this virtual topography with the handheld devices, the participants connect to the other locations and, at one and the same time, ‘knead’ and re-sculpt the urbanscape. Adding multiple forces from different directions, they will destabilize the texture and will thus be able to pull from, pierce, fold and deposit layers of images and sounds of each of the network’s location (Fig. 3).

It is the mobility and motion of the mobile phones that sets up the performative tension between varying degrees of resistance, transparency and intricateness to enact a topography that can only be recalled where it was touched and where traces have been left. The technological interface is at once the instrument that provides access, probes into and interacts with the rewritable topographies and also is investigated as it mediates, manipulates and influences the reading of the probed and interfered. The result is a fiction produced and shared between all participants and yet observed and uncovered through one’s personal window, the screen of the device display and the headphones.

**Fig. 1.** ‘Impossible Geographies 01: Memory,’ where a collage of past moments seeps into the present.

**Fig. 2.** IG02: Interpretation of GIS data.  

**Fig. 3.** IG02: Sculpting hybrid geographies.

The confrontation between the different readings of urban geography is based on the negotiation of the participants’ location using two different epistemic systems. One pertains to an allegedly ‘known’ and ‘placed’ and consists of geographical maps and corresponding geo-referenced data retrieved from geographic information system (GIS) datasets (Fig. 2). The second is inherently subjective and ambiguous and consists of the individual traces of the participants’ movements and practices as well as memories,
associations and desires that can be mapped to a growing web archive by participants online. This data will be woven into a fluid fabric materialized as an audio-visual representation of the space that spans between all locations. Its topographical shape and zones of varying degrees of elasticity and porosity results from the interpretation of the location and the actions of the participant in the location (see Fig. 3). The mathematical formalism of fuzzy logic will give us the machinery by which to calculate the magnitude of participation of the topographies from vague, imprecise and ambiguous information. By modifying membership functions, alternative topographies are possible, even those which may be ‘impossible.’

**THE DISCOURSE: THE ARTIST’S WORDS**

New Media Art and in particular Locative and Pervasive Media are deeply entangled with the development and enhancement of technology. One of the most important aspects in bringing together the everyday, art and technology lies in “the transformation of the real through the concept of the virtual.” [4]. It is precisely these technologies that bring about and make this change in conceptualization necessary. The resulting transformative interplay of all constituting elements relies on their differences as much as on their mutual effects and interrelations. Henri Lefebvre speaks of a “double illusion,” where each illusion embodies and nourishes the other, rather than coexisting in a rigidly antagonistic opposition [5]:

“The shifting back and forth between the two, and the flickering or oscillatory effect that it produces, are thus just as important as either of the illusions considered in isolation.” [6].

Oscillating and flickering, a “third space” emerges, enabling an in-between that allows for the interplaying parts and their boundaries to be negotiated and thus perforated. According to Papastergiadis,

“The third space does not point to an ideal stage of accomplishment, but rather to the process of critical interaction that occurs within and against the structure of a binary.” [7].

This space always remains unfinished and produces points of contact and leakage, lines of continuity and cracks, planes of reflection and polarization in-between [8], rather than fixed positions and familiar boundaries of delineation.

Translating and perforating the boundaries between our disciplines, we find ourselves on the unsettled ground prepared by postructuralism, its pluralism, ambiguity and unfixedness. Being ‘neither-nor,’ it is a hybrid space and as such fluid and elastic; a process rather than a containment. Our collaborative work ‘IG02: Urban Fiction’ investigates how such boundaries (i.e. between various urban spatio-social geographies) can be read and renegotiated by perforating the borders and remapping their political, cultural and epistemological relations. The generative framework of the mobile installation also encourages participants to explore these mechanisms of ‘reading’ and ‘writing’ geographical boundaries as interacting with this other hybrid geography means negotiating an alternative set of relations between subjects and places [9]. Moving through this impossible geography produces a narrative that perpetually blurs the lines of belonging and unbelonging by unweaving the threads of the known and the archived.

Similarly, we seek these niches and folds in our performative discourse. Katharyne Mitchell, following the postcolonial discourse of Homi Bhabha, sees in the spaces of the margins

“the unfixed spaces in-between states and subject positions that are vaunted as the location of resistance and intervention in hegemonic narratives of race, culture and nation.” [10].

‘IG02: Urban Fiction’ performs what Bhabha describes as the “turning of boundaries and limits into the in-between spaces.” [11]. Developing such ‘spacing’ processes and their computational expressions thus similarly operates in such a ‘third space.’ Or seen from another perspective, it is the ‘third space’ emerging from our discourse of intervention in which the artwork unfolds and creates another ‘third space’ that can be explored by the participants.

Analogous to Lefebvre’s notion, the importance of hybridity that characterizes such a ‘third space’ lies in the potential for other positions to emerge, rather than in the possibility to trace two original moments from which the third emerges [11]. The avoidance—or impossibility—of completeness in this in-between or neither-nor follows Jacques Derrida’s idea of signification. As gaps between the signer and the signified can never be sutured, the space remains incomplete and thus ambiguous. Our discourse of intervention then produces a narrative in which boundaries, in Bhabha’s words,

“may be acknowledged as ‘containing’ thresholds of meaning that must be crossed, erased, and translated in the process of cultural production.” [11].

Spacing such an unsuturable gap often implicates a ‘rupture’ that, according to Jacques Derrida, is inherent in the translation from one language to another [12]. We can also find this performative act of rupturing in the mark of Derrida’s notion of a signature, implicating a force due to the spacing which constitutes the written sign: “This spacing is not the simple negativity of a lack, but the emergence of the mark.” [13]. In the context of our work it is not only the signification that remains incomplete, but also the signature. As signifying and signified are displaced, the act of signing oscillates between other point of views, creating an interplay between signing and countersigning. The rupture then not only opens the space but might also afford a displacing of the mark itself: ‘IG02: Urban Fiction’ displaces the marks of physical boundaries and traditional cartography by emplacing traces of personal desires and different cultures based on the computational translations of fuzzy logic interference.
Rupturing, displacing and perforating always implies injury and loss and the in-between space created is thus unstable and vulnerable. Donna Haraway, for example, speaks of “the sciences and politics of interpretation, translation, stuttering and the partly understood.” Here, in Haraway’s words, “location is about vulnerability,” resisting the politics of closure and fixation but rather “insatiably curious about webs of differential positioning.” [14]. As we aim for an urban ethics of difference, both our discourse and its artistic outcome relate to the dominant hierarchies of Cartesian cartography only by unmapping and distorting them in order to allow for unscripted desires and impossible fantasies to be read between the uniform lines of the grid.

It is then the loss involved in this discourse, together with its vulnerability, that is able to unsettle discursive knowledge systems that gravitate around known. Sarat Maharaj sees the unscriptedness of such a hybrid flow “at odds with knowledge systems that define themselves according to rigorous disciplinary boundaries, methods, procedures.” As we seek perspectives from viewpoints that cannot be known in advance, we cannot rest on prior known rules or aim at knowable ends that could be spelled out before the event [15].

THE DISCOURSE: THE ENGINEER’S WORDS

Basil Bernstein’s œuvre dealt with the transmission of pedagogic knowledge and its entwinement with economic and social class and the economic rationalisation and capitalisation of knowledge. Bernstein is careful to note though that his theory is intended to apply beyond the school context to any context in which relationships exists for the purpose of knowledge production-reproduction. One of the most socially progressive aspects of his theorising deals with pedagogic rights. Bernstein proposes three pedagogic rights: 1) individual enhancement; 2) social, intellectual, cultural and personal inclusion; and 3) participation in a discourse and practice that must have outcomes [16]. What is remarkable about these rights is that they set the pre-conditions for reproduction. One of the most socially progressive aspects of his theorising deals with pedagogic rights. Bernstein proposes three pedagogic rights: 1) individual enhancement; 2) social, intellectual, cultural and personal inclusion; and 3) participation in a discourse and practice that must have outcomes [16]. What is remarkable about these rights is that they set the pre-conditions for reproduction.

It is in Bernstein’s later work on horizontal and vertical discourse [18] that we find a framing for our discourse of intervention. Bernstein describes horizontal discourse as common, everyday knowledge that operates in segmented contexts. For example, the knowledge that I need to choose a suitable jumper to wear to an art exhibition is segmentally and contextually different from the knowledge I need to turn on the tap. In contrast, vertical discourse is a systematically and hierarchically structured set of knowledge that manifests as specialised language and criteria for both the production and the circulation of the knowledge. Within vertical discourses, Bernstein goes further to distinguish between hierarchical knowledge, in which theory is the metric of achievement, and horizontal knowledge, in which specialised languages and the perspectives and positions that they produce constitute the currency.

A ‘discourse of intervention’ is deployed when the reading of a vertical discourse (the horizontal knowledge structure of the arts) is problematic from the viewpoint of another vertical discourse (the vertical knowledge structure of the sciences and engineering). Thinking of this discourse as part of and expressing the driving forces enacting our collaborative artwork, the discourse behaves performatively to enact and produce that which it names. By engaging in a conversation with the object we are shaping, the designed work is materialized through these conversations. The discourse intertwines us in a mutual ontological circuit of recognition by harnessing and representing that which can be converted and said. Therefore, the discourse of intervention itself participates in the enactment of our collaboration.

Our collaboration through discourses of intervention can be seen as a particular way of creating meaning and of representing a projected reality through language. Thinking of our discourse of intervention as performative opens up the space of terminology to characterize our collaboration as one which operates partially through a linguistic system of representation to: 1) aggregate—to blend ideas and concepts; 2) accumulate—to scaffold ideas and concepts; and 3) appraise—to evaluate and assess ideas and concepts; and through these enact the collaboration and make representable and recognizable the work of art. Through language and a style of collaboration characterized by discourses of intervention, the unmapping comes to inhabit the work.

THE SHIFT

The diagram shown in Fig. 4 depicts ‘starting points’ for our discourses of interventions arising from terms which signify knowledge in our respective territories. Terms connected by a vertical axis denote interventions between vertical discourses; terms connected on the horizontal axis denote interventions between horizontal knowledge structures of vertical discourses. The discourses take place in the spaces connected to these terms and seek to expand them.
While Bernstein rather pessimistically characterizes our creation of a new ‘language’ as possibly to “challenge the hegemony and legitimacy of more senior speakers” [18] and to mark a new territory, we see the intervention as an essential aspect of demapping the privileged vertical knowledge structures in order to reveal new possibilities from them. The intervention reads the process of requiring vertical and horizontal discourses to be acquired for the collaboration not as a process of remapping, hybridizing or genericizing but rather a process of crossing lines of division and separation along trajectories which might carry us across unknown thresholds.

The notion of discourses of intervention expresses then both a mode of working and an effect of working through the aims of the artwork. Ideally, the ‘incoherent’ and the ‘intervention’ function in tandem between process and production to effect a mode of discourse and collaboration that create an outlet through the artwork.

**PARTING THOUGHTS**

Negotiating disciplinary boundaries and celebrating the interventative questions traditional notions on both the production of knowledge and practice based research. The research literature on collaboration is effused with terms such as mental models, shared understanding, teams, groups, groupthink, distributed cognition, group cognition, and communities of practice as various ways to explain variations in and to account for collaborative performance. Others writing about arts collaboration suggest that learning how artists approach problem solving can lead scientists and engineers to technological advances [19]. Ruth West wrote about her collaboration with scientists in the following way:

“Each member of the team wrestled with knowledge from other disciplines to understand the inner workings and develop an informed basis upon which to participate in the creation of the artwork.” [20, p. 292].

We hope that our characterization of ‘discourses of intervention’ brings memories of the ‘wrestling’ that West writes about and of the learning to suture the contact surface between art and science with tools, approaches, and technologies that Plautz aims for.

We propose that our capacity to perform collaboration in the context of art is opened up by the “inbetweensphere” of our discourse of intervention [21]. The resulting space of this hybrid discourse is not so much a space of radical openness but rather a space, where the self-referential (closed) loop of metaphors is perpetually interrupted and the boundaries between subject and object are shifted, bent and pierced—at any time. It is where, according to Sarat Maharaj, “all sides” experience divestment and turbulence and even undergo critical break up and meltdown:
“It is where the mainstay of the law of equivalence – self/other, subject/object divisions – dissolves in preparing the ground for reciprocal, reflexive contamination. … As self/other routines of retinalized presentation grind down, an ever-altering flow of becoming and difference comes into play.” [15].

References and Notes

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