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'Transactables'

Co-authors Wayne McGregor & Alan Blackwell. in <u>On The Page: Performance Research</u>. 9:2. 2004, pp. 67-72.

In August 2003, inspired by work with choreographer Wayne McGregor on his 'graphic scores' and computer scientist and cognitive psychologist Alan Blackwell on the 'cognitive dimensions' of the use of notation, I sent in a proposal for this article to <u>Performance Research</u> for their themed issue 'On the Page' which called for material "about modes of making registers of creative activity -- forms of description in the traces".[1] The writing of this coincided with the formal start of the 'Choreography and Cognition' research project in November 2003.[2]

<u>Performance Research</u> is a specialist journal published by Routledge that promotes a dynamic interchange between scholarship and practice in an expanding field of performance. Interdisciplinary in vision and international in scope, its emphasis is on research in contemporary performance arts within changing cultures. Source: http://www.tandf.co.uk/journals/titles/13528165.asp (accessed 7 May 2010).

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[1] Email to the author, 1 Jul 2003.
[2] Documentation site: http://www.choreocog.net/ (accessed 7 May 2010).

Transactables

SCOTT DELAHUNTA, WAYNE MCGREGOR AND ALAN BLACKWELL

BETWEEN BODIES *Scott deLahunta*
Contemporary choreographers and dancers make use of the page as a site for creative drawing, writing and sketching. Often but not always accompanied by video registration, they employ the page as a toolkit for self-reflection /examination, for the collective documenting and sharing of creative ideas, scripts and scores, capturing the dynamics of gesture and recording notes for future reference. As such the page becomes an interactive object inextricably linked with the processes of dance making.

Whichever of these is the primary function of the page, whether part of a generative process or used for storing information for future retrieval, the choreographer's drawing or sketchbook also tends to be bound up with the making of a specific work – as temporary in usage as the performance itself is impermanent. Some evidence of the process is contained in the miscellaneous markings – the curves, boxes, lines, arrows, words and symbols – but usually with little annotation or explanation that would make them meaningful to anyone not part of the creation. Meanings may even be lost over time to those who have made the drawings originally, to be rediscovered in the rehearsal of a movement, action or gesture, suggesting a connection between mark making, memory and the sensorimotor systems.

Looking at a particular choreographer's notebooks over time, there will be certain stylistic consistencies related to habits or use of familiar graphic forms, etc., but essentially these representations are freed from formal conventions. Unlike more comprehensive notation systems, such as Labanotation and Benesh, drawing and sketching will be deployed by particular choreographers and dancers to serve their needs; they are contingent upon and contiguous with the making of specific choreographies and are perhaps best understood as dynamic influences in the process, as marks and traces to be used as triggers and stimuli, as a catalyst to artistic creation. In this context, as the emphasis of its significance shifts to usage or interpretation and re-expression in a movement, action or gesture, the page becomes less a static site for symbol depiction and more of an interactive object. Importantly, the page should not only function in this capacity for its choreographer/ dancer author, but also as a shared site for others who may be collaborators on the artistic team, for example other dancers, composers, designers, and so on.

There have been a large number of studies over several decades into understanding the use of graphic representations that are not part of formal notation, language or symbol systems.[1] They have tended to focus on the static versions of these representations, seeking across them for formal properties and meta-nomenclature that might be useful in helping visual designers intent on effective communication in different contexts; but there has been little or no study of their use in choreographic practice.

Ellen Schwartz, in her introduction to a little-known book entitled *Tracking, Tracing, Marking,*

[1] For example: Willard C. Brinton's *Graphic Methods for Representing Facts*, New York: McGraw-Hill Book Company/ The Engineering Magazine Company, 1919; Rudolph Arnheim's *Visual Thinking*, Berkeley: University of California Press, 1969; and the collections of Edward Tufte: *The Visual Display of Quantitative Information*, 1983; *Envisioning Information*, 1990; and *Visual Explanations*, 1997; all published by Graphics Press, Cheshire CT.

[2] Ellen Schwartz (ed.), *Tracking, Tracing, Marking, Pacing* (catalog from movement drawing show), NYC: Pratt Institute, 1982. The exhibition contained material from the sketchbooks of many choreographers including Lucinda Childs, Elizabeth Streb, Molissa Fenley and Remy Charlip.

[3] Lawrence Louppe (ed.), *Traces of Dance*, Paris: Editions dis Voir, 1994.

Pacing published as part of an exhibition of choreographers' drawings she curated in New York City in 1982, breaks these up into two categories: 'functional' consisting of systemic and free-form drawings; and 'non-functional' in which the relationship between the mark and the movement is more 'oblique'. [2] But beyond this she says little about the relation between the drawing and the nature of the movement with which it may have been associated. In the introduction to her edited book *Traces of Dance*, dance scholar Laurence Louppe comes closer to articulating this coupling of the corpus of the written and the danced by posing questions and impossibilities such as how to make sense of marks on the page that are not part of a formal notation system without its dancing author. [3] She summarizes what survives in the archive of choreographic drawings and notebooks as 'unfinished writings' that 'exist but halfway, in the absence of the body that alone can read you'.

One of the questions we asked in the context of the Choreography and Cognition project was how are notebooks and scores used by Wayne and his dancers in the process of making a new dance work. We were interested in the practical and functional possibilities of a systematic approach that perhaps Louppe is less inclined to recognize in her view on the limits of writing and the absences of bodies.

LIVING SCORES *Wayne McGregor*
Yesterday – Jan 1992 to Jan 2004
Over the past 12 years of creating I have accumulated many 'diaries' or notebooks of the intimate act of dance making. They are objects of the process of generating each individual piece, and contain ideas which are exposed and made visible through text, drawing, mathematical problem-solving, spatial geometry and generally engaging questions about the nature of form and content translated through tasks and onto the page.

Today – 1 Feb 2004
Recently, on re-reading the notebook entries as a part of facilitating a shared understanding of

my choreographic process to the group of neuroscientists involved in the Choreography and Cognition project, I started to question my own assumptions about my dance making practice. This framework for reflection has allowed me time to better understand the complex and complicated interventions of thought translated to paper, and indeed the need for me to have this tool, the page, to dialogue with: not at all as straightforward documentation, a simple record of the dance piece, or a notation in the traditional sense of the term where the 'diary' could be used to reconstruct the piece, but an active, living, ideas score. The notebooks are a space full of sets of information, geographies, territories of exploration, where side by side they start to describe process as a continuum of investigation where each piece seems to signify a marker in time rather than a completed and final destination.

In different ways, there does seem to be a systematic development in the entries, not in terms of an aspiration for a formula of making, but a clarity of intention and attention. Tasks are modulated, reformed, reinterpreted at various points in one process, to be then rediscovered or at least revisited in a much later one. Ideas which are rejected in one piece are energetically excavated in another, and this is explicitly illustrated in the specifics of the choreographic tasks which are invented to suit the new questions. In other words, there is a dynamic interplay between knowledge(s) of the past, with concepts of the future being researched within the boundaries of the present.

It was surprising to see when analysing my own notebooks that detailed information related to the body in motion, the body in space, the body in time, the body at all, is an *exceptional* entry. It's as if these choreographic intelligences do not need the syphon of the page to be articulated or discussed in any other space than the studio itself – concepts of the body mediated directly in real time and space intimately and in person with the individual dancers themselves.

The page facilitates a notion of an alternative

body (or is it 'mind'?) to collaborate with, outside of yourself, yet at one with your line of enquiry. We often describe dance as an exemplar of non-verbal communication but I have realized that the 'product' may be without words but the process of creativity is heavily reliant on them. Here, on the page, there is no verbal exchange, no explanation necessary, but a tablet for physicalizing thought without full-bodied dancing. It's a visceral experience though: bold mark making, animating descriptions of ideas, noting confused number sequences, the workings out of mind into matter, matter transformed into art. The page allows you to discover elements of yourself and the notebooks become the honest (bio)grapher.

Tomorrow – 3–5 June 2004 Sadler's Wells
The experiences of analytical, conceptual and challenging thinking from the Choreography and Cognition project have provided a vibrant catalyst for change. This change has been affected by the type of questions asked of the art-making process, which have been framed far outside my normal considerations in creating dance. It is this intervention that has most activated growth and this disruption to conventional ways of doing things which has inspired me to unlearn. This unlearning is reflected in the design thinking for my new work AtaXia where our aspiration is to uncoordinate our foundations of aesthetic knowledge – no more so than in the use, content and form of my Living Scores.

As part of the process for this piece, each dancer will have their own generative score which they can annotate, draw on, extend and individually breathe life into. In collaboration with designer John Warwicker the initial illustrated scores have been developed in a series of complexities. These are points of departure for choreography. What fascinates about the content of the given score is as much the information that is invisible as visible. There is an absence of complete form which generates a loss of control in reading. The meaning(s) of the primary stimuli are ambiguous and it is one of the

jobs of the creative process to uncover a plural approach to understanding the grammar and syntax of this new graphic language. In a semiotic sense, what are the signs and symbols of this material that communicate meaning(s)? How can we utilise them, translate them and exploit them to say something new about the body, interpersonal relationships and life?

Looking differently at sets of information stimulates creativity, and when this is harnessed with 'operational' tasks for translating this data into movement, a very special chemistry occurs. The scores themselves, accompanied by instructions on 'how to look', provide a dynamic imaginative space from which improvisational and generative tasks can take place. These ideal conditions set up a safe and engaging environment in which to play with movement, often inspiring a physical behaviour or language which is unnatural, uncommon for the body to execute. It is in this sense of generating the unexpected that the living score excels.

HOW IS IT POSSIBLE TO DISCOVER
THE FORM OF AN IDEA? *Alan Blackwell*
Choreographers, like architects, engine designers and computer programmers, transform mind-stuff into tangible products – our artificial world. For these and many other design disciplines, it is marks on a page that mediate the process of transformation. We know that complex design practices require media for communication – blueprints, scores or specifications – but these are substitutes for shared experience, and documents of the creative act. The notational conventions of such media divide the 'sentential', language-like conventions in which a series of symbols are read off the page like the words in a sentence, from the 'pictorial', mappings of observed experience onto the marked plane. We are familiar to the point of unconsciousness with the nature and function of such notations as a communicative score, acting as surrogate when the designer is no longer present, and allowing performers or manufacturers to interpret a (more or less) authorized work.

Yet the designer's page need not be simply a medium for communication. Sketches and private working documents often participate in a more intimate process. Where a work in progress has many parts or properties, a 'computational offloading' employs the page as a surrogate for short-term 'working' memory. This process results in many blurrings between the sentential and the pictorial. Where working memory might consist of a mental language of words and phrases, or snapshot visual images, sketches combine these elements in more elaborate or ambiguous ways. The designer engages in a dialogue with the page, externalizing, then looking to see something new. The page becomes a site for encounters of cognition and creativity, and also a fertile ground for research into the philosophy of mind.

Many fields of technology design are sufficiently new that they are still inventing their first notations – at a level of historical development that might be compared to 12th-century musicians, 17th-century dancers, or prehistoric rock deer hunters. It was the gradual realization of how I was reinventing these wheels that distracted me from my career in high technology, entering psychology research in order to understand the formal properties of markings on the page, and the human experience of making and seeing such notations. I now collaborate with a small international research community dedicated to the study of diagrammatic reasoning and visual languages. We adopt analytical methods from mathematics, philosophy, semiotics, experimental psychology and design research to describe the properties of existing notations, and anticipate the best choices for novel notational systems.

The results of these investigations can be applied also to the contemporary practice of traditional arts such as music and dance. Better understanding of the use of notation liberates both performers and composers, enabling compositional and interpretive innovation. In the Choreography and Cognition research project referenced in these pages, the results of nota-

tion and design research are being used to structure interviews with dancers and choreographers. Leading choreographers like Wayne McGregor develop new conceptual structures in part on the page, bringing great potential for adopting notational elements from other design disciplines. We facilitate this transfer of experience through structured taxonomies of the language of graphics, and through patterns of experience in the way that notations either encourage or obstruct particular profiles of design activity. [4]

We have used the Cognitive Dimensions questionnaire to discover the respects in which Wayne experiences the limitations of his design tools. [5] A great deal of his notational activity is concerned with 'accounting' processes, applying dance and spatial resources within a conceptual impetus. From our cross-disciplinary design perspective, we can imagine ways in which even mundane conventions from the world of professional accounting might be transfigured or subverted toward the innovative demands of contemporary dance. We are also able to contrast the personal styles of dancers who employ abstract representation when inventing notational devices, versus those who emphasize verbal or spatial operations. Dancers in the Random Dance company use paper as a problem-solving medium in which to solve and record improvisational exercises, but do not want to be distracted by the detail of the compositional process, or material that abstracts expressive movement away from the body. Balancing demands of these kinds is the art of the notation design researcher, and the challenge for the next phase of our work.

4 References include: A. F. Blackwell and T. R. G. Green, 'Notational Systems – The Cognitive Dimensions of Notations framework', in J.M. Carroll (ed.) *HCI Models, Theories and Frameworks: Toward a Multidisciplinary Science*, San Francisco: Morgan Kaufmann, 2003, pp. 103-34; Y. Engelhardt, The language of graphics, PhD thesis, University of Amsterdam, 2002; T. R. G. Green and M. Petre, 'Usability Analysis of Visual Programming Environments: A 'Cognitive Dimensions' Approach', *Journal of Visual Languages and Computing* (1996): 131-74.

5 A. F. Blackwell and T. R. G. Green, 'A Cognitive Dimensions Questionnaire Optimised for Users', in A. F. Blackwell and E. Bilotta (eds), Proceedings of the Twelfth Annual Meeting of the Psychology of Programming Interest Group, 2000, pp. 137-52 [http://ppig.org/papers/12th-blackwell.pdf].

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AtaXia scores by John Warwicker with annotations interpreted by dancers Laila Diallo *(left)* and Claire Cunningham *[over page)*.
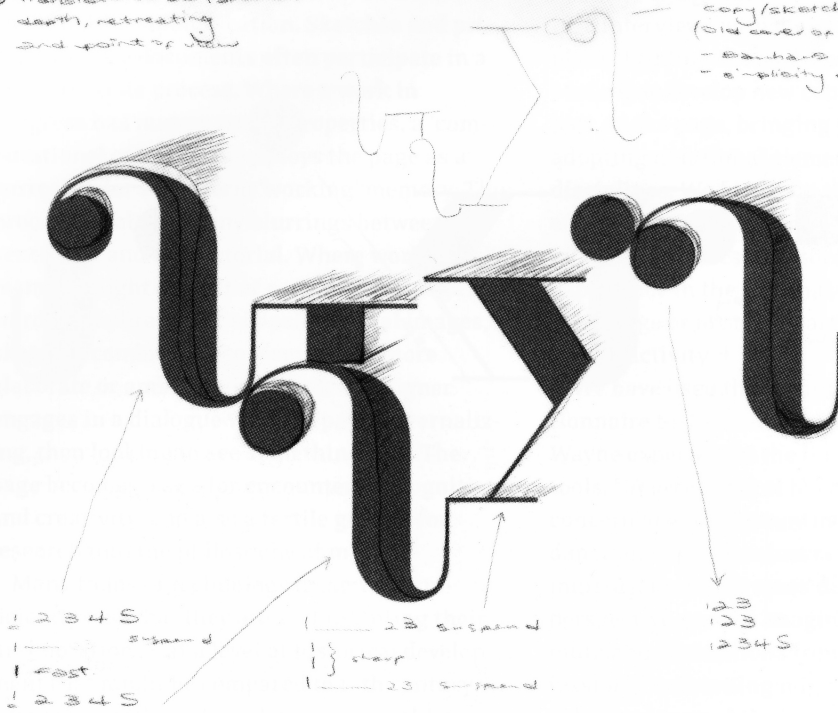
...Eventually, the living score becomes a detailed reference, a map of investigation, a memory of intention. It will be personalized, made individual, unique, but at the same time collective, shared and coherent. Everybody will read and interpret their own score with their remembered understanding of the process, a private testament to our particular contribution to the work, the piece itself the public face of a collaborative endeavour.
WAYNE MCGREGOR
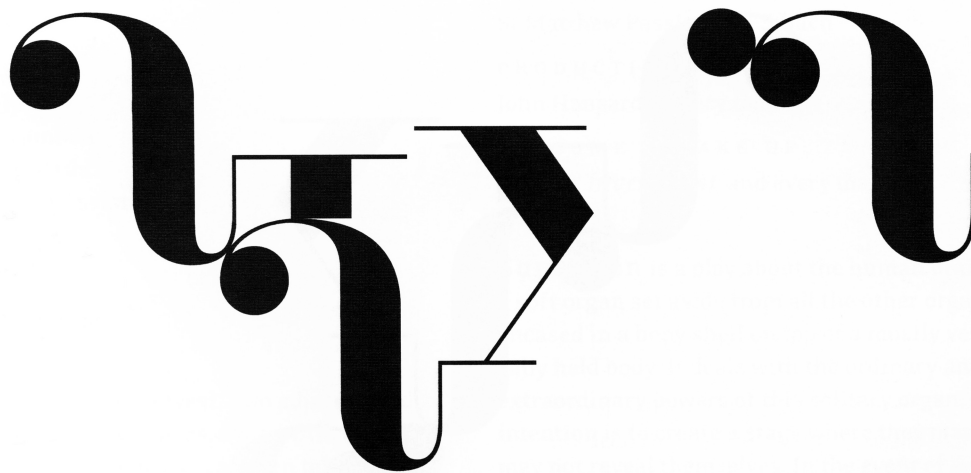
② Translate to 3D (spatial)
depth, retreating
and point of view

① describe what is visible (visual)
copy/sketch/outline
(old cover of 'A clockwork orange')
- Bauhaus movement
- simplicity of ...

1 2 3 4 5
1 —— 23   suspend
1 fast
1 2 3 4 5

1 —— 23 suspend
1 } sharp
1 —— 23 suspend

123
123
1234 5

④ rhythm of the elements
(social, kinesthetic)
situation, time, duration

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