materiality I have in mind is a semiotic materiality, one dealing with the text as text, i.e., in its textuality rather than its visual appearance. I would also like to take the opportunity of this sessmn to point out that the artificial division and separation of tasks between authors and designers (each dealing with the text as if it was a different object) has and is preventing the emergence of new forms of textuality in print and multimedia. The paper ends with a call and rationale for rethinking the traditional boundanes erected between design and authorship and identifies a productive example of intervention across media.

From this perspective, graphic space – the space in which texts occur (space here does not just refer to physical space but to a serruoloqical one; likewise, text does not merely refer to lines/stnngs of words, unfolding along a linear axis but, as etymology allows us, after Barthes, to a multilinear network of relations between threads) which, woven together, could extend the quantity of infomnation presented: in this example, through annotations and commentaries fitted between the lines and in the rnarqins: or generate new spares/platforms, as anticipated by artists and designers m the early 80s and, more importantly, new structures capable, according the hermeneutic propositions of Ricoeur (1981), to open up new meanings, new possibilities of interpretation.

Implicit throughout the paper rs a critique of the limitations of visual values in multimedia, which simulate visual experimentation, but in effect inhibit semiotic innovation – or what we might uill a semiotic vlsuality – by confining reading and writing to a "retinal" rather than a conceptual experience (to adopt Duchamp's expression). In this respect, the paper offers a critique of (retinal) visuality, from which visuality (conceptual visual!ty) will come out enhanced.

This epistemological mutation I envisage for multimedia authoring calls for a thorough examination of historic precedents and a fresh look at print and other media which, at various stages of their histories, have attempted to evolve new fomns of textualrty long before the appearance of electronic texts (Seaman, 1972).

It also involves considering the productive role of metaphors (Derrida, *Whrte Mythology;* Ricoeur, 1986:284-) m generating new insights. In this respect, II would be fatal to ignore the experimental work carried out in other fields by Godard and Greenaway in film, Barthes and Eco in literary criticism, Derrida in philosophy, Tschumi in architecture, as it is to read them superficially, under the pressure of intellectual fashions, and let them become mere alibis for conservative practices...

Concentrating on one concept. What, either in the moment of writing or in the process of reading-and, with due attention to etymology, we may call graphic space? I would like to suggest that this notion would gain to be theorized in sernioloqical rather than in purely visual-aesthetic temns, as it is at present, so that we may highlight the as yet unrealized sermonc contributions of the visual to the staging of mformation, the presentation of narrative and the development of multilinear structures. I say multilinear, rather than non-linear, as I feel somewhat sceptical about the claims of non-linearity, so widely- and, it seems to me, so uncritically-evoked in discussions of hypertexts.

GraphicSpace: the space where writing is ins*en* bed either in manuscript or printed form... the space where the text is laid to rest, preserved and/or entombed for postenty; but, simultaneously, opening itself to "an unlimited series of readings" (Ricoeur, 1981:91)

With the advent of writing, the text unfolded the linearity of the signifier along another second or third material axis, outside the body but mimicking its movement along a baseline before assuming more abstract conventions in anaent Egypt, Greece, and the Near East.

At that point, the body of the text subsided mto the metaphorical space of the specialist jargon of typographic workshops. Meanwhile, in the pursuit of specific functionalities, writing retained the scroll format, alongside the codex, from Ancient Egypt through to the modern period, and the scroll mg texts of electronic media.

The apparent linearity of the text, itself a direct consequence of the linearity of the signifier, has become a common diche of discourses which set out to valorize electronic alternatives to printed texts. The problem with such assumptorsts that they seem to confuse texts with their material support

From this perspective the same attribute of linearity may be imputed to James Joyce as to any example of pulp fiction. Ironically, as the reading process would indicate – were it made visible – this so-called linearity is only of the eye, not an attribute of the text or of reading, but external to it; for in the course of reading, (starting at the most basic level of sign gathenng) the processes through which the text is apprehended do not present these characteristics.

On a purely ergonomic level, for instance, legibility research has suggested that m the course of reading the eyes do not follow a unifomn linear pattern, but jump from one duster of letters/words to another, punctuating this with fixation pauses, which represent 94% of the total reading time; reverting, when necessary, to an earlier sections of the text, before moving on, by a series of jerks which, paradoxically we perceive and experience as a regular linear pro-

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On Multimedia Syntax:
A Semiological Perspective (What We Might Learn From Print)

My initial idea for this paper was to examine multimedia syntax, using semiotics as a tool to critically evaluate concrete examples of CD Rom and web site designs, and to outline a few suggestions for future developments. Given the limited time available, however, and after reading the introduction to this session and the abstracts, in which issues of narrative, the linearity of texts and interactivity appeared prominent, I have decided to focus on and problematize what I propose to call the dual materiality of texts, more specifically their typographic materiality, and consider some implications of that materiality on multimedia authoring. In the light of recent hypes and wild claims that print was dead, it is important and relevant not to loose sight of the contexts in which certain key concepts about reading and writing have emerged and evolved, before the advent of electronic media/platforms.

I would like to point out that I have greater ambitions for typography than the ergonomic or hedonistic functions it rs traditionally associated with in print and multimedia. The typographic

qression, rather than as the subliminal visual cacophony analogous to what really happens.

If this process could be made visible and translated typographically, it would not echo the carefully considered word and letter-spacing, leading, line length of classical or functionalist typography, but an irregular/chaotIC rythm which broke the rules, like some examples of new typography. By not availing themselves of the means to act meaningfully upon the text as text, the new typographies have failed to open up new fomns of textuality.

Subvervient to an authonng process from which they are excluded, the new typographers only inter-vene on one materiality of the signifier, (generating a visuality which works in parallel with the writing of content, but without impinging upon it.except as visual flirtation). Reduced to a packaging role, dressing common-place journalism in seemingly experimental visual fomns;the scope open to design-ers is to make ordinary messages appear more exciting. in the eyes of a gullible beholder. In doing so, designers have/are being denied (are consistently denying themselves?) the opportunity of participat-ing in the process of authorship. Given the clear-cut separation between authoring and design, in the world of publishing. (for an exception see *S, M, I., XL* by Rem Koolhaas and Bruce Mau) artistically ambi-tious designers are reduced to manipulating and styling graphic signs which carry authorially fixed/formated meanings.

The implications are far-reaching; as the task of typography was,and still is, in the main, regarded as providing a material form for the representation of texts and, therefore, as external to the process of authorship; it has retained its role as an adjunct, carried out by designers who are constantly remind-ed that their task is to serve the text and the author, with the intimation that they should not inter-fere with content. Recent attempts to intervene in magazine design-where the materiality of the text is emphasized through retinal forms of visuality, are not transferable to other graphic genres, as they manipulate the text from the outside, not at the level of its textuailty.

To summarize, it may be useful to distinguish between two fomns of"visuality" applied to texts:

1) A visuality which draws attention to the external/retinal materiality of the text, engaging readers/viewers in a kind of visual play/puzzle delays in the denotation of the text. This ten-dency gets usually characterised – somewhat simplistically– as'aesthetic" o('expressive· typography (as if aesthetic and visual play were synonymous); it occurs in TV commercials and title sequences, the layout of style magazine, the design of wacky letterforrns, etc.

2) The second form of'visuality"I have in mind does not refer to the visible manifestation of the text in its physical materiality, but to a second-order materiality which opens up the dimen-sions of the text as text Through a strategic display of its semiological body *I* structure, it facilitates-or in this instance, by a student on the MA course in Design and Digital Media at Coventry University, which explores the concept of dystopia in language – it provokes reader-s'engagement with the text and the proliferation of individual meanings.

The first form of visuahty rs traditionally the outcome of design work;the second has seldom been attempted. but is/can only be an outcome of the authoring process. The history of those attempts, in print and other media, is unevenly charted and scattered across different fields and disciplines (litera-ture, the visual arts, music, typography and their respective histories). Retrieving these precedents is important,as it will enable us to explore and develop new forms of visuality, new functionalities for the visual structuring and presentation of texts.John Cage's *Rootono,* presented as a re-reading of/through Joyce's *Rnnegan's Wake* is suggestive of new patterns of interaction and integration between and across media; by restoring the materiality of music and sound to the literary text, it also highlight the multilinearity, multidimensionality and openess of the Joycean text, as well as its capacity to generate new works across media, on the unlimited chain of semiosis...

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