

## About networking within the mind and between minds for the purpose of design and hermeneutics

*« Intention is central to Roman Ingarden's concept of the literary work, because texts preserve the acts of consciousness on the part of their writer, which are then reanimated in various ways by the reader. One can distinguish four levels in a text — word sounds, meaning units, perspectives controlling states of affair, and represented objectivities. Particularly prevalent in the last two levels are gaps or indeterminacies, which the reader fills with his own creations. But such gaps are not filled in an uncontrolled fashion, argues Wolfgang Iser, but through a process of retrospection and anticipation that can overturn the text's "prestructure", the coding of the reader's usual habits and expectations. Reading indeed is a variable, complex business, which accepts the disruptions and dissonances to be expected in a modernist work. Hans Robert Jauss stresses change. Since we absorb a work only when we enlarge the horizon of our understanding, the accepted canons of literature that no longer shock and challenge may not be relevant. Meaning emerges in interaction between text and readers, often in societies very different from the writer's expectations, and so largely out of his control. »*

C. John Holcombe <http://www.textetc.com/theory/hermeneutics.html>

Here we will be interested mainly in the Ingarden's so-called perspectives and represented objectivities levels, in the filling of a gap by the reader, and in the way the designer of the text can still imagine keeping a bit of control upon this process. We could draw examples from the plastic arts, and some future researchers maybe from music. But I find safer to begin with the process of scientific research, where toy examples (like resolving a geometry exercise) are simple but consistent situations where you read the great book of nature through the intermediation of a master. You are allowed to wander around and wonder about, without clear cut directives, but maybe under some influences.

This situation I call "aesthetic attention", it's a kind of reverse engineering where, starting from an object (text, painting, outline...), you feel urged to find a shape that could have been its master plan, or, even deeper, a mood that could have been its incentive. This is filling gaps behind and in between the appearances of the object, attributing them qualia in some sense I will try to make convincing, by quoting the *Three Laws of Qualia* by V.S. Ramachandran and W. Hirstein. Indeed my proposal is that Ingarden's perspectives are in a way the very qualia, that is qualia that are more than simple attributes, that are sort of bags of tools helping to solve the further questions of the object's interpretation, conditioning indeed the finding of the represented objectivities. The ultimate of the meta theory is that a building of sort of a qualia state co-evolve while the interpretation of the objectivities goes on. When you are doing mathematics, probably the unveiling of hidden objectivities is the point. But when reading a poem by Mallarmé or looking at a work by Jasper Johns, it could be getting at some very special blend of qualia which is the goal, for you as it was for the poet or the painter themselves.

I will deserve some attention to the possibility of falsification of the hypotheses that back up the predictive capabilities of the theory. More precisely, for each potential domain of application of our frame, one needs first to guess at what could be relevant qualia, and so one needs a method for verifying the consistency of those (I will take an example related to the lay out of public space, where one tries to optimize space's occupancy by playing through decoration with different categories of the well-being of the users). We then will have entered the many minds situation,

and I will indicate ways to transposing in there some of the technicalities introduced in the case of a single mind (*petites perceptions*, distinguished cliques...).

### 1. The Mathematician's Brain

(after David Ruelle, Princeton University Press 2007)

«A problem may be fairly easy if you use the right bag of tricks and become quite hard if you use the wrong one. Working mathematicians frequently experience this state of affairs and give due credit to Felix Klein for having uncovered this hidden mathematical reality: there are several different geometries, and it is useful to know where individual problems belong. » The Erlangen program indeed, the famous inaugural lecture by Felix Klein, proposed a concept of natural structures of geometry, which is a step beyond the recursive construction of a set of definitions and theorems from a set of consistent axioms; in fact it's a layer above. As to the way to solve difficult mathematical questions, let's think about Grothendieck's method, as quoted by Jean-Pierre Serre (DR pp. 77 & 148): «one does not make a frontal attack of a problem; one envelops it and dissolves it in a rising tide of very general theories. » But Ruelle adds : «While Grothendieck's way of doing mathematics is extremely structural, "hyper-Bourbakist," it does not forget the problems it wants to solve or dissolve.» We will have to put some flesh, as thin as it might be, around this statement of not forgetting the (reverse engineering) problem to be solved (through the aesthetic attention process). Ruelle (chap. 16) mention the phases of mathematical work as described by Poincaré and Hadamard: «a conscious stage of *preparation*, an unconscious stage of elaboration or *incubation*, an *illumination* that reverts to conscious thinking, and a conscious stage of *verification* » all of this maybe multiplied for the sake of recourse to some *relay results*. Thinking that some mathematical statement could be a relay result in view of your final objective is obviously related to that possibility of not losing the focus: the relay result must tell some interesting story about the final one, something worth talking about with your mathematician colleagues.

Ruelle gives an indication about the local shape of the process, rather than the way of sticking to limits' conditions; it's a matter of style: «Mathematical good taste, then, consists of using intelligently the concepts and results available in the ambient mathematical culture for the solution of new problems. And the culture evolves because its key concepts and results change, slowly or brutally, to be replaced by new mathematical beacons. Mathematical aesthetics, while culture dependent, is not meaningless fashion. »

One can guess that the decisive criterion for this aesthetics is its ability to make mathematicians productive, and that the intelligent use of concepts and results must at least take profit of the structures (the bag of tools and tricks) so highly valued by Klein, Bourbaki and Grothendieck. Thus a summary is that culture, on the basis of past achievements, brings around in a recursive way new clusters of concepts, results, methods... (which are structures in the sense of Klein, or perspectives in the sense of Ingarden). These clusters must steer all four phases of mathematical thinking (even unconscious), helping exploring the possible avenues of argumentation in a statistically cheap manner, and there must be some criterion for choosing within this proceeding argumentation some mathematical gossips that seems good candidates as building blocks if not of the theorem at stake, at least of a theory surrounding it (the Grothendieck's way!).

## 2. Qualia and Neo Qualia

(quotations are from *Three Laws of Qualia* Journal of Consciousness Studies, 4, n°5-6, 1997)

The qualia subject was a hot one in the neuroscientific community more than ten years ago, when Crick and al. proposed to relate the qualia phenomenon to a set of neurons in the lower layers of the primary sensory areas. To begin with the phenomenological aspect of it, these qualia have to do with perception, and are akin to malfunctioning of the brain because of some *filling in* effects: « we use the phrase ‘filling in’ in a somewhat metaphorical sense. We certainly do not wish to imply that there is a pixel-by-pixel rendering of the visual image on some internal neural screen, which would defeat the whole purpose of vision (and would imply a ‘Cartesian theatre’, an idea which Dennett has brilliantly demolished). We disagree, however, with Dennett’s specific claim that there is no ‘neural machinery’ corresponding to the blind spot. (There is, in fact, a patch of cortex corresponding to each eye’s blind spot that receives input from the other eye as well as the region surrounding the blind spot in the same eye; Fiorini *et al.*, 1992) What we mean by ‘filling in’ is simply this: that one quite literally sees visual stimuli (e.g. patterns and colours) as arising from a region of the visual field where there is actually no visual input. This is a purely descriptive, theory-neutral definition of filling in and one does not have to invoke—or debunk—homunculi watching screens to accept it. We would argue that the visual system fills in not for the benefit of a homunculus but in order to make some aspects of the information explicit for the next level of processing. »

We are close to the mechanism of completion of a figure by a working mathematician, at least at the “perceptual” level (adding some lines to a drawing, or some arrows to a diagram) if not yet at the conceptual level, but one feels that it must not be so simple to take levels apart: after all, completing a face into an impressionistic painting resorts to a model of the human face. Ramachandran & al. question the level (down to perceptual areas, or holistic property of the brain?) and the persistency of the filling in: «Would the completion of objects across the blind spot behind your head be true filling in of qualia, as with the real blind spot, or would it still be conceptual, revocable imagery or guesswork of the kind that you and I experience for the region behind the head? The answer to this question, we suggest, is that there will be a definite point when the images become irrevocable, and when representations are created, or at least recreated and fed back to the early visual areas, and at that point it becomes functionally equivalent to the blind spot. If this account is true, there is indeed a fundamental qualitative change, both in the phenomenology and in the corresponding information-processing strategies in the nervous system that are used to create the representations.»

Therefore, qualia would be activated near to the neural mechanism they modulate<sup>1</sup>, with at least a real feedback down to it. This level must of course be different if we think of higher level qualia: «Beliefs are also associated with ‘partial qualia’ and conscious awareness, once they are made explicit in ‘working memory’. In the absence of sensory support, however, the qualia associated

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<sup>1</sup> «Our claim that qualia are based primarily in the temporal lobes is consistent with the idea put forward by Jackendoff (1987) and Crick (1996) that qualia and consciousness are associated not with the *early* stages of perceptual processing (at the level of the retina, for instance), where (in our scheme) obviously multiple choices are not possible. Nor are they associated with the *final* stages of perceptual processing and behaviour planning, where behavioural programs are executed. Rather, they are associated with the *intermediate* stages of processing. The temporal lobes are in fact the interface between perception and action.»

with beliefs are fleeting and less robust than the real qualialaden percepts associated with sensory stimuli. Therefore the distinction between qualia associated with *percepts* and those associated with explicit (or occurrent) *beliefs* may be quantitative rather than qualitative. Tacit beliefs, on the other hand, are completely qualia-free.» Here I have to make a comment about these tacit (i.e. unquestionable) beliefs: in the vision I will propose, the recourse to qualia certainly doesn't require awareness (think of the incubation stage of the mathematician). Nevertheless, nothing is tacit about the attribution to some planar figure of the *complex projective* rather than the *euclidean* qualia (see the Butterfly theorem, Ruelle chap. 4).

Ramachandran & al. assert three laws of qualia: «we have identified two functional features of qualia: irrevocability on the input side, and flexibility on the output side. There is a third important feature of qualia. In order to make decisions on the basis of a qualia-laden representation, the representation needs to exist long enough for executive processes to work with it.» The second law means that qualia attributions are not the starters for automatic predefined action procedures. They are but pruning of possibilities (like in bistable percepts) for going ahead in your interpretation of the world, and here you need the two other properties of qualia, persistency and even a kind of irrevocability (to a certain point: in the bistable percepts, the reverse in perception occurs, with statistical predictability, while not under voluntary control<sup>2</sup>): «What is the computational advantage to making qualia irrevocable? One answer is stability. If you constantly change your mind about qualia, then the number of potential outputs will literally be infinite; there will be nothing constraining your behaviour. At some point you need to say 'this is it' and plant a flag on it, and *it's that planting of the flag that we call qualia*. The perceptual system follows a rationale something like this: given the available information, it is 90% certain that the object perceived is red. Therefore for the sake of argument, I'll assume that it is red and act accordingly, because if I keep saying 'maybe it's not red', I won't be able to take the next step. In other words, if I treated percepts like beliefs, I would be blind. *Qualia are irrevocable in order to eliminate hesitation and to confer certainty to decisions.*»

This image of planting of a flag fits perfectly with the activity of the researcher, looking for a shape for understanding some real stuff by seeing it through the glasses of selected structures (the flag signalling a bag of tricks).

Bags of tools – in more neutral terms clusters of mental associations – as neo qualia also share with standard qualia a distinctive flavour or fuzziness when coming to inter personal communication: one cannot know what are the ultimate ramifications of the qualia of *feedback*, or of *primality*... in the mind of one student or colleague. This seems to certain philosophers a decisive argument for rejecting qualia: of course approximations and statistics do fit poorly with ontology!

The notion of bag of tools implemented as neural connectivity at the lower relevant level, as Crick and Ramachandran propose qualia are, fits also with certain side effects of synaesthesia, because some of the tools may be applicable to more than one domain (even perception related tools could help for different sensory modalities<sup>3</sup>), thus some bags of tools could be activated through stimuli coming from different threads of “thought”, which combined with the persistency of (neo) qualia would produced synaesthesia effects. This prediction for sure presents no

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<sup>2</sup> ask Richard Frackowiak

<sup>3</sup> alike, why not, evaluations of smoothness, or scale self-similarity, in visual as well as in auditory processes?

contradiction with the following hypotheses by Ramachandran & Hubbard<sup>4</sup>: «This hyperconnectivity might be caused by a genetic mutation that causes defective pruning of connections between brain maps. The mutation may further be expressed selectively (due to transcription factors) in the fusiform or angular gyri, and this may explain the existence of different forms of synaesthesia. If expressed very diffusely, there may be extensive cross-wiring between brain regions that represent abstract concepts, which would explain the link between creativity, metaphor and synaesthesia (and the higher incidence of synaesthesia among artists and poets).»

I cannot resist following Ramachandran by putting upside down another philosopher's argument ("If qualia are filled in, they must be filled in for some *viewer*, i.e., a homunculus"): «If qualia are filled in, they are filled in for *something*: now, what is the 'something' here? There exists in certain branches of psychology the notion of an executive, or a control process (McKay, 1969). These processes are generally taken to be frontal, or prefrontal, but we would like to suggest that the something which qualia are filled in for is a sort of executive process, but a limbic one, rather than a frontal one. This would be a process involved in connecting motivation and emotion with the choice of actions to perform, based on a certain definite incoming set of qualia—very much the sort of thing which the self was traditionally supposed to do. A control process is not something which has all the properties of a full human being, of course—it is not at all a homunculus.»

The discussion about neural localizations is far beyond my expertise, but in the computer field there is the essential notion of operating system: this is more than a simple scheduler, but it is not a computer in the computer, a remake of a homunculus. The maintenance of a set of neo qualia, and the decision to link one specific neo qualia with an ongoing "thread of thought"<sup>5</sup>, would be under the control of a kind of operating system. In *Cortex, countercurrent context, and dimensional integration of lifetime memory*. *Cortex*, 40 2004, Bjorn Merker suggest that the hippocampal region could play such a role in the stabilization process of long term memory. I think that manipulation of high-level neo qualia is not far away.

### **3. The movement of thought. About private proto qualia?**

Let's start again with aesthetic attention, this reverse engineering of reality which try to trace back the specifications<sup>6</sup> of the creator (even the Creator, when it's about science as aesthetic attention!) I did not invent this notion of specification as the result of aesthetic attention: as stated by the philosopher and musicologist Kendall L. Walton<sup>7</sup>: « I urge that we avoid a narrow conception of what one hears.... The content of a musical experience may include features of the music the experiencer cannot specify. There may not always be a good way of ascertaining what the content of any of the intensional states includes, of acquiring the capacity to articulate them in their entirety. When possibilities are suggested, we may recognize or acknowledge them as indeed among the objects of the experience (as having been so all along). But failure to make

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<sup>4</sup> *Journal of Consciousness Studies*, 8, No. 12, 2001

<sup>5</sup> which I will soon name Petite Perception, in acknowledgement to Leibniz.

<sup>6</sup> Maybe hidden to the creator himself : what was the motive of Cézanne while « representing » apples, or the montagne Sainte-Victoire ?

<sup>7</sup> *Understanding Humor and Understanding Music*, The Journal of Musicology vol 11 1993

such an acknowledgement cannot be taken as conclusive proof that they are not objects of the experience. Recognition does not always come easily.

So analyses are probably, more often than one might have thought, specifications of what we hear. »

Walton insists on the necessity of a cyclic hearing of the musical work and then writing about it, again and again, with changing *perspectives* for each turn back. Writing is sort of an emergent part of thought, we can at least rely on for approximating the movement of thought.: there are a lot of properties that shape a verbal flow, pertaining to rhythm and musical coloration of words, meaning and mood. Discontinuities of rhythm (length of sentences, to begin with) may signal global changes (I will relate this experience made on last Beckett's texts). For relating discontinuities in rhythm and discontinuities in meaning, the notion of a "semantic space" is fair a tool: by studying co-occurrences in sentences (or any other basic unit of text) of very large corpora, you can define angles between words, and then dispose words and sentences in a linear space of a few hundred dimensions<sup>8</sup>. In principle this allows a representation of a verbal flow (mono or multilocutor) as a kind of severely diffusive process in the semantic space. Using again the linear structure (otherwise of moderate significance), one can smooth by averaging the representation of the flow, and then detect recurrent or transient periods at different time scales. If we consider the verbal flow as the emergent part of a mental process (according to Searle, a part of an intentional mental state: writing about the piece of music), these observations must give us some clues about these states.

But at this point, thinking of inner speech, it seems we maybe lost something of the movement of thought<sup>9</sup>:

« The three main semantic peculiarities of inner speech are : first, the preponderance of the *sense* of a word over its *meaning*. Sense refers to "the sum of all the psychological events aroused in our consciousness by the word, or the thought image. It is a dynamic, fluid, complex whole, with several zones of unequal stability... A word may sometimes be replaced by another without any change in sense. Words and senses are relatively independent of each other."

Second, inner thought, by its very nature, is heavily combinative, making free use of agglutination, or word fusing, in the manner of German nouns that are composite of several words. "When several words are merged into one word, the new word not only expresses a rather complex idea, but designates all the separate elements contained in that idea."

Third, as a consequence, in inner speech, a word, or an image, "is so saturated with sense that... it becomes a concentrate of sense... one word stands for a number of thoughts and feelings, and sometimes substitutes for a long and profound discourse. And naturally this unique inner sense of the chosen word cannot be translated into ordinary external speech. Inner sense turns out to be incommensurable with the external meaning of the same word." »<sup>10</sup>

I will propose that sense is the stuff which perspectives are made of. For Vytgowsky, sense is a bit over-focused on moods, and moods might be pointed at explicitly , or simply implicitly present in speech. Similarly, Ingarden's first level, the physical one which colors the verbal flow (assonances, articulation for spoken language...) might be part of a code, so on the explicit side, or rather diffuse, what Vytgowsky call sense and we call implicit.

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<sup>8</sup> cf. f.i. Landauer. Indeed it's not so simple, you have to detect multiword terms, to cope with multimeaning...

<sup>9</sup> what I have in mind is f.i. brainstorming 'to define an area of focus'

<sup>10</sup> quotation of Bert O. States quoting Lev Vytgowsky

If we agree on extending sense to non “psychological” issues (including in it conceptual bias, new feelings yet to be delimited for describing new materials of art...), one can think of the “implicit” facets of words (which in isolation are without aboutness, uninentional according to Searle) as an extension of the notion of semantic features. “Chopin” as meaning (a polish piano composer, born...dead...), for example, would be characterized, in a sort of game of questions, by means of the senses “romantic”, “martyred country”, “ piano virtuoso”.... Now we begin the design of our “model”: it does not start with words, rather with a set of senses, including all semantic features and more. This set “dually” generates an enlarged semantic space (if rich enough, identifying words via a the questioning game). But indeed we want the generator’s set rich enough,so as the “dual space” may put up the whole of mental states (this dual is an enlarged semantic space which projects onto the previous one: proto linguistic traces of mental states).

The next step of the model will be to give some structure to the set of basic senses: there is some notion of proximity about them, some hierarchies (red “close to” orange, both of them “under” color, but also under “hot”...) or more general links (f.i. between hot as temperature, hot as color, or hot as welcome): the set of basic senses is a network. Probably the so-called basic senses themselves are clusters, and the questions are not to be answered by yes or no, but by some indication of strength, or even of a “quality”. What matters indeed are clusters of basic senses, we will call *cliques* densely interconnected sub-networks of senses. I propose they are the stuff perspectives and (neo) qualia are made of. There would be some slow dynamics in this qualia (or perspective) *field*, coupled to a rapid one on the semantic side, which of course deserves far more subtle structures (grammars...) than the so-called linearity of the semantic space<sup>11</sup>.

Let me insist first about the so to speak “materiality” of senses: the qualia field would be more than a “mathematical” convenience (sort of a basis) for describing words and other meanings. They would exist by their own, being implemented (in a mind’s simulation or in the brain) in such a way as acquiring their own strength at each time, depending on the intensity with which they are stimulated by the ongoing mental state. These strengths (the dominant qualia of a mental process) would in return influence [the slow dynamics of] the associative functioning of « thought ». The basic generators of sense would be a set of primitives, new generators would appear recursively as clusters of the previously formed and the basic ones (we will tell more about this mechanism), meanwhile meanings, or mental states in general would appear as combinations of all of these generators, more precisely networks terminating into subsets of them (with mention of some strength or qualification<sup>12</sup>).

From now on, I will call qualia all of these generators (in growing number with cultural acquisitions). Synaesthesia, or exotic transpositions in the course of thought, would result from the transmodality of qualia.

“Materiality” translates into hypotheses which sort of justify the qualia name. They are the very heart (touchstone or blackhole?) of the theory:

1<sup>st</sup> *persistency*: the current weighting of qualia keeps some memory of previously activated qualia.

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<sup>11</sup> the enlarged one, that is with non awareness of part of the mental state - even if representable by language. In section 4, we will come back to bunch of words and other constituent of mental states (long term memory items) as networks of more basic elements, which will be there anchors into *cortical areas*, following Bjorn Merker.

<sup>12</sup> By playing with the richness of these qualifications, one can accommodate more or less aggregated generators

2<sup>nd</sup> *the winners take all*: the persistent qualia result from a nonlinear filtering favouring those the most solicited by the most successful (see below) combinations.

3<sup>rd</sup> *distinguished cliques*: one can model the dynamics of mental associations not only on the ‘logical’ side of words and meanings, but in a so to speak transversal way (forth and back from meanings to sense (qualia side), through rules for the spontaneous growth of subsets of qualia - be said with a precise mathematical metaphor : a structure of Markov random field. These extra associations would account for ‘good’ (productive on the long term, see below) mental combinations.

Apart from commonsense « proximities » among sets of common life semantic features, everything has to be discovered about this *style* of associations for real thinking, which obviously must be capable of learning and adaptation<sup>13</sup> (leading to evolutions of the landscape of qualia).

We did already recognize the first and third laws of qualia: the following description of the whole (!) of thought’s process, based on the third hypothesis, will account for the second one; I will call it “Leibniz’s Petites Perceptions<sup>14</sup> into a Bayesian framework”:

For representing the world as a sort of moving landscape (may be a manifold one) of *a posteriori* likelihood<sup>15</sup>, a mental state assembles meaning in memory (old and new data, models, methods...) by coping with syntaxes at various levels (this is the rapid dynamics on the meaning side); and accordingly it moves along at each step of the computation the weighting (quality and likelihood) of all of the items of meaning with respect to all of the qualia.

The ongoing Bayesian computation tries to improve the selection of memory items (the *boundary* of the computation) around a given core (think of a perception task from incomplete and corrupted data), so as to optimize the *good story* criterion (let’s recall of Grothendieck’s tide), which is:

if not being able to determine *one* clear cut maximum likelihood for the computation at stake, at least try to reduce the effective support of the *a posteriori* likelihood and get some simple alternative, a kind of a law relating well-chosen items, some striking gossip for storytelling ( an identity for a person is an example of it).

At last we are able to complete the model with its slow dynamics: the Glauber-like dynamics of qualia (or: Leibniz’s feelings differential calculus, or: the *style* of thought)

Why introducing *distinguished cliques* for modeling the movement of thought? : the *free boundary* of the Petites perceptions calculus would come along by taking into account the

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<sup>13</sup> cf. the *resonance* mechanism in *About Learning as a social process : a model based on Luhmann’s systems theory*, Reasoning and Cognition ReasoningCog 05 Keio University Press 2006

<sup>14</sup> «...il y a à tout moment une infinité de *perceptions* en nous, mais sans aperception et sans réflexion, c’est-à-dire des changements dans l’âme même dont nous ne nous apercevons pas, parce que les impressions sont ou trop petites, ou en trop grand nombre, ou trop unies, en sorte qu’elles n’ont rien d’assez distinguant à part; mais, jointes à d’autres, elles ne laissent pas de faire leur effet et de se faire sentir au moins confusément dans l’assemblage.

...ce sont ces *petites perceptions* qui nous *déterminent* en bien des rencontres sans qu’on y pense, et qui trompent le vulgaire par l’apparence d’une *indifférence d’équilibre*, comme si nous étions indifférents entièrement de tourner (par exemple) à droite ou à gauche. Il n’est point nécessaire aussi que je fasse remarquer ici...qu’elles causent *cette inquiétude* que je montre consister en quelque chose qui ne diffère de la douleur que comme le petit du grand, et qui fait souvent notre désir et même notre plaisir, en lui donnant comme un sel qui pique.»

G.W. Leibniz, *Nouveaux essais sur l’entendement humain*

<sup>15</sup> always to be revised, this is Deleuze’s flashback

Markov field probability determined by the distinguished cliques, for instance by sticking as close as possible to Glauber dynamics.

#1: The Glauber dynamics suggests new qualia for incorporation into the free boundary, depending of the dominant qualia at the time of the computation. It's left to a complementary process to choose new meaning items which lies « essentially » within the new boundary (taking profit of the newly highlighted qualia)

#2: The new item must fit, speaking of the syntaxes involved, with the ongoing evaluation. If, for reasons of definitive incoherence of types, a candidate meaning item as proposed by the Glauber dynamics has to be discarded, then select a new one according to the same rules. And then (if nothing fits or no good story is get at, back to #1)

As a vindication of my statement that the qualia field might as well be recognized as a perspective field, let me show what is conditioning through qualia. This indeed is “conditioning” not in the Pavlovian sense, but as in “conditional expectation”; the point is: at what levels may a thread of thought influence another one?

Let's recall the persistency of (part of the) previously activated qualia, in such a way that they still belong to the current boundary of calculus. They therefore influence (via the activation of distinguished cliques) the recruitment of new meaning items, and thus the hope to fulfill the good story criterion... and the story itself.

The conditioning effect has a nice by-product: it predicts that soliciting qualia by means which are completely orthogonal to the ongoing « calculus » process (the Petite perception) may influence the course of associations and the result of the evaluation. This could be considered as extended (maybe even structural) synaesthesiae, but for the time being it's more of a hook for falsifying our hypotheses!

To end up with this section, a guess about cultural creation of qualia. A scientist or an artist plays, successfully enough, with some new combining of features of all kinds – Kalman and the state variable constructs, Pollock and dripping: could such assemblages (distinguished cliques) turn into new qualia by becoming “materialized” in minds on their own, thus acquiring an autonomous capacity as starting points for cliques and further qualia? Such a qualia would have first to be adopted as sort of shared distinguished clique, recognized as such (despite Dennett's views) in some public sphere, of mathematicians, of art critics, or designers.

#### **4. I have a dream, and other blue-sky considerations**

I have been quite allusive about the slow dynamics along the qualia field, that is what, in the movement of the free boundary of a Petite Perception, amounts to qualia. One could say that the “essential support” of the calculus, that are the winners (cf. 2<sup>nd</sup> rule of qualia) amongst the qualia solicited by the current meanings the PP crushes on, is the *perspective* of the Petite Perception. It is evaluated by adding predefined weights<sup>16</sup> for all the distinguished cliques sitting in it. Modifying the perspective results in a modification of the evaluation, and the trial for selecting a new perspective is defined by stochastic rules based on ratios of evaluations. Far from being an esoteric sophistication, the Glauber dynamics is the simplest mathematical way for modelling this behaviour. The idea we try to convey here is that, beyond the associations ruled by the meanings'

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<sup>16</sup> there is a very slow loop (see ReasoningCog 05) for adapting those weights, in the Hebb style, looking at how often a distinguished clique is involved in successful trials.

syntaxes, there are (in a “dual” field) associations which are primarily ruled not by meanings but by the current perspective at work.

Once some distinguished cliques have been publicized and sort of frozen as qualia, it is easier to guess at their contours and then to experiment about the transversal influences on the movement of thought they can drive: the so-called weights of cliques and qualia being out of reach for a while (!), one can test at least if qualia, that have a strong intersection with what is evident about the current perspective, belong indeed to that perspective and thus their hidden components may influence the recruitment of further meanings. This will be the subject of section 6

As the present section is announced as “blue-sky”, I will propose another kind of experiment in support of the Glauber dynamics hypothesis. This dynamics must be the most prominent when logical constraints are set at the lowest level possible, like in brain storming.... I believe that the fabrication of dream imagery is a good example of that: the coherence indeed of that imagery seems to be of a quite short radius in space and time. We could thus create dreams (full videos with narrow field of view but not forgetting the sound track) by using a virtual reality generator fed up with the specifications of a real space and characters (this brings the logical constraints), but by relaxing persistency constraints about the “decoration” of the space, the appearance of the characters, even shortcuts would be authorized between similar places of the space, the characters could change their age or undergo substitutions.... What is not so easy would be to create a repertoire of qualia, of anchors in these qualia of the meanings manipulated by the VR generator, and last but not least of idiosyncratic distinguished cliques and their weights (for one dreamer). Supposing the first two steps being fulfilled, one could start from a quite arbitrary repertoire for the distinguished cliques and adapt it by using a feedback from the “virtual dreamer”, monitoring positive or negative emotions, surprise... via EEG f.i..

Were the video for fun rather than for exploratory purposes, one could contrariwise submit the “dreamer” to exotic associations, or pilot two dreamers in the same space, ruled by associations somewhere in between what each of them seem to feel as more or less strange!.

Deeper blue: subsequently to my ReasoningCog talk at Keio university, I have been strongly impressed by the reading of Merker’s *dimensional integration of lifetime memory*; the following for instance could describe the flashback activity of the Petites Perceptions, with both their buried and emergent components:

«The basic assumption... is that the accretion of personal history is directly dependent upon interaction between feedforward and feedback pathways, in two functionally linked ways: first, interaction between the two currents establishes the neural conditions for conscious awareness ... as the sole functional “gate” through which information enters personal history. ... Entry to the storage process takes place at the level of objects and events, since these are what are represented in conscious awareness. They are also the entities named in the lexicon of natural language. This provides a further indication that the dimensional estimates furnished by latent semantic analysis might apply to the brain as well. Secondly, this same interaction between the two currents is needed to sustain levels of neural activity at a given cortical locus with sufficient intensity and over sufficient lengths of time to effect lasting excitability changes in cortical synapses required for the long-term storage of information in personal history. Ultimately these are only different aspects of one single function, viewed in terms of its antecedents and its consequences, respectively. »

If we accept the parallel between long term memory items (as neural networks anchored into cortical areas) an PP, we are inclined to imagine that basic perceptual or emotional qualia, or

even some qualia related to numeracy or the generic grammar of language (not to speak of “faces neurons” in the fusiform gyrus...), could be sort of localized, maybe identified to the same cortical areas. Distinguished cliques an qualia might result from networking through some dedicated signalling. For professional activities involving a (temporary) rearranging of part of the cortex - cf. Studies about London taxi drivers! -, one could think of the networking of a clique being frozen as a new qualia, that is as a new generator of perspectives, authorizing old or new meanings to get anchored in it.

Quoting Bjorn Merker once again:

«...The limited temporal extent of hippocampal formation memory storage has an important consequence for the nature and composition of personal history. ... Since it is plausible to assume that the contents of personal history undergo some incremental strengthening of their neural embodiment whenever and to the extent that they are activated through contextual relevance to ongoing experience..., it would seem that however durable the synaptic changes in which personal history is stored, the resulting history is never a finally settled affair, but subject to continual passive change through the shifting relatedness of the contents of ongoing experience to prior history. This may help explain the vagueness and length of estimates for the time course of memory consolidation...On the present account the storage process is never final, independently of the limited size of the temporal window of hippocampal formation memory.»

In view of the hippocampal formation's role in the starting phase of memory consolidation<sup>17</sup>, one could think of it as the repository and activator of the set of distinguished cliques, why not through some chemical signaling alike the one that supports retinotopy<sup>18</sup>.

## 5. Publics, qualia, and cultural evolution.

If we could look, inside minds, at the distinguished cliques (private bag of tools, alias proto qualia) of unrelated experts in a common field, one would probably see various refinements of prototypic toolsets, because of subfields of interest more thoroughly explored by some of the experts. If the experts had the opportunity to participate in the same conferences, one should also see junctions of some of these refined toolsets, as a kind of shuffling of the initial ones, for resolving new problems of the domain. It's the way we expect new qualia to emerge through collective thinking, that is as the result of validation by Petites Perceptions which are no longer private ones, but instead are distributed amongst several minds. Indeed, beyond forums and blogs (with comments from the visitors,) the Petites Perceptions seem to always trend to externalize into the collective sphere as political clubs, quality circles, expertise networks..., still aiming at producing clear-cut consensus or chapels, and good mottos or stories for advertising them. People are thus cut across by several ongoing collective mental processes, whose traces in their minds

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<sup>17</sup> See recent work by Anton Sirota and al. on synchronization as triggered by theta and gamma oscillations both ways between neocortical and hippocampal networks, during awake state (learning) on one hand and slow wave sleep (consolidation) on the other hand : for instance *Integration and segregation of activity in entorhinal-hippocampal subregions by neocortical slow oscillations*. Neuron 52 :871-82 2006, or *Interaction between neocortical and hippocampal networks via slow oscillations*. Thalamus and Related Systems. X:1-15 2007.

<sup>18</sup> Alain Prochiantz has proved the existence of a signalling through protein markers between the retina, the hypothalamic relays, and the primary areas of the visual cortex. With a few dozens types of proteins, one can distinguish between billions of cliques (and qualia), as well as is huge the expressive power of a few hundred of (already aggregated) basic qualia for generating the world of meanings.

are communicating PP producing correlated stories. Communication would take place at two different levels and dynamics: meaning versus sense, that is in particular through words in a “logical” setting versus words as qualia’s carriers.

It is tempting to figure out Petites Perceptions and distinguished cliques at a more aggregated level, as group of (sort of facets of) people’s minds that are helpful putting altogether for better creativity. Eiki Ikegami introduces indeed<sup>19</sup> the notion of *public* as a space of interaction, as well as she recalls us with the historical issue of a good-to-put-together-with-a-capacity-of-transposition group of people, the *ikki alliance*:

« *Publics* are communicative sites that emerge as the points of connection among social and/or communicative networks. Each individual carries with him or her an amalgamation of cognitive, social or cognitive networks. The public is the sphere – actual-physical and/or imagined-virtual space – in which the actions of switching/connecting and decoupling of networks take place. » « I define *publics* as interactional spaces of discursive and non-discursive communication emerging through the actions of shifting network connections.» «I consider an identity and a public to emerge co-dependently. As in the analogy of negative space, the boundary of identity is revised and drawn only in the relational context in a public.» « In the ontological dimension of the human being, however, an individual can be perceived as having internalized publics as the points where different cognitive associational networks intersect. A person’s mind is constantly involved in internal dialogues while processing and cross-sectioning various thoughts and pieces of information. After all, it is easy to enter in a dispute with others because one is always getting into disputes with oneself. »

Moreover, Eiko Ikegami insists on sort of an identification of publics with their main output: « Narratives... are stored and reproduced as stories – which are *temporally and spatially structured cognitive associational networks*... »

As to the *ikki alliance*, their participants form a group of « like-minded people », and for them the *renga*<sup>20</sup> practice makes obvious « feelings of trust and collaboration, temporary though these might be.... Although the *ikki* alliances had political and military purposes while the poetry groups intended the communal enjoyment of an aesthetic world, both were infused by a similar spirit in their organization of independent-minded individuals in a temporary space of *mu’en*<sup>21</sup> solidarity. » The *renga* becomes thus a sort of technology for disintricating *like-minded* people. Matsuoka Shinpei elaborates upon the readiness for transposition inherent to *ikki* as well as to qualia « The first point of affinity stemmed from the aspect of harmony in linked verse. In making linked verse, a person could not compose a good succeeding line unless he had understood the poet who had preceded him, and digested and appreciated the previous line of verse. The degree of understanding was precisely the kind of consideration required to organize an *ikki* alliance. The second point was the aspect of excitement in linked verse. The making of chain of poems incorporated accidental unexpectedness in the making of every stanza in the sequence because alterations were injected into the process of composition. Surprising and

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<sup>19</sup> in *Bonds of Civility: Aesthetic Networks and the Political Origins of Japanese Culture*, Cambridge University Press, 2005

<sup>20</sup> linked verse, a collective form of poetry

<sup>21</sup> The *mu’en* is a *substrate*, a real or a virtual one (a shared mental space, for instance), which because of its distance from (literally *no relation with*) everyday life signals a crossing place in between two worlds (think of the Styx), and is thus predisposed to incubating new links. It is a place for bold transpositions between activities which emerged there, and which in turn marked it back with their vestiges.

unexpected combinations of words and images eventually produced a state of intellectual excitement that caught up the entire group. This excitement was linked to the physical and spiritual energy that was necessary to mobilize the *ikki*. »

As a practical issue for head hunters, we are left with the question of the possibility to anticipating modern *ikki* alliances (distinguished cliques at social level) by looking at people not yet each-other in interaction. I have proposed elsewhere that participation in common collective (web)sites dedicated to the domain of activity at stake brings us with an answer<sup>22</sup>. From tagging in these sites, a sort of duality builds up, which couples individuals and objects of the field (documents, concepts, actors...). We can derive from it several structures (on objects w.r.t. individuals or on individuals w.r.t. objects): to a given individual, we may associate a system of cliques onto the set of objects, to a certain extent independent from the nature or “level” of the language used (objects belong to the same clique if many tags enough are used for qualifying them). From this a notion of proximity results, of individuals w.r.t. a set of objects (characterizing a domain of activity). In a symmetric way, we could define proximity of objects w.r.t. a population of users. Could we think as potential E.I.’s « *ikki* alliances » coupled clusters of people and objects such that the individuals structure the objects the same way, and reciprocally?

## **6. Falsification of neo qualia and of the so-called structural synaesthesia.** (down to earth)

If I am allowed to confess my true motivation for (neo) qualia as structural synaesthesia and as sort of a hidden backbone for thought, it goes back to my apprenticeship of piano: for “interpreting” Beethoven, Mendelssohn or Fauré (Ravel was set apart: just play what is written down!), I was advised to bring in my mind some images of situations the teacher described in her own worlds, and that I adapted my way. As a son of a quite rationalist engineer, I found it foolish, sort of outdated magic. Nevertheless something did happen. Later on, as an amateur and today as a practitioner, I have been amazed by the distinctive flavour of contours in Rembrandt’s drawings or etchings, some of these lines seeming absolutely unnecessary, even troubling, for representation purposes, but in the freedom of their wandering through the page/the darkness of an empty wall or something, you could find the best résumé of the mood of the drawing. Therefore, before hard landing, I must say I dream of an experiment about synaesthesia between visual and auditory, precisely between simple lines and plain musical scales. One would define a few well shared qualia, like arrogance, shyness, grandiose, moved, carefree... and ask cellists, pianists, painters, mathematicians...to produce scales or lines<sup>23</sup> by being “penetrated” of those feelings (they could try several times, and say what they believe is their most relevant production). One would then, as a global statistical proof of the existence of shared trans-modal qualia, ask other persons to pair lines and/or scales from different artists, without any mention of qualia. We hope that automatic classification procedures would then make significant clusters to appear, at least a gross clustering of people and subordinated groupings of “works”. The following experiment would be back to the movement of thought: is it possible that such qualia-laden lines do sway what you feel about or conclude from a whole work? From now on I

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<sup>22</sup> Cf. ReasoningCog 2005

<sup>23</sup> One might be careful defining frameworks (dimensions of the paperboard, extension of the scale, duration of the performance...) such that the “information” conveyed during the different trials be about the same.

will consider more general and hopefully more strongly characterized settings, with a distinction between only behavioural experiments, and experiments involving brain imagery, where you must be careful that the persons under observation do undertake but strictly limited actions<sup>24</sup>.

### *1. Conditioning in individual setup*

We wish falsifying the basic hypotheses of the “theory of neo qualia” through their expression as conditioning in aesthetic attention: let’s consider experimental setups involving long run evaluation periods, and choose, for benefiting from simpler control variables, a classification task of a related set of plastic works, rather than (what would be the true question for the creator of a new form) understanding the organization of a single work of art<sup>25</sup>. Conditioning may take place through:

- visual qualia through direct vision, e.g. manipulation of colors, contrasts, formats...of the works
- semantic qualia through vision, e.g. manipulation of aspect of partial objects: position of parts of bodies, direction of gaze, type of an accessory,... or color chart ...
- visual qualia through context, e.g. modifying the scheme/frame of the global presentation of the works, setting a previous visual task with some intended bias...
- semantic qualia through context, e.g. having a preparatory talk, sketches of inscriptions floating around, musical accompaniment pointing to a well-defined style, mood... (‘multimedia installations’).
- selective cortical stimulation: replacing activation of qualia through speech, noises, images, and so on by a direct stimulation of specific cortical areas: e.g. areas along the visual path, from simple Hubel & Wiesel regions up to the fusiform gyrus, prefrontal areas...<sup>26</sup>

By guessing at the clues that might rule the discrimination between works, the supervisor chose the qualia to manipulate for controlling the end result. For validating the hypotheses, one has to employ a mix of multimodal instances of the same assumed qualia, each one of them inoperative at the same level in isolation.

### *2. Auto-conditioning in individual setup*

The previous task of « classification » could be a virtual one, only made explicit *a posteriori*, by use of language or gesture. As an alternative we could ask the “patient” to make his evaluation explicit at once by giving him the possibility to visually reassemble objects and isolate different classes. Hence clues swaying the current classification could be reinforced, leading to stronger complexes of qualia that could skew the evaluation, depending on the starting configuration of the process, that would constitute the control variable.

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<sup>24</sup> I must insist that these experiments are but falsifications of a “structural” synaesthesia phenomenon, and by no means a tentative for explaining it: if the effect occurs indeed, it would probably resort to variants of the mirror neuron mechanism, tracing back by internal simulation a gesture and even some conditions of its production not from seeing an other people’s gesture, but simply a trace of it.

<sup>25</sup> As would be the reverse engineering of a new style of representation, supposed to bring along a better insight into some emotional complex.

<sup>26</sup> If the making of some evaluation/choice seems to end up with some emotive correlate, would it be possible to put a bias onto the result of it by favoring/inhibiting the onset of this emotional state 1<sup>st</sup> during the process, 2<sup>nd</sup> before starting the process ?

In both falsifications 1 and 2, the experimental setups the most demonstrative - and the most pertinent for understanding the reception of art, and innovation generally speaking - will be ambiguous ones (the non linearity resulting in multiple 'equally likely' attractors of the mood/interpretation), where the controller destroy the ambiguity (break the symmetry) through the use of contextual qualia.

### 3. Auto-conditioning during a collective task

Starting with different people previously (individually) confronted by the same evaluation task, let's propose them (collectively) a new but related task. For avoiding a non convergent process, a few incomplete tentative solutions might be presented at the onset, asking for modifications and a final choice, which will reveal clusters of people associated with different clustering of works. Here the argumentation and choices of other people are the conditioning context, the set of starting configurations being the supervisor's control variable.

### 4. Ah-ah effects and transitions in experiments under brain imagery

The point for the use of brain imagery is to rely on tasks such that the solution suddenly emerges through pure attention, without any significant body's implication; whence the recourse to ambiguous sets of stimuli, and then ah-ah effects<sup>27</sup>. About brain imagery as a possible proof of operation of qualia, it is doubtful if neo qualia as stationary (non intentional mental) states might produce truly distinct cortical activity patterns! But maybe one could measure something by looking at transitions. There are two types of transitions to be investigated (think of a person

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<sup>27</sup> Let's describe an example, using two modalities: n°1, object (sequences of images of landscapes) and n°2, context (flux of music). For the first modality, we dispose of three sets of inputs: A (e.g. landscapes of the Alps), Ambiguous (landscapes from the Prealps), and B (views of gentle hills). For the second modality we dispose of at least two sets of inputs, which are supposed to resonate with objects modalities A (e.g. Mahler's symphonies) and B (e.g. pieces like Smetana's Moldava; all of these examples are of course caricatures). A and B may represent either opposite extremes of one qualia or two orthogonal qualia, Ambiguous A.B means participation in both A and B. Each experiment consists of

∅ the presentation of sequences of object inputs (to be made precise according to the phase of experimentation) until the experimenter declares having captured the homogeneity behind the sequence (ah ah effect); one register this time.  
Σ the simultaneous presentation of the same sequences of object inputs and of an alternate flux from the context modality: A then B during time t, then A followed by B during time 2t, and so on, until the experimenter declares himself capable of telling what context flux is in better accordance with the object flux; one register this time (maybe 'infinite' - that is neither A nor B) and the answer.

The whole experimentation consists of three phases:

1<sup>st</sup> Calibration: the purpose is to verify that A and B sets of objects are homogeneous, and in accordance with contexts A and B. So, the presentation is of A or B only. Let's call  $T_A$  (resp.  $T_B$ ) the distribution of the ∅ (ah ah) stopping time,  $TT_A$  that of the Σ (association) stopping time, and  $D_A$  the distribution of successful associations. Distributions of stopping time T and TT are computed over ensembles of experimenters who give the same final choice (so we distinguish  $T_{A|A}$  from  $T_{A|B}$ , and the same for the TT), as well as for the measurements of correlative emotional or attentional states, or of brain activity during the periods before the stopping times. For a presentation of A.B only, we measure  $T_{A.B|A}$ ,  $T_{A.B|B}$ , and so on for the TT and D.

2<sup>nd</sup> Test of non-linearity (winners take all): Presentation of objects is now a mix of A (or B) and A.B, with ratio R ( $R=A/A+A.B$ ), the context is A. The prediction is that  $T_R$  must exceed  $T_A$  more than  $TT_R$  exceeds  $TT_A$ , and more meaningfully that  $D_R$  (associations with A) as a function of R regresses onto an S-curve rather than a linear one.

3<sup>rd</sup> Test of synaesthesia: After a shuffle of the participants, we present them with A.B, or A, or B, or mixtures, this time simultaneously with - or even after - a presentation of the context A or the context B. The prediction is that the contextual bias (through a different modality of the qualia) affects both D, T and TT in ways which are easy to guess at.

walking in a public space, faced to a change of decoration y after x, or coming from x and facing the choice of taking either through y or through z) :

1<sup>st</sup> transition from one (hypothetic) qualia x to another one y, without any task to be fulfilled or any decision to be made,

2<sup>nd</sup> transition under x influence, with obligation to decide between y and z.

In all cases, significant statistical regularities of cerebral activity patterns would favour the evidence of operational pertinence of the hypothesized qualia (as in the study of bistable percepts).

## Appendix (in a different mood): Worstward Ho

These annotations of one of Samuel Beckett's last texts (1983) results from some puzzlement I had reading the excellent French translation by Edith Fournier (Beckett nevertheless believed this opus an untranslatable one, and did not try). I found the translation sometimes more esoteric than seemed necessary, and moreover I did not succeed accepting the way of rendering the ubiquitous *somehow* and *nohow* by *tant mal que pis* resp. *plus mèche*.

I think indeed that this is not a pure matter of materiality of words, that *somehow* and *nohow* point to quite a precise qualia, the very same as in my dual model, something like *on the meaning side* versus *on the sense side*<sup>28</sup>. Worstward Ho may not be a piece of theory, at least it is an accurate phenomenological shelling of saying, rather than some « mise en mots, en littérature, de l'exténuation<sup>29</sup> »

After a short preamble, what follows is but quantitative remarks about some passages of Worstward Ho exemplifying *nohow* writing, showing the same sort of auto-similarity as some textures do. We will then embark following Beckett's buzz-words' statistics forth and back across this mirror where words can play all the parts, but whose two sides can still be distinguished, two sides which are a remake of the Proust/Bergson duality of memory.

*Preamble : Between words and qualia, the void, really?*

J.E. Dearlove in *The Weaving of Penelope's Tapestry : Genre in the Works of Samuel Beckett* unveils a discourse woven from two antagonist movements/moods : « outletting all » (WH p. 45), then « inletting all » (id.) : « Everything in *Worstward Ho* both demonstrates and is about the weaving and unweaving process. The work depicts a voice saying words that it hopes will unsay themselves. The situation is familiar. Although *Worstward Ho* lacks the sense of urgency and volition which drives the Unnamable to seek the words that will put an end to words, nonetheless the piece does attempt to go beyond language and embrace the “Unmoreable unlesable unworseable evermost almost void” (WH p. 43). The effort is paradoxical. The more the voice describes the desired goal (i.e., the void), the further it is from achieving it<sup>30</sup>. The piece needs to unmake itself; needs to find words that will gesture to what it must be like when words are gone<sup>31</sup>. »

*Rhythm and segmentation*

Our attempt, once accepted the perspective of identifying the somehow/nohow duality with that of meaning/sense, is to stick to the materiality of the text as often as possible, considering that its movement gives the best clues about the course of Beckett's thought. As Worstward Ho is divided into many short paragraphs, it is tempting to look for a higher level organization, on the sole basis of stylish variations. It appears that the rhythm of reading, imposed as it is by the length of sentences, could be such an argument for a subdivision which will help us for the next

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<sup>28</sup> « She says, hey babe, take a walk on the wild side / Said, hey honey, take a walk on the wild side »

<sup>29</sup> « words, literature, about extenuation » (Patrick Kéchichian, *Le Monde*)

<sup>30</sup> Let me comment : not at all! On the contrary, the fabric of words will carry the complex of qualia which did trigger it, as the reader, listener,... will experience when disintricating this fabric.

<sup>31</sup> Another comment : words do not disappear; but our attention may accommodate farther, across their undulating surface.

step, that is the description of the flow of words through main words' occurrences. One can think of sections (groups of paragraphs) composed of a majority of short sentences (the rapid ones, denoted Rx) as lying more on the sense side, while the other ones (the slow Lx) could be of a more descriptive or argumentative nature, on meaning side.

The statistics of lengths of Worstward Ho's sentences leads to quite atypical results: 630 of them are rather utterances, between one and three words long; 380 lie between four and six words, 100 between seven and nine, 30 between ten and twelve, 10 between thirteen and fifteen, none are longer than fifteen words. Sentences are grouped into paragraphs whose amplitude goes from one to forty two sentences; these paragraphs can be considered as a sort of semantic segmentation of the text, but as the rhythm of the reading heavily relies on the duration of sentences, we will at first use this (very low level) criterion to get a segmentation at the level of paragraphs. If we consider here as "long" sentences those longer than seven words, one can distinguish segments composed of a majority of long sentences, which *a priori* emerge (some crude semantics being induced from the materiality of the text) from the breathless manner of the rest :

paragraph 6, It stands. What ? Yes. Say it stands....

paragraphs 17 to 21, Where then but there see now-...

paragraphs 25 to 28, First sudden gone the one. First sudden back. Unchanged....

paragraphs 33 to 38, On back better worse to fail the head said seat of all. Germ of all. All ?...

paragraphs 54 to 60, Still dim still on. So long as still dim still somehow on....

paragraphs 65 to 70, What words for what then ? How almost they still ring....

paragraphs 86 to 90, Say child gone. As good as gone. From the void. From the stare....

we regroup these "slow" fragments, the same lengths' statistics gives a smoother decay : 161, 138, 64, 24, 8. Onto the regrouping of "rapid" fragments, the statistics is even more striking: 466, 240, 36, 7, 1. The decay of frequencies when doubling sentences' length from six to twelve is six times higher in the rapid group than it is in the slow group...

As a "methodological" issue, I must acknowledge that in a few occurrences I did modulate the frontiers slow/rapid by taking a qualitative look at the content, but this modulation never exceeded one paragraph.

### *An exercise about scale-similarity : rhymes and ultra-résumé of the "central" part*

Considering the overall briefness of the sentences, that hash the meaning, that put rhythm at the foreground, and then the rhymes, I propose as a test of scale similarity (alike with a dripping production) a transposition of what would be reading a poem by solely accentuating the final word of each verse. Here the paragraphs take the place of the lines, and the final sentence of each paragraph plays the role of the final word of a line. The rhymes drive in a way the mnemonic trace of a poem, as "harmony" is concerned. We will here chain down kind of pseudo rhymes into a harmonic résumé of the text, which could convey most of the sense, in that it would awake the same dominant qualia (the same "perspective") as the whole of the text.

We start from the fourth rapid fragment § 29 : «The void. How try say ? How try fail ? No try no fail. Say only-...», to the seventh rapid segment ending with § 85 : «All save void. No. Void too. Unworsenable void. Never less. Never more. Never since first said never unsaid never worse said never not gnawing to be gone.» This central part is composed of four rapid fragments – thirty eight paragraphs - and three slow fragments – nineteen paragraphs - enclosed in between. We will see later on that this is centred around the climax of the text, L5, and enclose most of the "argumentation". Here is the "ultra-résumé":

*"Say only- So far. That little much of void alone. Then all go. Better worse so. Good and all. Better worse so. The world once. Far far from wrong. And take heart. Pending worse still. Bad the no- In*

*the dim void. Next- Clenched eyes clamped to all. A little better worse than nothing so. Scene and seer of all. For poor best worse and all. Worsen that ? How better worse so-missay ? For worst and all. In the dim void. Time to- If not for good. Better than nothing so bettered for the worse. Worse better later. Somehow nohow on. As worst they may fail ever worse to say. Only ! No saying what it all is they somehow say. Worst in- Time gone when nohow on. Unlessenable least best worse. Held holding hands ! In the dim void. Unworsenable worst. For then in utmost dim to unutter leastmost all. Save for some after nohow somehow worsen on. So better than nothing worse shade three from now. An old woman's. Save somehow undimmed worsen still. Not till for good nohow on poor worst missaid. Unstillable vain least if longing still. Vain longing that vain longing go. For be missaid. Back for somehow on. Same all but nothing. Onceless till no more. Somehow ooze on. How fail say how other seen. That words had dimmed. Never to come again. No ooze for when ooze gone. Worse words for worsen still. Gnawing. To be gone. Never since first said never unsaid never worse said never not gnawing to be gone”.*

What backs up the claim of this being sort of a résumé - indeed the hypothesis of scale similarity - is for instance that the ratio between short and long sentences do not differ from the global one. Moreover, many of the key words of the text are in attendance here, not only the ubiquitous ones (say, void, clenched eyes, go, worse, bad, dim, somehow, nohow, hands [if not head], woman [if not old man et child], words...), but even some other words which are distilled along the original text and which will drive my subsequent analysis (wrong, longing, unworsenable, once[less], ooze, gnawing). These statements confirm the feeling that this could be an acceptable résumé, at least as style is involved, rather than a possible meaning.

*The flow of words: oscillations along both sides of a tube (somehow/nohow)*

Worstward Ho starts with sort of a programmatic statement

« *On. Say on. Be said on. Somehow on. Till nohow on. Said nohow on.* »

Then, we will have to wait until L5 precisely (§ 55 then 60) to see *nohow* reappear.

As to *meaning*, Beckett's recourse to mentioning it explicitly is parsimonious: the only occurrence is indeed in § 46:

« *Something not wrong with one. Meaning - meaning! - meaning the kneeling one.* »

This sits in the first fragment (L4) where a dance sets in around *the head said seat of all* and *the words too whosesoever*, preparing the trance (*Joy. Joy!*) in the already mentioned fragment L5. We understand that here will be a central articulation of the text, and we will see that the rapid fragment R5 coming before brings us with an isolated thus remarkable metaphor, which in our perspective we will interpret as a description of the interface between *somehow* and *nohow*.

The first fragments present with chunks of events, hardly seen, unstable, a kind of sampling of mental imagery (*a body, a place, head sunk on crippled hands, clenched starring eyes... old man and child* appear in L2 § 19, then not before L5 § 59), all along with a lateral sampling of some ill-said inner speech :

« *They fade. Now the one. Now the twain. Now both. Fade back. Now the one. Now the twain. Now both. Fade? No. Sudden go. Sudden back. Now the one. Now the twain. Now both.*» (R3, § 22)

« *Unchanged? Sudden back unchanged? Yes. Say yes. Each time unchanged. Somehow unchanged. Till no. Till say no. Sudden back changed. Somehow changed. Each time somehow changed.* » (R3, § 23)

This is probably the passage of the most “theoretical” character from R1 to R4, reminding (anticipating indeed) « *Comme lorsqu'il disparaissait le temps d'apparaître plus tard à nouveau à une nouvelle place...* » in *Stirrings Still* : a report about the coexistence of the persistent and the labile in *Petites perceptions* and the images they trigger.

This also sends back to the familial trilogy at the heart of the pseudo autobiographic *Company*, even if we have to wait until L4 § 36-37 for a rather abstract *three* (*Something hot wrong with one. Then with two. Then with three....*) then L6 § 68 for a burst of eight *woman*, which echoes into L7 then the final R8.

Even before introducing *meaning* (§ 36), L4 see the arrival of *words* (§ 35), which is obviously a core concern. It's interesting noticing that *words* come on stage with a halo of *wrong* (§ 36,37), indeed a burst of *not wrong*, and of *far from wrong*, and *true* at last (§ 38). Words seem to be the theme of the fragment : they bring with them the trilogy *Him, One, It*

« *Whose words? Ask in vain. Or not in vain if say no knowing. No saying. No words for him whose words. Him? One. No words for one whose words. One? It. No words for it whose words.*

*Better worse so.* » (35) I see in *Him* a relative of *Ils* or *Soi-même* in *Company* : *he* is made of words, *he* is but storytelling. *One* and *It* probably try to get us towards regions and structures less in favour of anthropomorphism ; that could be worse-ward, no less-ward for getting less, but as a necessity for running into another field, for leaving the *somehow* which makes stories out of words, and reaching the *nohow* which gnaws them differently, but this is anticipating R7 (§ 83). *One* could be for an alive *nohow*, a field of qualia still capable of learning, of integrating successful exotic associations? *It* for a still, hardened *nohow*? That are but hypotheses about the poet's forethought.

*Something there badly not wrong* (see § 39) anyway: « *The words too whosoever. What room for worse! How almost true they sometimes almost ring! How wanting in inanity! Say the night is young alas and take heart. Or better worse say still a watch of night alas to come. A rest of last watch to come. And take heart.* » (§ 38) Words are almost true when used for their resonance, at least they pull the right way (*better worse*).

*Meaning* is over, *words* are ubiquitous along four fragments, from § 53 to § 83, *far from wrong* will be back for the only § 78, but *true* will persist in R5 (§ 45,52) and will explode in L5 (§ 59) soon after the ephemeral three times repeated *Joy* (§ 57).

« *True. True! And yet say worst perhaps worst of all the old man and child.... True. True! And yet say first the worst perhaps worst of all the old man and child. Worst in need of worse. Worst in-* » The alternation of fragments L and R (slower reading versus breathless) is an indication of the "musical" or "pictorial" role of accumulating short bursts of words, alike brushstrokes or punching hashing the matter on the canvas.

R5 brings up again *one*, who is divested (unsaid) of its attributes :

« *Greatcoat cut off higher. Nothing from pelvis down. Nothing but bowed back. Topless baseless hindtrunk.* » (§ 39)

All the same for *the twain, the three* («*that head in that head, those crippled hands*»).

A second statement (§ 46) of the initial program sounds like another *Take heart* (see § 38), for bringing to light the dissipation of the words:

« *On. Stare on. Say on. Be on. Somehow on. Anyhow on. Till dim gone. At long last gone. All at long last gone. For bad and all. For poor best worst and all.* ».

Then the quite atypical § 47 (appearance/disappearance of a *pipe* and a *tube*) try to explain thoroughly that *dim* which *seals* the beyond/ this side of words (which is *worse?*) :

« *Dim whence unknown. At all costs unknown. Unchanging. Say now unchanging. Far and wide. High and low. Say a pipe in that void. A tube. Sealed. Then in that pipe or tube that selfsame dim. Old dim. When ever what else? Where all always to be seen. Of the nothing to be seen. Dimly seen. Nothing ever unseen. Of the nothing to be seen. Dimly seen. Worsen that?* »

Hazardous as it might be, this *tube* which confines you within the dimness of your own language

makes me think of the French writer Amélie Nothomb (*La métaphysique des tubes*). She herself pointed to Slawomir Mrozek, might be to the *Histoire courte de bout en bout* from the *Brèves Épîtres*. Rather than this novel which wanders around the thickness of a tube, I would like to quote, from *Des opinions*, a paragraph about the hole : « Toute l'activité humaine consiste à combler un trou qui ne peut être comblé. Ce trou, c'est nous. [...] Tout se passe autour de ce trou, mais quel que soit le nombre de tombereaux de réalité qu'on déverse dedans, jamais il ne sera comblé.[...] Il ne s'agit pas du tout de se résigner à un moi plus ou moins tordu. Il s'agit de s'accepter en tant que trou, justement, et non pas de le combler désespérément ou de l'agrandir exprès.[...] Certains croient que, par ce trou, on peut passer de l'autre côté. Mais qui doit y passer, alors... »

Not knowing we are indeed the seal onto the tube, we pretend to possess « des tombereaux de réalité » translated into words, but the *dimmost dim* of this plasma of words makes us wish « passer de l'autre côté ». To Mrozek questioning « Puisque nous sommes le tube, qui doit passer de l'autre côté? » the mathematician's answer is to turn the sealed tube inside out like it would be easy for a glove (the turning inside out of a sphere by Stephen Smale)! This tube (surface, therefore interface) could be a metaphor of the duality between meaning and sense. In the following, Beckett will insist that the focus on one of them is by no means destruction of the other. The very end of *Worstward Ho* (§ 95) will remind us of the tube (a hole as in Mrozek, a pinhole) and the three pin-like figures (child, man, woman), *vasts apart, in dimmost dim*, one cannot for sure localize inside/outside.

« *Three pins. One pinhole. In dimmost dim. Vasts apart. At bounds of boundless void. Whence no farther.* »

L5 is the first one of these inside-out moments (advent of *nohow*) :

« *What when words gone? None for what then. But say by way of somehow on somehow with sight to do. With less of sight. Still dim and yet -. No. Nohow so on. Say better worse words gone when nohow on. Still dim and nohow on. All seen and nohow on. What words for what then? None for what then. No words for what when words gone. For what when nohow on. Somehow nohow on.* » (§ 55)

There is a bit of ambiguity in the next paragraph: is *save* for “except for” (the choice of French translator Edith Fournier: *Rien sauf ce qu'ils dissent... Rien sauf eux*), or for “preserve” or “record”? We will raise this issue again for §69: here is the expressive power of *nohow*!

« *Worsening words whose unknown. Whence unknown. At all costs unknown. Now for to say as worst they may only they only they. Dim void shades all they. Nothing save what they say. Somehow say. Nothing save they. What they say. Whosoever whencesoever say. As worst they may fail ever worse to say.* » (§ 56)

A cape has been crossed over, several exclamations connote the event : *joy, true*, already mentioned, and also *still*, meaning – *meaning!* - “free from noticeable current”, “without interruption or cessation” ; or both of them (in French “encore”, or something like “coi”)? « *Remains of mind then still. Enough still. Somewhere somewhere somehow enough still. No mind and words? Even such words. So enough still. Just enough still to joy. Joy! Just enough still to joy that only they. Only!* » (§ 57)

No mind and words ? : This decoupling between mind and words could suggest that the common apparatus which produces words and thought at certain times produces one and not the other one, and vice versa!

At that point a new usage of words occurs, *secrete*, used solely in § 58 :

« *Enough still not to know. Not to know what they say. Not to know what it is the words it says*

*say. Says? Secretes. Say better worse secretes. What it is the words it secretes say. What the so-said void. The so-said dim. The so-said shades. The so-said seat and germ of all. Enough to know no knowing. No knowing what it is the words it secretes say. No saying. No saying what it is they somehow say. »*

Enough still to know no knowing/saying what the words [it says] secretes somehow say... ? Maybe *secrete* does not belong to somehow's vocabulary. Is it pure nohow, or is the whole paragraph not a statement, but the stolen trace of a Petite perception, not yet ready to emerge from nohow?

End of L5 (remind this is not Beckett's subdivision!)

« *Worst in need of worse. Worst in -*

*Blanks for nohow on. How long? Blanks how long till somehow on? Again somehow on. All gone when nohow on. Time gone when nohow on. » (60)<sup>32</sup>*

Somehow will for sure be back on the attention's theatre, but for the time being, the time of nohow, *time is gone*, when words, *enough still, secrete*.

R6 seems some musical aftermath where new words are introduced, some of them quickly resorbed, while some other will ricochet up to the last rapid fragments: *leastward, unnullable, unworsenable, stretch* (back in R7), *naught* (back in R7 then R8).

### *Nohow in support of somehow*

The first paragraph of L6 (§ 65) is an echo – from the other side of the tube – to the last paragraph of L4 (§ 38) :

« *What words for what then? How almost they still ring. As somehow from some soft of mind they ooze. From it in it ooze. How all but uninane. To last unlesenable least how loath to leasten. For then in utmost dim to unutter leastmost all. »*

Words *still ring* (Beckett's involuted sentences<sup>33</sup> make them resonate indeed), full of awareness and of intelligence. Out of the brain apparatus they *ooze*. This *ooze* appears four times in L6 and nine in aftermath R7; *nohow*, similarly, occurs five times in L6 and eleven times in R7.

There is also some symmetry between L5 and L6, the former being nohow's Assumption, while the latter questions the after nohow::

« *So little worse the old man and child. Gone held holding hands they plod apart. Left right barefoot unreceding on. Not worsen yet the rift. Save for some after nohow somehow worsen on*<sup>34</sup> » (§ 66)

« *Next fail see say how dim undimmed to worsen. How nohow save to dimmer still. But but a shade so as when after nohow somehow on to dimmer still. Till dimmest dim. Best bad worse of all. Save somehow undimmed worsen still.* » (69)<sup>35</sup>

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<sup>32</sup> Des absences comme pour rien encore. Longues comment ? Des absences longues comment jusqu'à reprendre comme ça ? Remettre ça comme ça. Tout disparu tant que comme rien. Temps disparu tant que comme rien. Transl. E.F. Hiatus pour plus mèche encore. Quel laps ? Quel laps de hiatus jusqu'à tant mal que pis encore. Encore tant mal que pis encore. Tout disparu lorsque plus mèche encore. Temps disparu lorsque plus mèche encore.

<sup>33</sup> D'accord en cela avec E.F., (qui traduit Comme l'inéptie leur fait défaut) je pense que S.B. s'est emberlificoté dans les accumulations de négations, et qu'il a cru écrire *How all but un-uninane* !

<sup>34</sup> Garder pour un après comme rien un comme ça pire encore.

Transl. E.F. Garder aux fins de quelque pire tant mal que pis encore après plus mèche.

<sup>35</sup> Puis rater voir dire comment empirer la pénombre inobscureie. Comment comme rien mémorise pour plus obscur encore. Mais d'un ton à peine pour lorsqu'après comme rien comme ça encore toujours plus obscur. Jusqu'à l'obscurissime pénombre. La plus mal mieux ratée de toutes. Mémorise comme ça inobscurei pire encore.

Carrying its ambiguities, *save* is the motto of this come back from nohow to somehow. This might have been an excellent motive for Beckett's absence of French translation. Let me try to comment:

(§ 66) don't exacerbate the dip (between meaning and sense). Keep, for after - some unavoidable nevertheless unpredictable – turn back to words (in their rational majesty), the possibility of enhancing them (*worser, worstward ho!*) through the echoes of their freedom when on the "wild" side.

(§ 69) about (*say*) *how dim undimmed to worsen* : *dim* (that of words) becomes enhancement (*to worsen*) when *undimmed* (enlightened by the latitude of associations in the qualia field) *Save* might then be salvation : the poet's work onto words (through nohow) save them by leverage of their anchoring into the sensitive and conceptual "realities" («after nohow somehow on to dimmer still. Save somehow undimmed worser still».)

In a more pragmatic setting: at first reading, an assemblage of words brings us with some simulation of "reality" whose precision is quite illusory; then, gnawing words into the landscape of their dominant qualia will (at least if the writer was inspired) portray something more ambiguous (dimmer) therefore closer to what was to be communicated (this is the nohow side). The blurring must be just enough ("but a shade") to convey the exact amount of ambiguity required; thus, coming back to words in their normal setting (meaning, somehow) cannot be but dimmer still... unless you keep in mind both of the nohow and the somehow! And maybe many round-trips, back and forth between somehow and nohow, will be necessary for you getting the right specification from behind the words (as Kendall L. Walton describes it - cf. footnote 7).

I couldn't give a better description of this interaction between nohow and somehow (somehow – be said on- undimmed/ saved after nohow on) than by quoting two among other famous mathematicians:

« C'est l'essentiel du travail, de distinguer le vrai du faux. Et par ailleurs, je m'autorise parfois à penser à une chose qui n'est pas littéralement vraie. En faisant des mathématiques, on oublie parfois ce qui se passe sur le moment, on pense à des structures futures, en termes imprécis.!» (Maxim Konsevitch, IHES) (interview post médaille Field, octobre 1998)

« According to Sylvester (1876), a mathematical idea should not be petrified in a formalised axiomatic setting, but should be considered instead as flowing as a river. One should always be ready to change the axioms, preserving the informal idea.!» (V.I. Arnold, Steklov mathematical institute)

R7 is a another lyric starting with introducing *longing* with as many as fifteen occurrences (*faintly still...for faintest...longing that all go...vain longing that vain longing go*), *nohow* and *ooze blossom* (eleven resp. nine occurrences), *no once* to a last degree, associated with *pastless* in § 76: «*No once. No once in pastless now. No not none. When before worse the shades? The dim before more? When if not once? Onceless alone the void. By no stretch more. By none less. Onceless till no more.*»,

*wrong (far from)* comes back for the first time after L4/R5:

« *Preying since last worse the stare. Something there still far so far from wrong. So far far far from wrong. Try better worse another stare when with words than when not. When somehow than when nohow. While all seen the same. No not all seen the same. Seen other. By the same other stare seen other. When with words than when not. When somehow than when nohow. How fail say how other seen?* » (§ 78)

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Transl. E.F. .... Comment pas mèche sauf à plus obscure encore. Mais d'un ton à peine afin lorsque tant mal que pis encore après plus mèche d'aller à plus obscur encore. Jusqu'à l'obscurissime pénombre. La plus mal mieux ratée de toutes. Sauf si tant mal que pis inobscurie encore plus mal encore.

This is a questioning from the closest proximity of the surface of the *sealed tube*, words on one side and their materiality on the other side (underscoring is mine, of course).

« *Less. Less seen. Less seeing. Less seen and seeing when with words than when not. When somehow than when nohow. Stare by words dimmed. Shades dimmed. Void dimmed. Dim dimmed. All there as when no words. As when nohow. Only all dimmed. Till blank again. No words again. Nohow again. Then all undimmed. Stare undimmed. That words had dimmed.* » (§ 79)

Isn't it saying that thought proceeds in part despite *words*, through an aesthetic *stare*, which must not be confused with the pragmatic - tool of the sufficient statistics of voluntary memory - *look at*.

The fragment concludes with a burst of *preying*, the same as in the exalted § 59<sup>36</sup>, but here it resorbs into as many *gnawing* – whom a unique echo at the very end (§ 93 : *All gnawing to be naught*) -:

« *Preying but what not preying? When not preying? Nohow over words again say what then when not preying<sup>37</sup>. Each better worse for naught. No stilling preying. The shades. The dim. The void. All always faintly preying. Worse for naught. No less than when but bad all always faintly preying. Gnawing.*

*Gnawing to be gone. Less no good. Worse no good. Only one good. Gone. Gone for good. Till then gnaw on. All gnaw on. To be gone.* » (§ 83-84)

Could we translate from nohow to somehow what for do the words prey : for the poet, could it be the willing that decoding of his poem brings in the exact amount and colour of ambiguity he wanted to convey? And for the reader, the fear that his decoding could miss some gates among the many ones disposed by the poet? What are these shades *gnawing to be gone*? It makes me think of the ambiguity of the French *épuisement* : depletion of the self, or exhaustion of a set of possibilities? I would like the first alternative not blurring the second one.

The last “theoretical” fragment (L7) considers the possibility of resolving the preying since words fluctuate between appearance and disappearance (*gnawing to be gone*). The mental imagery of the first fragments emerges again before sinking at last<sup>38</sup>.

The last articulation of the text at the junction of the last fragments

« *Nothing to show a child and yet a child. A man and yet a man. Old and yet old. Nothing but ooze how nothing and yet. One bowed back yet an old man's. The other yet a child's. A small child's.* » (§ 90)

could be about a Petite perception which can stand up without neither words nor puppets, which [ici un mot perdu<sup>39</sup>] an *old man and child, a woman*:

« *Nothing and yet a woman. Old and yet old. On unseen knees. Stooped as loving memory some old gravestones stoop. In that old graveyard. Names gone and when to when. Stoop mute over the graves of none.* » (§ 92)

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<sup>36</sup> « Preying since last worse said on foresaid remains . But what not on them preying? What seen? What said? What of all seen and said not on them preying? »

<sup>37</sup> Après comme rien les mots disent à nouveau ce que lorsqu'ils ne harcèlent

Transl. E.F. : plus mèche passé mots encore dire quoi alors lorsqu'ils ne harcèlent

<sup>38</sup> « *Back to once so-said two as one. Preying ever since not long since last failed worse. Ever since vast atween. Say better worse now all gone save trunks from now. Nothing from pelves down. From napes up. Topless baseless hindtrunks. Legless plodding on. Left right unreceding on.* » (§ 87)

« *Vast void apart old man and child dim shades on unseen knees. One blur. One clear. Dim clear. Now the one. Now the other.* » (from § 89)

<sup>39</sup> Stirrings Still 3

Neither words nor puppets but an abundance of qualia, new qualia again for reinforcing the illustration of the main theme : *stoop, loving memory, gravestone, graveyard, grave.*  
Full stop. Final assertion: the *vasts apart* bits of involuntary memory are the alpha and the oméga of nohow :

« *Enough. Sudden enough. Sudden all far. No move and sudden all far. All least. Three pins. One pinhole. In dimmest dim. Vasts apart. At bounds of boundless void. Whence no farther. Best worse no farther. Nohow less. Nohow worse. Nohow naught. Nohow on. Said nohow on.* » (§ 95-96)

Worstward Ho was thus Nohoward Ho, or “in search for the mysterious *pipe*”, which is not kind of a homunculus, but maybe the true *seat and germ of all*. A construct which is a constant progression, with statement of a program and conclusion, and simultaneously a movement through a mirror, some false symmetry w.r.t. the climax, when encountering the nohow. An alternation of somehow and nohow talk, for exemplifying the never defined nohow. Faint sacrifice to fading characters surrounding a core of sensitive abstraction.

## **Annex for the appendix: Beckett's text with beacons.**

### *R1*

1. On. Say on. Be said on. Somehow on. Till nohow on. Said nohow on.

2. Say for be said. Missaid. From now say for missaid.

3. Say a body. Where none. No mind. Where none. That at least. A place. Where none. For the body. To be in. Move in. Out of. Back into. No. No out. No back. Only in. Stay in. On in. Still.

4. All of old. Nothing else ever. Ever tried. Ever failed. No matter. Try again. Fail again. Fail better.

5. First the body. No. First the place. No. First both. Now either. Now the other. Sick of the either try the other. Sick of it back sick of the either. So on. Somehow on. Till sick of both. Throw up and go. Where neither. Till sick of there. Throw up and back. The body again. Where none. The place again. Where none. Try again. Fail again. Better again. Or better worse. Fail worse again. Still worse again. Till sick for good. Throw up for good. Go for good. Where neither for good. Good and all.

### *L1*

6. It stands. What? Yes. Say it stands. Had to up in the end and stand. Say bones. No bones but say bones. Say ground. No ground but say ground. So as to say pain. No mind and pain? Say yes that the bones may pain till no choice but stand. Somehow up and stand. Or better worse remains. Say remains of mind where none to permit of pain. Pain of bones till no choice but up and stand. Somehow up. Somehow stand. Remains of mind where none for the sake of pain. Here of bones. Other examples if needs must. Of pain. Relief from. Change of.

### *R2*

7. All of old. Nothing else ever. But never so failed. Worse failed. With care never worse failed.

8. Dim light source unknown. Know minimum. Know nothing no. Too much to hope. At most mere minimum. Meremost minimum.

9. No choice but stand. Somehow up and stand. Somehow stand. That or groan. The groan so long on its way. No. No groan. Simply pain. Simply up. A time when try how. Try see. Try say. How first it lay. Then somehow knelt. Bit by bit. Then on from there. Bit by bit. Till up at last. Not now. Fail better worse now.

10. Another. Say another. Head sunk on crippled hands. Vertex vertical. Eyes clenched. Seat of all. Germ of all.

11. No future in this. Alas yes.

12. It stands. See in the dim void how at last it stands. In the dim light source unknown. Before the downcast eyes. Clenched eyes. Staring eyes. Clenched staring eyes.

13. That shade. Once lying. Now standing. That a body? Yes. Say that a body. Somehow standing. In the dim void.

14. A place. Where none. A time when try see. Try say. How small. How vast. How if not boundless bounded. Whence the dim. Not now. Know better now. Unknow better now. Know only no out of. No knowing how know only no out of. Into only. Hence another. Another place where none. Whither once whence no return. No. No place but the one. None but the one where none. Whence never once in. Somehow in. Beyondless. Thenceless there. Thitherless there. Thenceless thitherless there.

15. Where then but there see –

16. See for be seen. Misseen. From now see for be misseen.

*L2*

17. Where then but there see now –

18. First back turned the shade astand. In the dim void see first back turned the shade astand. Still.

19. Where then but there see now another. Bit by bit an old man and child. In the dim void bit by bit an old man and child. Any other would do as ill.

20. Hand in hand with equal plod they go. In the free hands - no. Free empty hands. Backs turned both bowed with equal plod they go. The child hand raised to reach the holding hand. Hold the old holding hand. Hold and be held. Plod on and never recede. Slowly with never a pause plod on and never recede. Backs turned. Both bowed. Joined by held joining hands. Plod on as one. One shade. Another shade.

21. Head sunk on crippled hands. Clenched staring eyes. At in the dim void shades. One astand at rest. One old man and child. At rest plodding on. Any others would do as ill. Almost any. Almost as ill.

*R3*

22. They fade. Now the one. Now the twain. Now both. Fade back. Now the one. Now the twain. Now both. Fade? No. Sudden go. Sudden back. Now the one. Now the twain. Now both.

23. Unchanged? Sudden back unchanged? Yes. Say yes. Each time unchanged. Somehow unchanged. Till no. Till say no. Sudden back changed. Somehow changed. Each time somehow changed.

24. The dim. The void. Gone too? Back too? No. Say no. Never gone. Never back. Till yes. Till say yes. Gone too. Back too. The dim. The void. Now the one. Now the other. Now both. Sudden gone. Sudden back. Unchanged? Sudden back unchanged? Yes. Say yes. Each time unchanged. Somehow unchanged. Till no. Till say no. Sudden back changed. Somehow changed. Each time somehow changed.

*L3*

25. First sudden gone the one. First sudden back. Unchanged. Say now unchanged. So far unchanged. Back turned. Head sunk. Vertex vertical in hat. Cocked back of black brim alone. Back of black greatcoat cut off midhigh. Kneeling. Better kneeling. Better worse kneeling. Say now kneeling. From now kneeling. Could rise but to its knees. Sudden gone sudden back unchanged back turned head sunk dark shade on unseen knees. Still.

26. Next sudden gone the twain. Next sudden back. Say now unchanged. So far unchanged. Backs turned. Heads sunk. Dim hair. Dim white and hair so fair that in that dim light dim white. Black greatcoats to heels. Dim black. Bootheels. Now the two right. Now the two left. As on with equal plod they go. No ground. Plod as on void. Dim hands. Dim white. Two free and two as one. So sudden gone sudden back unchanged as one dark shade plod unreceding on.

27. The dim. Far and wide the same. High and low. Unchanging. Say now unchanging. Whence no knowing. No saying. Say only such dim light as never. On all. Say a grot in that void. A gulf. Then in that grot or gulf such dimmest light as never. Whence no knowing. No saying.

28. The void. Unchanging. Say now unchanging. Void were not the one. The twain. So far were not the one and twain. So far.

*R4*

29. The void. How try say? How try fail? No try no fail. Say only –

30. First the bones. On back to them. Preying since first said on foresaid remains. The ground. The pain. No bones. No ground. No pain. Why up unknown. At all costs unknown. If ever down. No choice but up if ever down. Or never down. Forever kneeling. Better forever kneeling. Better worse forever kneeling. Say from now forever kneeling. So far from now forever kneeling. So far.

31. The void. Before the staring eyes. Stare where they may. Far and wide. High and low. That narrow field. Know no more. See no more. Say no more. That alone. That little much of void alone.

32. On back to unsay void can go. Void cannot go. Save dim go. Then all go. All not already gone. Till dim back. Then all back. All not still gone. The one can go. The twain can go. Dim can go. Void cannot go. Save dim go. Then all go.

*L4*

33. On back better worse to fail the head said seat of all. Germ of all. All? If of all of it too. Where if not there it too? There in the sunken head the sunken head. The hands. The eyes. Shade with the other shades. In the same dim. The same narrow void. Before the staring eyes. Where it too if not there too? Ask not. No. Ask in vain. Better worse so.

34. The head. Ask not if it can go. Say no. Unasking no. It cannot go. Save dim go. Then all go. Oh dim go. Go for good. All for good. Good and all.

35. Whose words? Ask in vain. Or not in vain if say no knowing. No saying. No words for him whose words. Him? One. No words for one whose words. One? It. No words for it whose words. Better worse so.

36. Something not wrong with one. Meaning - meaning! - meaning the kneeling one. From now one for the kneeling one. As from now two for the twain. The as one plodding twain. As from now three for the head. The head as first said missaid. So from now. For to gain time. Time to lose. Gain time to lose. As the soul once. The world once.

37. Something not wrong with one. Then with two. Then with three. So on. Something not wrong with all. Far from wrong. Far far from wrong.

38. The words too whosoever. What room for worse! How almost true they sometimes almost ring! How wanting in inanity! Say the night is young alas and take heart. Or better worse say still a watch of night alas to come. A rest of last watch to come. And take heart.

*R5*

39. First one. First try fail better one. Something there badly not wrong. Not that as it is it is not bad. The no face bad. The no hands bad. The no -. Enough. A pox on bad. Mere bad. Way for worse. Pending worse still. First worse. Mere worse. Pending worse still. Add a -. Add? Never. Bow it down. Be it bowed down. Deep down. Head in hat gone. More back gone. Greatcoat cut off higher. Nothing from pelvis down. Nothing but bowed back. Topless baseless hindtrunk. Dim black. On unseen knees. In the dim void. Better worse so. Pending worse still.

40. Next try fail better two. The twain. Bad as it is as it is. Bad the no –

41. First back on to three. Not yet to try worsen. Simply be there again. There in that head in that head. Be it again. That head in that head. Clenched eyes clamped to it alone. Alone? No. Too. To it too. The sunken skull. The crippled hands. Clenched staring eyes. Be that shade again. In that shade again. With the other shades. Worsening shades. In the dim void.

42. Next –

43. First how all at once. In that stare. The worsened one. The worsening two. And what yet to worsen. To try to worsen. Itself. The dim. The void. All at once in that stare. Clenched eyes clamped to all.

44. Next two. From bad to worsen. Try worsen. From merely bad. Add -. Add? Never. The boots. Better worse bootless. Bare heels. Now the two right. Now the two left. Left right left right on. Barefoot unceding on. Better worse so. A little better worse than nothing so.

45. Next the so-said seat and germ of all. Those hands! That head! That near true ring! Away. Full face from now. No hands. No face. Skull and stare alone. Scene and seer of all.

46. On. Stare on. Say on. Be on. Somehow on. Anyhow on. Till dim gone. At long last gone. All at long last gone. For bad and all. For poor best worst and all.

47. Dim whence unknown. At all costs unknown. Unchanging. Say now unchanging. Far and wide. High and low. Say a pipe in that void. A tube. Sealed. Then in that pipe or tube that selfsame dim. Old dim. When ever what else? Where all always to be seen. Of the nothing to be seen. Dimly seen. Nothing ever unseen. Of the nothing to be seen. Dimly seen. Worsen that?

48. Next the so-said void. The so-missaid. That narrow field. Rife with shades. Well so-missaid. Shade-ridden void. How better worse so-missay?

49. Add others. Add? Never. Till if needs must. Nothing to those so far. Dimly so far. Them only lessen. But with them as they lessen others. As they worsen. If needs must. Others to lessen. To worsen. Till dim go. At long last go. For worst and all.

50. On. Somehow on. Anyhow on. Say all gone. So on. In the skull all gone. All? No. All cannot go. Till dim go. Say then but the two gone. In the skull one and two gone. From the void. From the stare. In the skull all save the skull gone. The stare. Alone in the dim void. Alone to be seen. Dimly seen. In the skull the skull alone to be seen. The staring eyes. Dimly seen. By the staring eyes. The others gone. Long sudden gone. Then sudden back. Unchanged. Say now unchanged. First one. Then two. Or first two. Then one. Or together. Then all again together. The bowed back. The plodding twain. The skull. The stare. All back in the skull together. Unchanged. Stare clamped to all. In the dim void.

51. The eyes. Time to –

52. First on back to unsay dim can go. Somehow on back. Dim cannot go. Dim to go must go for good. True then dim can go. If but for good. One can go not for good. Two too. Three no if not for good. With dim gone for good. Void no if not for good. With all gone for good. Dim can worsen. Somehow worsen. Go no. If not for good.

53. The eyes. Time to try worsen. Somehow try worsen. Unclench. Say staring open. All white and pupil. Dim white. White? No. All pupil. Dim black holes. Unwavering gaping. Be they so said. With worsening words. From now so. Better than nothing so bettered for the worse.

*L5*

54. Still dim still on. So long as still dim still somehow on. Anyhow on. With worsening words. Worsening stare. For the nothing to be seen. At the nothing to be seen. Dimly seen. As now by way of somehow on where in the nowhere all together? All three together. Where there all three as last worse seen? Bowed back alone. Barefoot plodding twain. Skull and lidless stare. Where in the narrow vast? Say only vasts apart. In that narrow void vasts of void apart. Worse better later.

55. What when words gone? None for what then. But say by way of somehow on somehow with sight to do. With less of sight. Still dim and yet -. No. Nohow so on. Say better worse words gone when nohow on. Still dim and nohow on. All seen and nohow on. What words for what then? None for what then. No words for what when words gone. For what when nohow on. Somehow nohow on.

56. Worsening words whose unknown. Whence unknown. At all costs unknown. Now for to say as worst they may only they only they. Dim void shades all they. Nothing save what they say. Somehow say. Nothing save they. What they say. Whosoever whencesoever say. As worst they may fail ever worse to say.

57. Remains of mind then still. Enough still. Somewhere somehow enough still. No mind and no words? Even such words. So enough still. Just enough still to joy. Joy! Just enough still to joy that only they. Only!

58. Enough still not to know. Not to know what they say. Not to know what it is the words it says say. Says? Secretes. Say better worse secretes. What it is the words it secretes say. What the so-said void. The so-said dim. The so-said shades. The so-said seat and germ of all. Enough to know no knowing. No knowing what it is the words it secretes say. No saying. No saying what it is they somehow say.

59. That said on back to try worse say the plodding twain. Preying since last worse said on foresaid remains. But what not on them preying? What seen? What said? What of all seen and said not on them preying? True. True! And yet say worst perhaps worst of all the old man and child. That shade at last worse seen. Left right left right barefoot unceding on. They then the words. Back to them now for want of better on and better fail. Worsen fail that perhaps of all the least. Least worse failed of all the worse failed shades. Less worse than the bowed back alone. The skull and lidless stare. Though they too for worse. But what not for worse. True. True! And yet say first the worst perhaps worst of all the old man and child. Worst in need of worse. Worst in –

60. Blanks for nohow on. How long? Blanks how long till somehow on? Again somehow on. All gone when nohow on. Time gone when nohow on.

*R6*

61. Worse less. By no stretch more. Worse for want of better less. Less best. No. Naught best. Best worse. No. Not best worse. Naught not best worse. Less best worse. No. Least. Least best worse. Least never to be naught. Never to naught be brought. Never by naught be nulled. Unnullable least. Say that best worst. With leastening words say least best worse. For want of worsen worse. Unlessenable least best worse.

62. The twain. The hands. Held holding hands. That almost ring! As when first said on crippled hands the head. Crippled hands! They there then the words. Here now held holding. As when first said. Ununsaid when worse said. Away. Held holding hands!

63. The empty too. Away. No hands in the -. No. Save for worse to say. Somehow worse somehow to say. Say for now still seen. Dimly seen. Dim white. Two dim white empty hands. In the dim void.

64. So leastward on. So long as dim still. Dim undimmed. Or dimmed to dimmer still. To dimmest dim. Leastmost in dimmest dim. Utmost dim. Leastmost in utmost dim. Unworsenable worst.

*L6*

65. What words for what then? How almost they still ring. As somehow from some soft of mind they ooze. From it in it ooze. How all but univane. To last unlessenable least how loath to leasten. For then in utmost dim to unutter leastmost all.

66. So little worse the old man and child. Gone held holding hands they plod apart. Left right barefoot unpreceding on. Not worsen yet the rift. Save for some after nohow somehow worsen on.

67. On back to unsay clamped to all the stare. No but from now to now this and now that. As now from worsened twain to next for worse alone. To skull and stare alone. Of the two worse in want the skull preying since unsunk. Now say the fore alone. No dome. Temple to temple alone. Clamped to it and stare alone the stare. Bowed back alone and twain blurs in the void. So better than nothing worse shade three from now.

68. Somehow again on back to the bowed back alone. Nothing to show a woman's and yet a woman's. Oozed from softening soft the word woman's. The words old woman's. The words nothing to show bowed back alone a woman's and yet a woman's. So better worse from now that shade a woman's. An old woman's.

69. Next fail see say how dim undimmed to worsen. How nohow save to dimmer still. But but a shade so as when after nohow somehow on to dimmer still. Till dimmest dim. Best bad worse of all. Save somehow undimmed worsen still.

70. Ooze on back not to unsay but say again the vasts apart. Say seen again. No worse again. The vasts of void apart. Of all so far missaid the worse missaid. So far. Not till nohow worse missay say worse missaid. Not till for good nohow on poor worst missaid.

*R7*

71. Longing the so-said mind long lost to longing. The so-missaid. So far so-missaid. Dint of long longing lost to longing. Long vain longing. And longing still. Faintly longing still. Faintly vainly longing still. For fainter still. For faintest. Faintly vainly longing for the least of longing. Unlessenable least of longing. Unstillable vain least of longing still.

72. Longing that all go. Dim go. Void go. Longing go. Vain longing that vain longing go.

73. Said is missaid. Whenever said said said missaid. From now said alone. No more from now now said and now missaid. From now said alone. Said for missaid. For be missaid.

74. Back is on. Somehow on. From now back alone. No more from now now back and now back on. From now back alone. Back for back on. Back for somehow on.

75. Back unsay better worse by no stretch more. If more dim less light then better worse more dim. Unsaid then better worse by no stretch more. Better worse may no less than less be more. Better worse what? The say? The said? Same thing. Same nothing. Same all but nothing.

76. No once. No once in pastless now. No not none. When before worse the shades? The dim before more? When if not once? Onceless alone the void. By no stretch more. By none less. Onceless till no more.

77. Ooze back try worsen blanks. Those then when nohow on. Unsay then all gone. All not gone. Only nohow on. All not gone and nohow on. All there as now when somehow on. The dim. The void. The shades. Only words gone. Ooze gone. Till ooze again and on. Somehow ooze on.

78. Preying since last worse the stare. Something there still far so far from wrong. So far far far from wrong. Try better worse another stare when with words than when not. When somehow than when nohow. While all seen the same. No not all seen the same. Seen other. By the same other stare seen other. When with words than when not. When somehow than when nohow. How fail say how other seen?

79. Less. Less seen. Less seeing. Less seen and seeing when with words than when not. When somehow than when nohow. Stare by words dimmed. Shades dimmed. Void dimmed. Dim dimmed. All there as when no words. As when nohow. Only all dimmed. Till blank again. No words again. Nohow again. Then all undimmed. Stare undimmed. That words had dimmed.

80. Back unsay shades can go. Go and come again. No. Shades cannot go. Much less come again. Nor bowed old woman's back. Nor old man and child. Nor foreskull and and stare. Blur yes. Shades can blur. When stare clamped to one alone. Or somehow words again. Go no nor come again. Till dim if ever go. Never to come again.

81. Blanks for when words gone. When nohow on. Then all seen as only then. Undimmed. All undimmed that words dim. All so seen unsaid. No ooze then. No trace on soft when from it ooze again. In it ooze again. Ooze alone for seen as seen with ooze. Dimmed. No ooze for seen undimmed. For when nohow on. No ooze for when ooze gone.

82. Back try worsen twain preying since last worse. Since atwain. Two once so one. From now rift a vast. Vast of void atween. With equal plod still unreceding on. That little better worse. Till words for worsen still. Worse words for worsen still.

83. Preying but what not preying? When not preying? Nohow over words again say what then when not preying. Each better worse for naught. No stilling preying. The shades. The dim. The void. All always faintly preying. Worse for naught. No less than when but bad all always faintly preying. Gnawing.

84. Gnawing to be gone. Less no good. Worse no good. Only one good. Gone. Gone for good. Till then gnaw on. All gnaw on. To be gone.

85. All save void. No. Void too. Unworsenable void. Never less. Never more. Never since first said never unsaid never worse said never not gnawing to be gone.

*L7*

86. Say child gone. As good as gone. From the void. From the stare. Void then not that much more? Say old man gone. Old woman gone. As good as gone. Void then not that much more again? No. Void most when almost. Worst when almost. Less then? All shades as good as gone. If then not that much more than that much less then? Less worse then? Enough. A pox on void. Unmoreable unlesable unworseable evermost almost void.

87. Back to once so-said two as one. Preying ever since not long since last failed worse. Ever since vast atween. Say better worse now all gone save trunks from now. Nothing from pelves down. From napes up. Topless baseless hindtrunks. Legless plodding on. Left right unreceding on.

88. Stare clamped to stare. Bowed backs blurs in stare clamped to stare. Two black holes. Dim black. In through skull to soft. Out from soft through skull. Agape in unseen face. That the flaw? The want of flaw? Try better worse set in skull. Two black holes in foreskull. Or one. Try better still worse one. One dim black hole mid-foreskull. Into the hell of all. Out from the hell of all. So better than nothing worse say stare from now.

89. Stare outstared away to old man hindtrunk unreceding on. Try better worse kneeling. Legs gone say better worse kneeling. No more if ever on. Say never. Say never on. Ever kneeling. Legs gone from stare say better worse ever kneeling. Stare away to child and worsen same. Vast void apart old man and child dim shades on unseen knees. One blur. One clear. Dim clear. Now the one. Now the other.

90. Nothing to show a child and yet a child. A man and yet a man. Old and yet old. Nothing but ooze how nothing and yet. One bowed back yet an old man's. The other yet a child's. A small child's.

R8

91. Somehow again and all in stare again. All at once as once. Better worse all. The three bowed down. The stare. The whole narrow void. No blurs. All clear. Dim clear. Black hole agape on all. Inletting all. Outletting all.

92. Nothing and yet a woman. Old and yet old. On unseen knees. Stooped as loving memory some old gravestones stoop. In that old graveyard. Names gone and when to when. Stoop mute over the graves of none.

93. Same stoop for all. Same vasts apart. Such last state. Latest state. Till somehow less in vain. Worse in vain. All gnawing to be naught. Never to be naught.

94. What were skull to go? As good as go. Into what then black hole? From out what then? What why of all? Better worse so? No. Skull better worse. What left of skull. Of soft. Worst why of all of all. So skull not go. What left of skull not go. Into it still the hole. Into what left of soft. From out what little left.

95. Enough. Sudden enough. Sudden all far. No move and sudden all far. All least. Three pins. One pinhole. In dimmest dim. Vasts apart. At bounds of boundless void. Whence no farther. Best worse no farther. Nohow less. Nohow worse. Nohow naught. Nohow on.

96. Said nohow on.

