How does the mind do literary work?

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1. **Questions**

- How do literary forms work?
- Are there specialized grammars for poetry?
- How do we process literary forms?

2. <u>A proposal</u>

- (Literary) forms have features that are best spelled out as separate, non-functionallyrelated domains
- A modular theory of cognition provides a unified framework for looking at literature as a practice exploiting very different kinds of forms (i.e meter, syntax, semantics and so on)

3. <u>METER</u>

- Meter is a set of rules and conditions that controls both the length of the lines and the placement of some stresses
- This is achieved by computing over a representation of phonological structure, which is not phonology proper
- *Endecasillabo*, the most common meter in the Italian tradition \rightarrow 10 metrical positions, but the number of syllables in a verseline need not coincide with the number of metrical positions
- Beatrice, or syllables and lines. The same diphthong in (b) and (c), but a different parsing

(Dante, Purgatorio, XVIII: 73)

 $3 \quad 4 \quad 5 \quad 6$ 7 1 28 - 9 10 Δ (b) fe.dir tor.n**e.a**.mèn.ti e còr.rer giòs.tra; \rightarrow 11 syll. (Dante, Inferno, XXII: 6) 2 3 4 5 6 7 8 9 10 Δ (c) La nò.bi.le vir.tù Be.a.trì.ce in.tèn.de →12syll.

• LINGUISTIC RHYTHM and METER → they are best spelled out as separated forms: the kind of prominence assigned by the meter is not always consistent with linguistic prominence;

STRESS σ $\sum \sigma \sum$ $\sigma \sum$ $\sigma \Sigma$ Σ σ σ (a2)Nel mézzo del cammín di nóstra víta (Dante, Inferno, I, 1) STRESS Σ σ Σ σ σ Σ $\sigma \Sigma$ Σ σ σ (d) ésta sélva selvággia e áspra e fórte (Dante, Inferno, I, 4)

N.B. σ = unstressed syllable

 Σ = stressed syllable

• The two lines significantly differ from the point of view of linguistic rhythm, still they are perfectly metrical *endecasillabi*

• METER DOES NOT DEPEND ON SEMANTIC FORM either;

 \rightarrow semantic complexity does not create metrical complexity:

- (e) nel tèmpo che colùi che 'l mòndo schiàra (Dante, Inferno, XXVI) 'In the time that the one that the world enlightens'
- The two recursively embedded sentences in (e) do not affect the meter, which is straightforwardly iambic

• In LOOSE METRICAL FORMS (see Fabb & Halle 2008), meter does not control all the syllables in a line;

 \rightarrow I.e., phonological form does not coincide with metrical form

Eugenio Montale (cf. Montale 1984)→ loose endecasillabi:

- (f) *E tu seguìssi le fràgil<u>i a</u>rchitettùre* (E. Montale, *Notizie dall'Amiata*, II: 1)
- (g) Tu non ricordi la casa dei doganieri (E. Montale, La casa dei doganieri, 1)

1 2 3 4 5 6 7 8 9 10 11 12 Δ (f1) E tu se.guìs.si le frà.gi.l<u>i a</u>r.chi.tet.tù.re

1 2 3 4 5 6 7 8 9 10 11 12 Δ (g1) Tu non ri.còr.di la cà.sa dei do.ga.niè.ri

- A traditional theory of meter is not able to explain:
 - the perceptual similarity between this meter and a canonical *endecasillabo*;
 - their structure;
 - the rules underlying the mental computation leading to such forms;

ſ ↓ (f2) E tu seguissi le fràgili architettù(re) Gridline (GL) * (* *] * (* *] * (* (* * (* *](0 ← *) *) * * *) 1 ← * *) *) 2 ←) * *) 3 ← * 4 GL (g2) Tu non ricòrdi la càsa dei doganiè(ri) *]* (* * (* *] * (* (* * (* *](0 ← * *) * *) *) 1 ← * *) *) 2 ← *) 3 ←) * 4

• Other kinds of *loose* meter may not leave syllables ungrouped, but have a loose control on the grouping instead. A German example (J. W. Goethe, *Römische Elegie*):

(h)	-		auf klass * [*		-		
(h1)		-	lauter un [* * *			GL 0→	
(h2)			on in ihre. * [* *	2		GL 0→	

Therefore:

• **METER** is neither a particular setting of linguistic constraints, nor the organization of linguistic rhythm: **instead**, **it is the output of a specialized computation**;

and

• METRICAL FORM is processed separately from phonological, syntactic and semantic form, as well as from any other kind of literary form

4. SYNTAX

'Me up at does', by e.e. cummings (from Complete Poems 1904-1962, p.784)

(h) Me up at does

out of the floor quietly stare

a poisoned mouse

still who alive

is asking What have i done that

You wouldn't have

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- deviation is central to studies of literary language (e.g. Attridge 1988), but the ways in which deviant language is interpreted is not well understood.
- cummings' text seems chaotic, and is highly deviant, but the sentence is largely unambiguous. How do we reach this unambiguous interpretation?
- proposals for a `poetic grammar' (Austin 1984) are highly problematic. Some of the movements/constructions in the cummings poem are unlike English grammar (for discussion of focus movement see Rochemont and Culicover 1990).
- motivating the movements in terms of other formal features of the text (rhyme, meter) is also highly problematic. This rearranged version retains the meter and most of the rhyme
- (i) a poisoned mouse

still who alive is asking What

have i done that

You wouldn't have

does quietly stare up at Me

out of the floor

• Rhyme doesn't create syntactic relations. Consider another rearranged form:

(j)

- still is who does out of up stare You wouldn't oor quietly mouse You wouldn't alive done asking What the Me up that have poisoned have
- an alternative proposal: deviant sentences are given an interpretation via the interaction of separate linguistic systems (syntax, semantics, pragmatics).
- residual syntactic structure maps onto an underspecified and incomplete semantic structure, which forms the basis for pragmatic inferencing, which in turn picks out the interpretation.
- explaining the interpretation of deviant sentences in this way involves no extra linguistic machinery, avoids theoretical difficulties, and comes with additional empirical advantages.
- it also corresponds with readers' intuitive responses to such texts: interpretation is partially inferential, but constrained by some aspects of structure.

5. CONCLUSION. A modular approach

- Claim (A) Meter is the output of a specialized computation; other forms are built upon the interaction of different, still separated, cognitive domains.
- Claim (B) There is no such a thing as a "poetic grammar"; rather we see cognitive input systems jointly operating in processing literature.
- Claim (C) Metrical form is parsed separately from other literary and linguistic forms. Similarly, syntax, semantics and pragmatics operate as separate but interacting domains.

6. References

- Attridge, D., 1988. *Peculiar language: Literature as Difference from the Renaissance to James Joyce*. London: Meuthen.
- Austin, T., 1984. Language crafted: a theory of poetic syntax. Bloomington, IN: Indiana University Press.

cummings, e.e., 1994. Complete Poems: 1904-1962. London :Liveright Publishing Corporation

Fabb, N. & M., Halle. 2008. Meter in Poetry: A new theory. Cambridge: CUP.

- Geiser, E., Zaehle, T., Jancke, L., & Meyer, M. 2008. The neural correlate of speech rhythm as evidenced by meter processing: an fmri study. *Journal of Cognitive Neuroscience*. 20(3): 541-552.
- Nespor, M. & I. Vogel. 1986. Prosodic Phonology. Dordrecht: Foris.

Montale, E. 1984. Tutte le poesie. Milano: Mondadori.

Rochemont, M.S., P. Culicover. 1990. English focus constructions and the theory of grammar. Cambridge: CUP.