

Substance and Structure in Columbia School Linguistics
Workshop on Substance and Structure in Linguistics
University of Copenhagen, February 27-28, 2015
Joseph Davis, The City College of New York

In 1974, William Diver gave a presentation to a colloquium on Ferdinand de Saussure held at Columbia University and sponsored by the then-new journal *Semiotext(e)*. While claiming a direct intellectual line back to Saussure, Diver at the same time faulted Saussure and his successors Trubetzkoy, Jakobson, and Hjelmslev, for eliminating *substance* from linguistics and over-emphasizing *value*, or what we might here call *structure*. At the other extreme, Diver faulted Chomsky for an uncritical reliance on traditional *substance*. According to Diver, Saussure's insistence in the *Cours* that *la langue* is a system of *valeur pure* appeared at the time to be justified by the nineteenth-century preoccupation with substance and by Saussure's own insight that certain linguistic problems could be solved with no appeal to substance. But that insistence, Diver claimed, was overplayed.

In his 1878 *Mémoire sur le système primitif des voyelles dans les langues indo-européennes*, Saussure had proposed—based entirely upon *structural* relations, not phonetic *substance*—that the Indo-European parent language must have had a series of consonants whose unknowable phonetic substance had entirely disappeared from the known daughter languages. These

hypothetical consonants in Proto-Indo-European became known as the laryngeals. Only with the discovery of Hittite, a quarter-century later, was Saussure's proposal supported by evidence of phonetic substance. The problem had been solved with no appeal to substance; the solution became merely more convincing to people once it was backed up by substance. That is, substance was not essential to the solution.

Grammar too received a Saussurean corrective: For instance, rather than an uncontrolled proliferation of notional "uses of the cases," a list of universal conceptual substances—such as causer, agent, instrument, recipient, patient, inner object, possessor, etc.—the linguist should let *la langue* itself establish what structural oppositions are relevant. So Russian might have an instrumental case for nouns, but Latin might not; Latin might have an ablative case, but German might not; and German might have a dative case for nouns, but French might not.

As a consequence of Saussure's influence, his successors promoted structure (or *valeur*), in both phonology and grammar, as the only thing of true importance and relegated substance to fields outside linguistics proper, such as phonetics and psychology. But in Diver's view, Saussure's "antithesis"—pure structure—quickly "led to difficulties . . . as insurmountable as those of the thesis"—pure substance. In particular, Diver faulted

Trubetzkoy's purely negative definition of phonemes and his device of the neutralization of oppositions. And Diver faulted Jakobson's assumption of the *a priori* structural devices of binary opposition and markedness.

Diver argued that both substance *and* structure have their place in linguistics, in both phonology and grammar.

Diver argued, contra Trubetzkoy's *neutralization of opposition*, that the total absence of voiced obstruents in final position in German is but an "extreme case" of a tendency seen elsewhere, as in English. The figures appear in (1).

1. Frequencies of final obstruents in the English monosyllabic lexicon

-p	144	-t	261	-k	211	= 616	oral articulator only
-b	87	-d	192	-g	78	= 357	oral <i>and</i> laryngeal articulators

Adapted from Diver 1974 [2012]

Diver's account of the favoring in the lexicon of voiceless over voiced obstruents appealed to the need for the language-user to control only one articulator—oral—in the former but two articulators—oral and laryngeal—in the latter. Thus phonetic substance is required for a solution to the problem.

Diver argued, contra Jakobson's *allgemeine Kasuslehre*, that conceptual substance is required—in addition to value, or structural, relations—to

account for the distribution of the cases in a particular language. Diver's account of the distribution of Latin nominal cases appealed both to value, or structure, and to a semantic *substance* that Diver called "degree of contribution." That is, certain of the cases "rank the participants in terms of their relative importance in the particular activity" represented by the verb.¹ The language-specific hypothesis appears in (2), along with a list of familiar "uses" of the cases, consisting of essentially universal conceptual notions.

2.	<p>Diver's hypothesis (internal to <i>la langue</i>)</p> <p><i>Value, or Structure:</i></p>	<p>Notions (external to <i>la langue</i>)</p> <p>(a partial, open-ended list)</p>								
	<p><i>Substance:</i> Degree of contribution to the activity</p>	<table border="0" style="border-left: 1px solid black; border-right: 1px solid black; padding: 0 10px;"> <tr> <td style="padding: 5px;">MOST nominative</td> <td style="padding: 5px;">Causer Agent Assistant</td> </tr> <tr> <td style="padding: 5px;">MORE ablative</td> <td style="padding: 5px;">Instrument Means Accessory</td> </tr> <tr> <td style="padding: 5px;">LESS dative</td> <td style="padding: 5px;">Motivator Purpose Beneficiary</td> </tr> <tr> <td style="padding: 5px;">LEAST accusative</td> <td style="padding: 5px;">Patient</td> </tr> </table>	MOST nominative	Causer Agent Assistant	MORE ablative	Instrument Means Accessory	LESS dative	Motivator Purpose Beneficiary	LEAST accusative	Patient
MOST nominative	Causer Agent Assistant									
MORE ablative	Instrument Means Accessory									
LESS dative	Motivator Purpose Beneficiary									
LEAST accusative	Patient									

Adapted from Diver 1974 [2012]

¹ Diver's hypothesis explicitly excluded the genitive case.

Yes, says Diver, structure, or value relations, must be taken into account, but it is also crucial to get the right substance which is thus categorized. And that substance is not the familiar language-external notions of agent and so forth; it is rather, in Latin, the substance of Degree of contribution to the activity.

Consider how the Latin cases would be used to communicate the two ideas ‘The soldiers built a wall for the purpose of defense’ and ‘Caesar had the soldiers build a wall for the purpose of defense.’ Number (3):

3.	‘The soldiers built a wall for the purpose of defense.’	‘Caesar had the soldiers build a wall for the purpose of defense.’ (cf. <i>dbg</i> I: 8)																																										
	<table border="0" style="margin-left: 20px;"> <tr> <td style="font-size: 3em; vertical-align: middle;">{</td> <td style="padding-right: 10px;">soldiers</td> <td style="padding-right: 10px;">Agent</td> </tr> <tr> <td></td> <td style="padding-right: 10px;"><i>nominative</i></td> <td></td> </tr> <tr> <td style="font-size: 3em; vertical-align: middle;">{</td> <td style="padding-right: 10px;">defense</td> <td style="padding-right: 10px;">Purpose</td> </tr> <tr> <td></td> <td style="padding-right: 10px;"><i>dative</i></td> <td></td> </tr> <tr> <td style="font-size: 3em; vertical-align: middle;">{</td> <td style="padding-right: 10px;">wall</td> <td style="padding-right: 10px;">Patient</td> </tr> <tr> <td></td> <td style="padding-right: 10px;"><i>accusative</i></td> <td></td> </tr> </table>	{	soldiers	Agent		<i>nominative</i>		{	defense	Purpose		<i>dative</i>		{	wall	Patient		<i>accusative</i>		<table border="0" style="margin-left: 20px;"> <tr> <td style="font-size: 3em; vertical-align: middle;">{</td> <td style="padding-right: 10px;">Caesar</td> <td style="padding-right: 10px;">Causer</td> </tr> <tr> <td></td> <td style="padding-right: 10px;"><i>nominative</i></td> <td></td> </tr> <tr> <td style="font-size: 3em; vertical-align: middle;">{</td> <td style="padding-right: 10px;">soldiers</td> <td style="padding-right: 10px;">Agent</td> </tr> <tr> <td></td> <td style="padding-right: 10px;"><i>ablative</i></td> <td></td> </tr> <tr> <td style="font-size: 3em; vertical-align: middle;">{</td> <td style="padding-right: 10px;">defense</td> <td style="padding-right: 10px;">Purpose</td> </tr> <tr> <td></td> <td style="padding-right: 10px;"><i>dative</i></td> <td></td> </tr> <tr> <td style="font-size: 3em; vertical-align: middle;">{</td> <td style="padding-right: 10px;">wall</td> <td style="padding-right: 10px;">Patient</td> </tr> <tr> <td></td> <td style="padding-right: 10px;"><i>accusative</i></td> <td></td> </tr> </table>	{	Caesar	Causer		<i>nominative</i>		{	soldiers	Agent		<i>ablative</i>		{	defense	Purpose		<i>dative</i>		{	wall	Patient		<i>accusative</i>	
{	soldiers	Agent																																										
	<i>nominative</i>																																											
{	defense	Purpose																																										
	<i>dative</i>																																											
{	wall	Patient																																										
	<i>accusative</i>																																											
{	Caesar	Causer																																										
	<i>nominative</i>																																											
{	soldiers	Agent																																										
	<i>ablative</i>																																											
{	defense	Purpose																																										
	<i>dative</i>																																											
{	wall	Patient																																										
	<i>accusative</i>																																											

Adapted from Diver 1974 [2012]

The point here is the lack of correspondence between the cases and any “real-world” roles such as causer or agent. Instead the substance of Contribution is divided up into merely relative values.

Diver uses the same hypothesis to argue against an appeal to case government. For example, rather than saying that the verb *satisfacio* ‘satisfy’ governs the dative as direct object, Diver would hold that the party satisfied contributes substantially to the activity of satisfying by having to “agree that the reparations are sufficient,” as in (4):

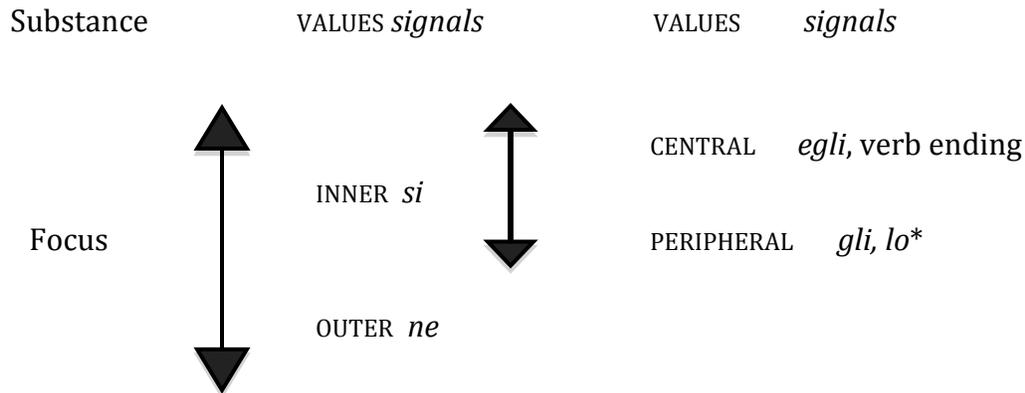
4. *si Aeduis de iniuriis quas ipsis intulerint . . . satisficiant (dbg I: 14)*
 ‘if they would satisfy *the Aedui-dat* in respect of the outrages that they had inflicted on them’

The wronged Aedui contribute substantially to the activity of satisfying in that the Aedui must consent to the terms of satisfaction.

Diver’s forty-year-old proposal that we need both substance and structure in linguistic analysis finds support too in current Columbia School work. Consider the distribution in discourse of the modern Italian pronominal clitic *si* relative to other clitics. (*Si* is traditionally known as the third-person reflexive and impersonal clitic.)

See (5), particularly the left-hand side of the diagram.

5. The Italian System of Focus (on participants in an event)



* The clitic *gli* here is a stand-in for three datives: *gli, le, loro*; *lo* is a stand-in for four accusatives: *lo, la, li, le*.

The distribution of *si* relative to the clitic *ne* reflects an “opposition of value,” or structure, involving the semantic substance of “Focus” on participants in the event represented by the verb: *Si* signals the value INNER and *ne* the value OUTER within the substance of Focus. (*Ne* is traditionally called the partitive.) The other pronouns subdivide the range of INNER Focus into two more precise values. In essence, all the pronouns except *ne* place enough Focus on a referent to suit a bona fide participant, someone or something that has a substantive role to play in the activity, while *ne* places mere bystanders to events at the outer fringes of Focus.

The hypothesis that *si* signals a higher value of Focus than *ne* finds quantitative support from texts in which there is one clearly identifiable principal character. In such texts, the principal character tends strongly to appear in INNER Focus, signaled by *si*, compared with other referents, which tend to appear in OUTER Focus, signaled by *ne*. Number (6):

6. Focus (INNER / OUTER) Correlated with Character Status

	<i>si</i>	<i>ne</i>		
	INNER Focus	OUTER Focus		
Character status:	<i>n</i>	<i>n</i>		
Principal	165 .26	2 .02		167
Other	<u>477</u> .74	<u>99</u> .98		<u>576</u>
	642 1.00	101 1.00		743

OR > 17

Combined results from three texts—Berto, Montanelli, Calvino—each of which skews in the same direction.

The count confirms that a principal character is rarely referred to by *ne* but is fairly often referred to by *si*. The results are consistent with the hypothesis that *si* signals a higher level of participant Focus than *ne*.

The example next, (7), illustrates the tendency. In CENTRAL Focus (finite verbs *Tendeva, sapeva, stringeva, sentiva, lasciava*) is the principal character, the naive Viscount Medardo, standing pensively at night at some distance from the site of a terrible battle.

7. Tendeva lo sguardo al margine dell'orizzonte notturno, dove sapeva essere il campo dei nemici, e a braccia conserte si stringeva con le mani le spalle, contento d'aver certezza insieme di realtà lontane e diverse, e della propria presenza in mezzo a esse. Sentiva il sangue di quella guerra crudele, sparso per mille rivi sulla terra, giungere fino a lui; e *se ne* lasciava lambire, senza provare accanimento né pietà.
(Calvino 22)

He stretched his gaze toward the edge of the night horizon, where he knew the enemies' camp to be, and with folded arms he squeezed his shoulders with his hands, happy to have certainty both of realities far and wide and of his own presence in the midst of them. He felt the blood of that cruel war, spilled in a thousand streams on the ground, reaching even to him; and he allowed *himself* (*se = si*) to lick *at it* (*ne*), without feeling either rage or pity.

Here, as often, INNER-Focus *si* refers to the principal character, while OUTER-Focus *ne* refers to something else: a small part of the blood of other men, in this case. Consistent, moreover, with the meaning OUTER Focus, the blood of the enemies does not fully participate in the licking. This is not a literal statement: Medardo did not plunge his tongue into the blood running on the ground: not *se lo lasciava lambire* 'he let himself lick it.' Rather, he took some

pleasure in tasting—licking ‘at it’—a bit of the reality of life and death. This Viscount is a dilettante at war, not fully plunged into it.

Thus we see the effects of an *opposition of value*, or the importance of structure.

On the other hand, the distribution of *si* relative to the clitics *gli* and *lo* reflects an *opposition of substance*. By hypothesis, *gli* and *lo* signal grammatical meanings having to do with the substance of “Degree of Control” over the event while *si* lies outside (or “opts out of”) that substance: *si* does not signal Degree of Control. In (8), note that *si* does not appear in the diagram.

8. The Italian System of Degree of Control (Partial Statement)

Substance	VALUES	<i>signals</i>
Degree of Control	HIGH	*
	MID	<i>gli</i>
	LOW	<i>lo</i>

* The signal of HIGH Control consists of the *order* of certain clitics.

The exclusion of *si* from this substance —versus its *inclusion* in the substance in (5)—also finds quantitative support. The table in (9) gives results of a

count made on two chapters from Giacomo Devoto's history *Gli antichi italici* 'The Ancient Italic Peoples.'

9. *Si-* and the Opting Out of the Substance of Control

	Ch. VI 'Italic Alphabets and Dialects'	Ch. XI 'Becoming Part of the Roman World'
<i>si</i> (no Control meaning)	122	196
<i>lo</i> (a Control meaning)	9	35
	Ratio 14:1	Ratio 6:1 OR > 2.4

Chapter Six, on 'Italic Alphabets and Dialects,' has little to say about humans and contains only one personal name in Focus (subject of a finite verb) referring to a human. Chapter Eleven, on 'Becoming Part of the Roman World,' contains fifty-four personal names in Focus referring to humans (54 human grammatical subjects). Since inanimates are routinely viewed by people as exercising less control over events than humans do, we can predict that the chapter on alphabets and dialects, where control is irrelevant, will have a higher ratio of *si* to Control signals than will the chapter about humans, where control *is* relevant.

The chapter on alphabets has a *si/lo* ratio of about 14:1; the chapter on humans has a *si/lo* ratio of only about 6:1, relatively fewer *si*'s, relatively more

Degree of Control signals. The odds ratio measures the strength of the correlation at 2.4 (>1). Signals of Degree of Control tend to be used in contexts where distinctions of control are *more* relevant; *si* tends to be used in contexts where such distinctions are *less* relevant.

In the long and ongoing debate about whether and to what extent linguistics should concern itself with structure versus substance, the evidence from authentic discourse continues to support the conclusion that both structure *and* substance are required if we are to account for the observations. The analytical question must be: What is the phonetic or semantic *substance*? And what are the *structural* relations within that substance?

References

- Davis, Joseph. Under consideration. *The Substance and Value of Italian Si*.
Diver, William. 1974 [2012]. "Substance and Value in Linguistic Analysis." *Semiotext(e)* 1(2): 11-30. Edited and republished in *Language: Communication and Human Behavior. The Linguistic Essays of William Diver*, Alan Huffman and Joseph Davis (eds.), Leiden / Boston: Brill. 23-45.
Saussure, Ferdinand de. 1878. *Mémoire sur le système primitif des voyelles dans les langues indo-européennes*. Paris. Published in *Recueil des publications scientifiques de F. de Saussure*, Geneva, 1922. Cited in Diver 1974 [2012].
Saussure, Ferdinand de. 1916 [1972]. *Cours de linguistique générale*. Paris: Payot.

Sources of Data

- Berto, Giuseppe. 1951. *Il brigante*. n.p.: Einaudi.
Caesar. *De bello gallico*.
Calvino, Italo. 1951. *Il visconte dimezzato*. New York: Appleton, 1968.
Devoto, Giacomo. 1951. *Gli antichi italici*. 2nd edition. Firenze: Vallecchi.
Montanelli, Indro. 1976. *L'Italia in camicia nera*. Milano: Rizzoli, 1977.