

Particularist Compositionality

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Particularism is a view developed in the theory of morals. Its main claim is that moral rightness or wrongness of acts cannot be captured into general moral principles and rules and that morality does not depend on their provision. Moral reasoning should therefore adjust to the rich and holistic non-repeatable circumstances. Particularism can be extended to other areas that bear some substantial relation to normativity, such as language and meaning. We tackle the question whether particularism-inspired compositionality would be a viable option. Particularist or weak compositionality is offered as a realistic possibility, especially if we take a look at problems encountered in the case of ubiquitously present generalist proposals designed to explain compositionality. No form of normative authority of the general is able to explain compositionality, and a good bet is that particularist patterns do in fact accomplish this job. We build our proposal upon connectionism-inspired picture and try to find a place for particularist compositionality within such an approach.

1 Presuppositions of the Classicist View of Compositionality

Classicist view of compositionality emerges out of the following general picture. Productivity, systematicity and compositionality are very closely related features of rationality; e.g. language and cognition. The productivity claim is further supported by empirical evidence and arguments pertaining to our capacity to generate – in principle – an unbounded number of sentences. Systematicity and productivity are problematic because of some of their requirements: (a) an atomistic view of parts or meaning constituents, and (b) a simple rule-based and tractable compositional structure.

We propose an alternative that avoids these problematic commitments: particularist compositionality or weak compositionality. The inspiration for this alternative comes from the particularist view concerning the role of general principles and rules in ethics. It can be found in Jonathan Dancy's work on rationality, practical judgment and meaning. (Dancy 1993, 2000, 2004). We begin by briefly presenting some difficulties for classicist view. Then we look at Horgan and Tienson's version of non-classical approach to language and thought. We conclude with some remarks about how to understand this non-classical proposal in a way that enables to incorporate compositionality into it.

Classicists try to retain the compositionality requirement of meaning constancy by arguing for appropriateness of general patterns and by diminishing the importance of contextual variation. They try hard to keep in charge the atomist normative authority of the unique lexical meaning. Classicists see structure to be possible only on the basis of atomistic meaning ingredients undergrid by tractable computational rules leading to general patterns. If you abandon this route, they argue, you stay with just a list of disconnected compositional facts involving meaning, which has to happen in the case of the connectionist approach. But just how

should we preserve rationality and productivity without the presuppositions proper to classicist compositionality?

There is the possibility of an alternative non-classicist structure and language of thought, as based upon the proposal of dynamical cognition. “It is entirely possible that normative standards are like competent human cognition ... that normative standards are too complex, too subtle, and too sophisticated to be formulated as exceptionless general principles.” (Horgan and Tienson, 1996, 143 /HT/) The logical space of possibilities needs to be extended if we should account for the actual rationality, productivity and compositionality as displayed by cognizers.¹

2 Where Classicism Goes Wrong

There are two main directions where classicists go wrong: 1. the supposition of atomistic meaning with its inability to explain cases of metaphors and of double meaning 2. the supposition that if you do not buy atomistic meaning and rigid rules, neither compositionality nor systematicity are possible. Against this, we claim that compositionality does not necessarily need to be tied to general rules. Particularist non-arbitrariness of composition is possible.

Ad 1. The classicist view of compositionality and productivity has problems with its requirement of keeping the same meaning of the constituent compositional parts over a range of cases.² In the sentence “The man kicked the bucket” ex-

¹We stay neutral as to the general picture of the metaphysics of meaning that we endorse in this paper, as our main preoccupation is the contextual shift of meaning.

²In the theory by Fodor and Pylyshyn this requirement or presupposition is present in their Compositionality Principle: “insofar as language is systematic, a lexical item must make approximately the same semantic contribution to each expression in which it occurs. [...] Similarity of constituent structure accounts for the se-

pressions “kicked” and “bucket” do not appear with their standard lexical meaning, but with what may be dubbed their metaphorical meaning. Such linguistic phenomena are not rare and speakers of natural languages master them without special difficulties. Differentiating between several distinct meanings of a term will not suffice to solve the problem at hand. The particularist view is that even if we try to save atomism by attributing several meanings to the same expression, this would not tell us anything about the meaning of “good” in a certain particular case. Our understanding always succeeds in context, which atomists are unable to explain by just breaking things down into their supposed constituents. Once we grasp this, it can serve as a rejection of the classicist claim that context is overestimated. Each breaking down of a context into parts makes your position only worse, because you cannot explain why in this or another particular case this meaning is used. Classicist compositionality and systematicity which consider context as unimportant are not viable.³

Ad 2. “The man kicked the bucket” case is interpreted by classicists in a way that the understanding of this sentence would depend upon the understanding of other sentences, such as “The bucket kicked the man” or “The man kicked the stone”. But none of these sentences will help us to understand the original sentence in its metaphorical meaning, because the meaning of this sentence is formed entirely under the normative pressures of a specific context.

Whether we understand an expression literally or metaphorically depends upon the context in which the sentence is used. If it is used in the context of things going on in your yard, the meaning will be literal. If the context

mantic relatedness between systematically related sentences only to the extent that the semantic properties of the shared constituents are context-independent.” (Fodor and Pylyshyn 1988, 42)

³The early authors claiming that classicism is unable to explain metaphors include Rumelhart 1979 and Schiffer 1987.

is that of a violent death, the context will be metaphorical. Then sentences like “The man died of a violent death.” will become important for the understanding/production of the first sentence. If we look at these two sentences, they are close indeed. But according to the classicist view, there is little meaning-relevant that would tie them together. Despite that there is no link here according to the classicist, the understanding of the first sentence depends upon the understanding of the second. Contextual variation happens and is grasped by cognizers in an automatic manner. Presuppositions are introduced in such a way that they adapt to the requirements of co-reference and similar phenomena. Contextual variation is so smooth that it gives place to cognitive illusions figuring absence of contextual shift. In his “Score-keeping in a Language Game” (1979) Lewis provided an excellent picture of contextual dynamics.

There is a question though how to understand atomistic and literal lexical meaning and how to account for a certain stability of meaning. We can help ourselves with Dancy’s thought that we do not need to have an unchangeable kernel of meaning coming with each expression, even if one allows for some kind of default meaning.⁴ Default meaning is not clearly fixed. It is a half-standard meaning, not the most usual meaning. Even if we understand the default meaning, we do not necessarily need to understand all the other meanings proper to the same expression. A generalist introduces the basic meaning and allows for soft aberrations from it, for whatever needs further contextual explaining. Default meaning is the enabling condition for meaning.

Particularist talks about the meaning-in-this-case and not about the standard meaning. There is then the dominance of the context over all expressions in the sentence: Meaning-in-this-case-1, Meaning-in-this-case-2, . . . , Meaning-in-this-case-n. Because context dominates now, we can explain how

⁴For his notion of default reason see Dancy 2004, 111-117.

the metaphorical meaning comes about: because we uttered it in this context.

Contrary to classicists, we do not propose to treat aberrations from lexical meanings as being adjusted empirical departures from the general pattern of meaning for the item in question. We rather propose to generalize irregularity in meanings for a certain lexical item so that one ends up with a list of items. Each of the items however will not come without its structure. The holistic structure determining contextual meaning of the item on the list is the structure of the relevant pattern specific for the case in question. Lexical or default meaning is not rejected, for it plays an important role as the enabling condition in the background structure determining the particular meaning. The competent users' knowledge of meanings is thus not just the knowledge of general rules involving classicist systematicity and compositionality. It is closer to a disposition concerning the proper use - a skill that allows us to change easily from one context to another.

An outline of particularist compositionality now starts to unleash itself, which is much closer to our capabilities of rationality and productivity than either classicists or connectionists would suggest. Accordingly, dynamical cognition inspired proposal is better off at explaining all of these than is the case with either classicist or connectionist approaches.

Particularist normative authority of meaning is intrinsically involved into a certain context, which makes the varying contribution much more natural and plausible. Particularist view about meaning is not condemned to arbitrariness though. There is an underlying non-classicist holistic structure of beautiful patterns. Such a structure brings relevance with it without the prevalent engagement of generalities. Holism should not be viewed as promoting an arbitrarily composed intermingling of parts. The meaning of concepts or sentences depends upon the meaning of other relevant concepts or sentences.

There are three views about compositionality. The first is the idea that there are general exceptionless compositional principles. The second is the view that there are general *ceteris paribus* compositional principles with generalist authority. The third is the view of compositionality that we endorse: compositional structure is effectively there, appropriating non-generalist relevant patterns. Still, one could find a positive role for *ceteris paribus* principles within this last option.

3 The Possibility of the Particularist Non-Arbitrariness of Composition

Our main view is that compositionality is particularist. Particularism allows for a relevant structure that does not follow generalist patterns but is rooted in particular patterns. Such particularist structure undergrids compositionality.

There is an example of a particularism-compatible principle in the area of metaphysics.⁵ A similar possibility to recognize non-arbitrariness of composition should be recognized in the area of compositionality and meaning. We will look at an approach that recognizes some flexibility in handling compositionality, and also recognizes a particularistically based non-arbitrariness of composition structure there, although it is obstructed in its explicit effort to do this because of its uneasy ways of trying to uphold generalist bonds to which it continues to cling in the sense of the overall project. Our proposal rests on the non-classical picture of cognition.

The approach of Dynamical Cognition in the area of the models of mind has brought to attention the possibility of

⁵A general principle promoting structure and banning arbitrariness from the world is called Non-Arbitrariness Of Composition. Its generality though is entirely compatible with particularism and with its promoting of relevant structure. See Potrc 2002.

a relevant structure that is not a classicist structure. Classicists think that structure is necessarily related to symbols and general rules. Dynamical Cognition is inspired by the background multi-dimensional landscape proper to connectionist systems. The difference to these systems is that Dynamical Cognition recognizes Language of Thought as an outcome of this structure. According to the Dynamical Cognition approach there is a non-classical Language Of Thought that goes a long way towards embracing particularist or weak compositionality for which we argue to be the actual compositionality. The Dynamical Cognition approach however is unable to articulate compositionality under that very name. The reasons for this are that compositionality and the semantics related to it are of a particularist nature, that they follow the path of particular patterns, and not that of generalist patterns. The Dynamical Cognition approach however, at least in its HT⁶ rendering, still in a sense follows general patterns, by embracing generalities with exceptions or *ceteris paribus* clauses. Such a position of HT is understandable if we consider that his main task is to argue against exceptionless generalities ruling over cognition, opposing to these the kind of generalities that allow for exceptions or *ceteris paribus* clauses. But once we recognize the possibility of the existence of particularist beautiful and relevant patterns for which we push here, it becomes quite natural for us to offer *help* to HT so that he would recognize his own position in semantics and compositionality as being that of

⁶HT is used as an abbreviation for the position in the Horgan, T. and Tienson, J. 1996 book *Connectionism and philosophy of psychology*. The position of this book is that of Dynamical Cognition as a model of mind. HT is used here as if it designates a certain unique person holding such a view, despite that the actual authorship comes from a joint effort of two persons. HT also captures the individual that it designates in a certain moment of time. It is possible that none of the actual persons entering into the 1996 time slice of HT now still shares exactly the same view.

particularist compositionality. Particularist compositionality could still accept *ceteris paribus* principles, but not as the only ones that offer ultimate normativity.

We will first take a look at where compositionality gets articulated in HT. The answer is that compositionality is articulated in the Fundamental Principle of Cognitive Design (FPCD). FPCD is indeed a rendering of compositionality, and specifically it is a rendering of particularist compositionality. Then we ask why, if this is the case, FPCD is not explicitly recognized as a principle instituting compositionality. HT does indeed articulate productivity and systematicity. These are compatible with generalist interpretation, and systematicity presents a *syntactic* requirement for productivity. Compositionality that involves a *semantic* contribution to productivity is a much harder issue. It turns out however that it is a much harder issue for an approach based upon general patterns. As semantics does actually follow particularist patterns, and as FPCD presents such a pattern, this will help HT to recognize FPCD dealing with compositionality and meaning.

Let us first recapitulate some basic moves here. Productivity is a main issue for HT, for productivity is related to the question of the *structure* enabling intelligent systems and an effective cognition.⁷ Productivity in linguistic matters is the capacity to produce an infinite number of well-formed sentences upon the basis of a finite number of input data. A child gets a limited number of input blocks, such as “mama”, “dad”, “car”, “cat” and “mat”. Then at a particular moment

⁷“Cognitive systems are representationally systematic in the sense that there are systematic interconnections among the contents of the cognitive states that they instantiate. ... Cognitive systems exhibit processing systematicity, in the sense that the (potential) evolution of a cognitive system from each of its potential cognitive states must be appropriate to the content of that state, and content-appropriate evolution must be similarly related to cognitive structure over vast range of content.” HT, 155.

in time he becomes able to *produce* a potential infinity of well-formed strings or sentences, such as “The cat is on the mat”.

A classical-approach view is that productivity is a cognitive ability that needs an explanation. The explanation comes through a *structure* that *enables* production. This structure may be assured through syntactic and semantic preconditions. The syntactic precondition figures systematicity, which may be explained in the following manner: It is impossible for an intelligent cognizer to be able to form the sentence “John loves a girl”, but at the same time being unable to form this other sentence, “A girl loves John”. So the ability to master syntactic frames into which to put the items is one precondition for productivity. Another precondition for productivity is compositionality, which basically requires the items in question to retain the same semantic meaning. So the word “cat” should retain the meaning cat through several occasions of its appearance. It does not seem that productivity would be really possible if the word “cat” would mean cat on one occasion, dog on another occasion, and car on the third occasion, in an arbitrary manner. So a certain semantic constancy of basic features that assures structure seems to be needed for productivity and thus for the intelligent behavior of a cognizer.

The above description of enabling conditions for productivity fits well into the *generalist* approach. Notice that the syntactic structure will be typically guided by a propositional logic-like setting of a tractable kind. And the constancy of meaning of a feature along several contexts is assured by an atomistic generalist account. The presupposition of the independence of units of meaning from the context is important for the ability of systematicity and compositionality to jointly explain productivity in the classicist view. Fodor and Pylyshyn stress this in a repeated manner, and they even argue that contextuality attributed to language is widely overestimated.

HT does not embrace the straight and unlimited generalist account of cognition. At least he argues for some exceptions customarily coming along with generalist principles. And he wishes to articulate a picture of cognition that is quite different from the generalist account. So there seems to be a tension in HT's approach. On the one hand he still embraces a certain kind of a generalist-based story of cognition. On the other hand he wishes to promote a really wide range of approaches to cognition, some of which, such as Dynamical Cognition itself, really do transcend generalism. But the immense novelty of this direction towards recognizing particularist patterns as being at the basis of the structure allowing for productivity cannot perhaps be straightforwardly recognized by an approach that still clings to generalism, even to general patterns allowing for exceptions.

HT in his book does well discuss productivity and systematicity. But although he perhaps entertains the feeling that he did discuss *compositionality* in there, he certainly did not do it in an explicit manner.⁸ Despite this we think that HT does discuss compositionality in his book, although in an implicit manner, without mentioning the expression, in the Fundamental Principle of Cognitive Design that he proposes. At least this is what we argue. Given that compositionality targets the structure that enables the meaning, proper for enabling productivity, we will look at where in HT's book meaning is discussed.⁹ This happens to be the case with the Fundamental Principle of Cognitive Design (FPCD):

⁸In a private correspondence HT said that he intends to summarize his approach towards compositionality such as proposed in his book. But there is *no explicit* discussion of compositionality to be found in the register of HT's book at all, despite of his several counts of mentioning productivity and systematicity.

⁹At the very beginning of his book, HT delimits his inquiry in such a manner as not to include the discussion of contentfull intentional states and of origins of intentionality.

The Fundamental Principle of Cognitive Design. The high-dimensional topography of the activation landscape and the positioning of TCS-realizing points on that landscape are jointly just right to subserve content-appropriate cognitive transitions for the whole vast range of potential TCSs the cognitive system has the capacity to instantiate. (HT, 154)

HT's approach is inspired by connectionism which considers the dynamics of composition to happen according to the settling of activation states in a multi-dimensional landscape. This is a landscape determining potential activations the dimensionality of which depends on the number and position of neurons in a connectionist network. The approach is not identical to the connectionist proposals in that it embraces the full-fledged structure of Language of Thought. Compositionality is preserved thereby, without being classicist compositionality. FPCD presents the way compositionality comes along in a non-classical setting.

Total Cognitive State (TCS) is a state of a cognitive system at a certain moment, such as my intentional belief that the cat is on the mat. According to the classicist approach, TCS is realized at the middle level of the system's description by an algorithm. The non-classicist conceives TCS-realizing point as a point on the dynamical multi-dimensional landscape, the inspiration of which is the background structure of a connectionist system. The search of HT's book is for a *structure* that is non-classicist, but that nevertheless enables intelligent cognition. HT calls his proposal that of *Dynamical Cognition* (DC). DC distinguishes itself from the classicist cognition model of mind proposal, among other things, by the difference at the middle level of cognitive system's description. Whereas we find an algorithm at the middle level of cognitive system's description in the case of the classicist proposal, there are mathematical-state transitions to be found at this level according to the generic proposal. (HT 45) Generic proposal subsumes the

algorithmic one as its sub-case, with the unwanted consequence that it is not rich enough if measured with the actual performance to be found in cognizers, and therefore that it is not realistic.

According to this picture, each representation gets positioned upon a rich *background* multi-dimensional space, where the tendency that it may bring along is shaped by the forces of the landscape upon which it gets positioned. The resulting meaning is a real context-related outcome. Both the tendency of a certain representation and the underlying landscape upon which the representation gets positioned determine the resulting meaning. Each time this meaning is at least slightly different and variable because of the impact of the background landscape upon which the representation gets positioned. But the outcome of meaning is not arbitrary, because it is related to the *structure* that is offered by the constantly molded rich background landscape.

The topography of the activation landscape guides potential cognitive transitions. Notice now that there is a hand-and-glove or joint interaction of “content-appropriate cognitive transitions” here that determine the *meaning*. So what FPCD actually describes is a *semantic* precondition for productivity. It is a description of how representations follow a structure in such a way that they result in the production of *relevant* meaning.

In this way compositionality is articulated by the help of the Fundamental Principle of Cognitive Design (FPCD). FPCD is indeed a rendering of compositionality. Compositionality is a requirement to explain how *meaning* can contribute to productivity. In the above picture meaning does contribute to productivity in a much more plausible manner as this would be possible for *atomist* generalist requirements for compositionality. In fact, the FPCD picture also brings systematicity or syntactic requirements in a much more plausible interdependency relation than this is accounted for by the classicist generalist picture concerning

compositionality. It gives the sense of how the background structure of the cognitive system is related to the issues of meaning. This is not possible in a real plausible manner by the generalist requirement to substantially limit the issue of compositionality to atomism. The FPCD picture offers a *particularist* compositionality.

The joint molding of “the high-dimensional topography of the activation landscape and the positioning of TCS-realizing points on that landscape” leads us to expect the contribution of meaning of a single feature to be a joint result of the tendency that it brings along and the positioning upon the non-classically rendered background. This however means that each single appearing of the TCS as a meaning determining feature will be slightly different and thus substantially context dependent. But there will be the contribution of the *structure*, and nothing will really happen in an arbitrary manner. Just that this structure will not be the one assured by generalist projection, but that of each single case. This all happens in an automatic adjusting manner in the cognitive system.

If meaning and compositionality are described as based upon *particularist* patterns by FPCD, this seems to be quite a long shot away from the usual generalist and atomistic presenting of compositionality. Generalism is precluded by the intractable richness and multi-dimensionality, while the atomism of the TCS-realizing points gets precluded by their intrinsically subserved transitions in the dynamics of the background supporting landscape that also determines their contextually changing semantic value. Compositionality determines the effectiveness of meaning in a cognitive system. But this effectiveness just cannot come through a shallow repetition according to the generalist pattern. Meaning is rather a production, a creativity, something that happens according to poetic lines. The meaning of the word “fly” in John Donne’s verse¹⁰ certainly does not seem to be

¹⁰This verse is also reproduced in the next section: “Call us what

reducible to the most standard dictionary meaning. Such examples clearly show the sheer wrongfulness of atomistic and generalist conceiving of compositionality as a function of tractable coming together of atomistic parts. And it is clear that poetry is an effective and relevant production of meaning. One problem for the generalist view of compositionality is that it atomistically delimits the units of meaning. But are meanings really entirely limited to single words, to phrases? Perhaps they are determined by sentences and words that just bring in some meaning forces as the offered tendencies that may be and in most cases are overridden by the context in which they appear. But a sentence does not offer enough context. Narration seems to be a much better candidate. The narrative contextual meaning seems to dominate atomistic parts such as words, so that these atomistic parts are not even necessary for the production of a certain narrative meaning. Consider that the same story, the same fable, with the same meaning, may be narrated by a different choice of words, but still have the same meaning. Consider that historical narration actually *enriches* itself by the joining of different (and sometimes even contradictory) narratives.

This all shows the profoundly wrong proposal of compositionality as a *meaning of a composite entity such as a sentence being composed solely of meanings of its constituent parts and of the manner of the coming together of these parts*. According to this simplistic atomistic generalist approach the meaning of the sentence “The cat is on the mat” would depend upon the contribution of the meanings of semantic atoms such as “cat”, “mat”, “being on”, and upon the manner of these coming together. But this is just a parody of meaning which is really a production and thrives upon unexpected but relevantly structured particularist patterns. Unhappily, such a parody of compositionality was basically accepted as an adequate rendering of compositionality by most analytic philosophers, from Dummett and

you will, we are made such by love; Call her one, me another fly”.

Davidson to Blackburn.

4 More on FPCD

FPCD is not a generalist kind of principle; it is rather a particularist kind of principle, or at least a particularism compatible kind of principle. One lesson is that there exist particularist principles – the principles that follow particularist and not generalist patterns. The existence of such particularist principles is hard to acknowledge, as we are so much used to principles coming attached to generalist patterns.

FPCD has the dynamics and richness intrinsically built into it. The hand in glove syntax and semantics cooperating feature is a guiding feature. These kind of features point in the direction of a particularist structure. Dynamics is not something for which generalist patterns would easily allow. Neither is richness something that generalist patterns would easily account for.

FPCD introduces a particularist pattern, related to meaning. So HT elaborates this in a particularist way, but is unable to treat it in the area of productivity-systematicity discussion according to the mode of Fodor-Pylyshyn to which he sticks in an explicit manner.

The bottom line is that there are these two kinds of patterns: general patterns and particularist patterns. FPCD presents a case of particularist patterns. But the whole debate about productivity is made according to generalist patterns.

So HT does exhibit the particularist pattern of FPCD. Well in opposition to the generalist presupposition that meaning should be atomistic and thus generalist, meaning is rather holistic and particularist. Why? Because the whole of the context determines the meaning. You cannot say that the meaning is that of a word. This would already take you down the atomist and generalist line. The meaning is not

(as Dummett presupposes) the meaning of a whole, of a sentence, which is composed out of atomistic elements, say of words. The meaning rather belongs to the whole of the sequence. You cannot identify the meaning atomistic blocks (Word? Phrase? Sentence? Paragraph? Chapter? Do these have vague borders?). Rather, the meaning seems to be much more dynamic. Consider narration. Atomism really cannot survive. The dominance and the novelty of meaning are closely related. The generalist picture is a widely wrong picture of meaning, not just slightly misguided. Meaning is intrinsically related to the particularist and holistic effects. This is how our language functions and evolves. This is also why meaning poses such a difficult question. But it is a difficult question for generalist patterns, not for the particularist patterns view. The perspective should be changed towards particularist patterns in order to understand meaning and compositionality principles related to it. Holism and dynamics then become important for meaning.

Is this holistic approach captured by FPCD? The answer is: yes. Notice that FPCD proposes dynamics; it proposes a holistic and constantly changing landscape, which is rich and does not proceed along the atomist and generalist ways. The meaning is not a matter of atomistic elements, according to FPCD. It is a matter of the hand-in-glove collaboration of syntactic and semantic forces.

There are holistic preconditions for semantic meaning, the background that enables meaning and that dominates it. We can take the example of poetry, of words used in a poem. It is clear that the whole of the holistic background contributes to the meaning there, and certainly meaning is not a function adding atomistic meaning elements according to tractable procedures, in a mereological manner. The dictionary meaning of words is nothing but a contributory factor in the holistic background of multi-dimensional landscape. In a poem, words do not have their meaning as a function of atomistic meaning coming together in a tractable manner.

Now we can read a poem. Here is a verse from John Donne:

19 *Call us what you will, we are made such by love;*

20 *Call her one, me another fly,*

It would be strange to claim that the word “fly” means an animal here that we usually designate with this name. You can see that the meaning of the word fly gives just an indication of the direction towards the overall meaning of this verse inside the whole of the poem, and this succeeds upon a background landscape¹¹. Now, the background has the most important role in the overall production of meaning. The idea is that poetry is not an aberration of language, but that it shows the very truth about how language works.

The generalistically accountable dictionary meaning of the word fly may at most figure as a contributory indicator of a partial direction for the overall produced meaning.

Because the background is holistic – multi-dimensional landscape shapes it – it just gives an indeterminate indication as to how meaning should be captured. But once the pattern gets formed, also through whatever comes upon the background landscape, there is determinacy of meaning that comes from the particularist pattern. This pattern is not repeatable, it is unique, but it is not arbitrary at all. It gives the appropriate direction to meaning through its unique particular determinateness.

The above is a view of meaning as a production upon a multi-dimensional landscape. This requires richness and holism. So meaning is produced in a hand and glove constantly appearing match of the background and the positioning of TCSs upon this background, which is itself a dynamical process. A particularist pattern of a relevant kind is substantial for this whole process of meaning. This beautiful pattern provides relevance and it is dynamical.

HT also says the following about semantics and thus

¹¹The landscape that was indicated by Searle as the background in his discussion of intentionality.

about the basis of meaning:

Structural encoding of semantic properties and relations. Key semantic properties and relations of total cognitive states are encoded within the structure of the mathematical system that is the locus of cognitive design. Semantic properties and relations are encoded by mathematical properties and relations of mathematical states that realize those TCSs. (HT, 155)

This is actually a description of the cognitive background as the basis of meaning and of semantic properties, as the possible activation states, that also exercise their force upon the actual meaning of TCSs. Mathematical description fits the dynamics of a system. The encoding however does not succeed arbitrarily but rather has a structure as its basis. This can only be a particularist shaped structure, which is based on holistic dynamical pressures that bring non-arbitrariness along with them.

5 Particularism and HT Approach

In FPCD a full-blooded holistic and particularistic approach seems to be present already. The question therefore looms large why we can not find compositionality in HT in an explicit manner. One of the reasons, besides the others we elaborate, is that the whole vocabulary or the conceptual scheme in HT's book is attuned to the soft generalities or to the *ceteris paribus* clauses. At the same time there is no direct vocabulary of beautiful patterns present in HT's book. We do not think that we can start with rules including exceptions and then say that this is our compositionality. For in our view, *ceteris paribus* generalities come apres coup. We call beautiful patterns the forms producing relevant structure upon the particular arrangement basis. If you approach the problem of compositionality from the point of view of

beautiful patterns, then it becomes somehow smoothly natural that you deny any kind of normative authority to general principles – both to the general principles in the rigid form without exceptions and also in the form of the soft *ceteris paribus* clauses. All that is needed in order to accomplish this is just the particularist interpretation of the FPCD principle.

Why is FPCD not explicitly recognized as a principle in the register of compositionality? The answer comes from the overall project into which HT is engaged: arguing in favor of generalities with exception or *ceteris paribus* generalities, as against the generalities without exception, in the area of philosophy of psychology and cognition. This is certainly a right track to follow and a valuable exercise. However, CP generalities are still generalities. They are effective under the normative authority of the general that they bring along with them.

But, can CP generalities contribute to meaning or to the explanation of meaning at all? Consider Donne's usage of the word "fly". Now try to apply the following CP procedure to the meaning explanation of this case, something such as "Fly means fly, unless something in the context comes in and overrides the original lexical meaning". We can see that there will be no explanation coming at all from such a principle. The reason is that it is a general normativity based principle. On the other hand, it seems that the invoking of particularist patterns and of their contextually bound structure may show a direction of non-arbitrary explanation here.

It is interesting that in his book HT articulates productivity in the general sense and also systematicity. But these are not semantic features. Systematicity, say, is a syntactic feature, and as such it may be much sooner ranged under generalist patterns and under the explanation according to these. Systematicity represents a syntactic requirement for productivity.

Compositionality and its adjoined semantics presents a

harder issue, that of meaning. Most people opt for a holistic view of meaning, but find it hard to combine such a view with the rest of their overall atomistic and generalist tractable presuppositions in this area. Devitt opts for meaning molecularism. Fodor offers an atomistic account of meaning that appears as a kind of *reductio ad absurdum* of generalist atomism.

Compositionality is a hard issue for general pattern approaches only. Once one embraces the possibility of particular patterns that bring relevance with them for free in a sense, compositionality ceases to be a hard issue. Semantics actually follows particular patterns. HT has seen this well enough. He has proposed FPCD as a particularist pattern. Once we have explicitly embraced particularist patterns, we can help HT to recognize his move towards particularist compositionality that he was not able to explicitly recognize himself because of his commitment to generalist patterns, such as generalities with exception.

Particularist patterns obtain their structure from the richness and not from making resources more scarce and atomistically shaped as generalist supported classicism supposes. Such richness is then a natural environment for adaptation to contextually changing parameters.

Meaning is whatever crystalizes on a multi-dimensional landscape. It does not depend on such requirements as is the need to stay constant through the change of contexts.

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