

Invitation to contextualism

synthesis through irreducibility, and towards an emancipative politics of interdependency

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1. Call for a social-psychological discipline of design

What follows has been written for those of you who haven't yet read *The Mind's We: Contextualism in Cognitive Psychology*.¹ I just did, that is, read that wonderful book by Diane Gillespie. And I now strongly recommend it.

On the off-chance that already you are well-versed in contextualism, you are sure to appreciate Gillespie's overview. She has done the rest of us the great service of mastering a huge volume of literature, and putting it all in ... context.

Most likely, though, you may still be a novice as far as contextualism goes. If so, please allow yourself the benefit of her true-to-life introduction. For life *really* is exemplified by variety. Unless you prefer to keep your head stuck in the sand, you need contextualism. After you have become familiar with it, you are bound to wonder why you ever believed you could live without it. It is *really* obvious, but only when you are prepared to alter some assumptions.

Actually, I am not betting on your favorable reception of contextualism. For Gillespie also clearly explains why especially, say, members of whatever establishment have habitually ignored it, and, left to their own devices, shall continue to do so. Without their support, who has the courage to publicly embrace innovation, and behave accordingly? Well, it is a chance I felt I had once again to take, which has resulted in this paper, and you now reading it. Please continue. Should you prefer instead to immediately look up Gillespie's *The Mind's We*, of course I'll be more than happy.

Should you still be with me for the time being, what I have attempted here, is to strike up a dialogue. I've selected sections from Gillespie's book regarding two themes I want to draw your special attention to. It is first of all contextualism as a theory or, rather, ontology (also read: worldview). Discussing how Gillespie sketches contextualism, I offer suggestions for its more explicit semiotic (meta)model. Secondly, I follow Gillespie's remarks on the nature of resistance to contextualism. I'll trace it to contextualism's emancipative potential, thus tightly linking both themes.

I admit being at a loss overcoming such persistent obstacles. At least you may learn to recognize such distancing for the we-negating power strategy – I find that – it is. It certainly cannot be beaten by some equivalent power, for that would undo contextualism in the process. We should practice patience to educate for acknowledging variety, a lesson that *The Mind's We* so constructively contains. Gillespie explains:

I have termed contextualistic cognitive psychology the mind's "we," in recognition of its communal perspective. [p. 25]

No, I am not a psychologist. Or am I? Anyway, I have no formal degree in psychology to show for it. Speaking of "communal perspective," I design resources at the scale of

¹ D. Gillespie, *The Mind's We: Contextualism in Cognitive Psychology*, Southern Illinois University Press, 1992.

(public) infrastructure for facilitating information exchange. To responsibly do so requires continuous commitment to especially (social) psychology. Not many people would agree with me. Call me obnoxious if you will, but my idea, rather, is that such an exchange-oriented design discipline for information does not properly exist, not yet. And as I see it, contextualism makes it viable as the social-psychological discipline it needs to become and then continue to be.

Does this mean that I only have designers in mind as readers? No, far from it. On the face of it, Gillespie might have been writing just for her fellow-psychologists. In fact, though, her book is about practicing equity and therefore a book that could, and should, well be studied to communal advantage by every citizen. Here, I'd like to address the same audience.

2. It is all about life, really

The key to contextualism can only come from experience of real life. Gillespie reports

fe[e]ll[ing] disquieted, confused [... as] I sat struggling with [...] research articles [...] on cognitive psychology. [p. xi]

Someone close pulls her away:

[M]y then three-year-old son [helped me] realize[...] something essential was missing[. ... H]e asked me, for example, for attention and engaged me in his project[, ...] interact[ing] with me in an ongoing dialogue. [...] How were we going to get the last block on his tower? [pp. xi-xii]

And while

this type of experience is frequent, deeply significant, [it is] systematically ignored. [p. xii]

3. Dia-enneadic semiotics, or how contextualistic does it get?

From the perspective of pragmatics of sign exchange, I have come to favor a radical interpretation. It may be expressed with a slogan: Every sign is a request for compliance.² In short, this is how I believe it works with signs.

One participant in the exchange, acting as sign producer, exhibits behavior that she first of all requests to be taken for a sign by another participant, acting as sign consumer. (For) only as a sign can it evoke interpretation and, in turn, an exhibition of behavior.

It is all about taking irreducibility seriously. Then the roles of the dialogical participants are reversed. The original sign producer is now the sign consumer, vice versa. In her interpretation the sign-consumer-acting-before-as-sign-producer will evaluate whether or not the original sign consumer, who is now the sign producer, complied with her earlier request. Meanwhile, the sign-producer-acting-before-as-sign-consumer is invariably making her behavior into a request for compliance, too. And so on.

² P.E. Wisse, *Semiosis & Sign Exchange: design for a subjective situationism* (Information Dynamics, 2002; dissertation, University of Amsterdam).

The triadic (meta)model of semiosis that C.S. Peirce (1839-1914) draws up, is still too simple to account for real life variety. Starting from Peirce's three elements plus some remarks on what he calls ground,³ I developed a semiotic ennead.⁴ I strictly maintain Peirce's axiomatic irreducibility of what have become nine elements.

What Gillespie refers to as an "ongoing dialogue" can be considered a set of partial exchanges, every time between a sign producer and a sign consumer.⁵ I have reproduced a (meta)model of such exchange as figure 1.⁶

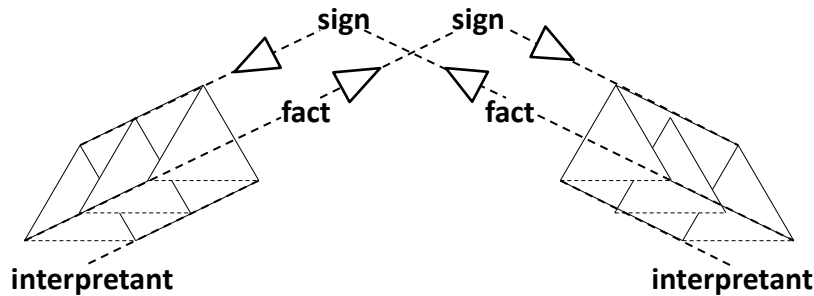


figure 1: sign exchange as dialogics.

Showing more detail, a single ennead is reproduced here as figure 2.⁷

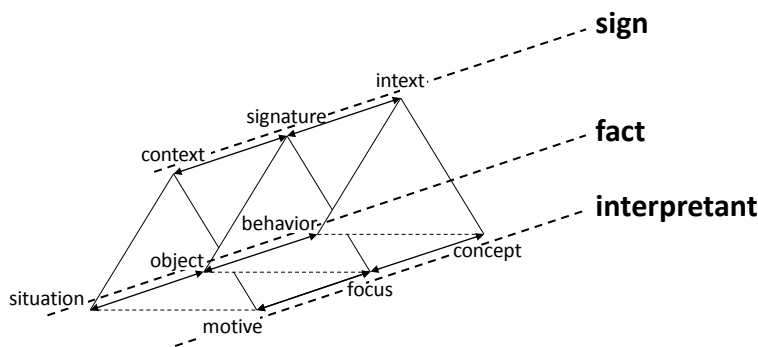


figure 2: semiotic ennead.

Please note, that sign is mediating (as Peirce emphasized). And a behavioral orientation is just as indispensable for an understanding of cognition as, the other way around, understanding behavior should include a cognitive orientation. A synthesis is only possible through radical irreducibility. I also point to the enneadic distinction between situation, context and motive.

³ For Peirce on semiosis, I took my cue from *Pragmatism in retrospect: a last formulation* (in: *Philosophical writings of Peirce*, selected and edited by J. Buchler, Dover, 1955, pp. 269-289). As far as I can judge, Peirce wrote that "retrospect" in 1906. Actually, Buchler (1914-1991) is an important contributor to contextualism in his own right; references to his work are included in my paper *Metapattern of natural complexes: enlisting Justus Buchler's metaphysics for informational infrastructure* (in: *PrimaVera*, working paper 2006-15, Amsterdam University, 2006).

⁴ See chapters 2 and 4 in *Semiosis & Sign Exchange*.

⁵ When they are one and the same subject, an interior dialogue develops. It can now be seen that calling it an interior monologue is confusing.

⁶ This (meta)model first appeared in *Dia-enneadic framework for information concepts* (2003).

⁷ Its first publication has been as figure 4.5.2 in *Semiosis & Sign Exchange*. Some of its elements have been renamed since. Peirce's original triadic elements (sign, object and interpretant) reappear for the ennead as its three dimensions (with object called fact, and object still the name of one of the ennead's elements).

Otherwise, at this stage I refrain from explaining the ennead and the dia-enneadic construct of exchange. I only hint at those (meta)models in order to refer to them later on in this paper for some comments on sections from Gillespie's *The Mind's We*.

4. Ubiquity of requests for compliance

What Gillespie learns from a playful exchange with her son was that

the social embeddedness of his behavior [...] seemed suspiciously absent from the concerns of the cognitive scientists I had been reading. [p. xii]

However, for some time she keeps silent

for fear that my thinking would be judged "irrational." [...] And] there was no language to express what I found missing. [p. xii]

Particularly problematic [...] is the language needed to express contextualism's categories. [p. 21]

Let me start by commenting on such "fear." I'm afraid (sic!) it exemplifies how a subject herself may contribute to, if not actually determine, compliance. An interior dialogue imagining another judgmental subject can already force someone to behave in a way that she imagines as what is expected from her. In fact, what she also imagines is what may result from non-compliance. Now, that is *all* of a social nature. Does Gillespie *not* want to look stupid? Does she *not* want to jeopardize academic advancement? Does she *not* want to antagonize anyone who might have power over her?

Such predictions are often realistic. A person in authority may 'argue' that what you have presented is "irrational." How can that be, especially when he hasn't really taken a look, let alone made a serious study? Indeed, if you want to upset such a person, and get him to turn his anger on you, calmly ask for reasons. No, he is just giving an instruction, as economically as he can, i.e. with minimal effort on his part, as to how you are supposed to behave, that is, a request for compliance. So, what does he want? It may be that he does not want to be bothered. Or it may be that he wants to eliminate what he views as competition; when other work is never made public, he can continue to claim the field as his with his work (and don't be surprised when he has copied it: plagiarism).

Am I making a mockery of science? I don't think so. As Gillespie remarks, science

often ignores new perspectives and muzzles oppositional voices, as if diversity were incompatible with rationality[.] [p. xv]

What should be welcomed as

difficult dialogues[,] disintegrate into simplistic polarizations, often motivated by commitments to particular methods or technologies. [p. 1]

5. Why a formal language for contextualism does not seem to make a difference, not yet, anyway

Adversity raises the question whether or not it would make much difference when indeed a "language" is available with so-called necessary and sufficient expressive power for "social embeddedness of [...] behavior." My own experience is that it does not, anyway,

not in the short run. With variety foremost in mind, around 1990 I have developed such a language annex method: Metapattern.⁸ I am trying to find support for its use ever since. And as I find that there now exists precisely, in Gillespie's words, a "language to express what I found missing," I was never troubled by "fear" of my work being judged "irrational." Again, not that it made, and makes, any difference. On the contrary, trying to confront decision and opinion makers with something quite different only seems to harden their efforts to ignore it. Indeed, I still did not get beyond making attempts. Apparently, I am seen as a competitor or, should I say, an intruder or usurper, whereas I consider myself more of a therapist, pointing to different ground and how current problems may be solved, and opportunities exploited, from making the shift. However, to someone who wants to continue his – illusion of – monopoly, feeling comfortable with it, anything that he spots to 'threaten' it, will be fought.

Of course, this does not make Gillespie any less right arguing that a language with requisite variety is a must. It certainly is, but again, not exclusively so. What is (a) language, anyway? What it takes to use it, includes what the world is believed to be like, which is a concept, too. And this does not stop at the sign producer's belief, pure and simple. From the producer's perspective, in order for exchange to have a chance of success with (a) sign as a request for compliance, the producer also holds a belief about the consumer's belief.⁹ Superficially, it seems a conundrum like that of the chicken and the egg. Only when the concept of language is extended, the means of expression is irreducibly associated with its object (and the subject doing the expressing).¹⁰ Indeed, it takes contextualism to understand ... contextualism. This is not different, though, from other "world hypotheses"¹¹ (and one of the reasons why, as a famous example, Niels Bohr and Albert Einstein never settled their argument about quantum physics).¹²

When inner dialogue fails to yield compliance, a more persistent need is experienced. Such a need equals yet another motive, from which semiosis may then take off – more – randomly, experimentally, to arrive at quite a different concept altogether. Of course, such a novel result is in exterior dialogue at first hand, if not impossible, to follow for another subject. We just should not expect wider distribution of any major change to occur in the near future, as the literature on paradigm shifts shows. In my view there is no excuse, however, for promoting "fear" in people who have the courage to come up with new ideas. They deserve a genuine effort to be understood. Regretfully, it is my experience that persons regularly fail to spend the effort that 'we' both may and should require from them on the basis of their positions of responsibility (which is always *social*).

⁸ My initial description is given with *Multicontextual paradigm for object orientation: a development of information modeling toward fifth behavioral form* (translated from a paper in Dutch, 1991). I named the modeling method/language during the writing of the book *Metapattern: context and time in information models* (Addison-Wesley, 2001). For more papers on Metapattern in the English language, see the relevant [reference page](#) on my website. More of my papers are written in Dutch, all accessible on [my website](#), too.

⁹ See chapters 7 and 8 in *Semiosis & Sign Exchange*.

¹⁰ The mutually largely exclusive and excluding (sub)disciplines that Gillespie targets with criticism are behaviorism, information-system psychology and mechanistic cognitive psychology. Likewise, oppositions between them dissolve when applying contextualism as a wider framework. It can therefore hardly be a coincidence that the (sub)disciplines, all three of them as mentioned, are seen integrated – with modification, of course – by the enneadic approach. Should the ennead inadvertently be reduced to its three dimensions, we are again left with those mutually opposing, only partially relevant (sub)disciplines.

¹¹ Gillespie refers throughout her to the work of S.C. Pepper; see also later in this paper.

¹² Gillespie hasn't ventured into physical science. In *Metapattern for complementarity modeling* (2014) I have interpreted Bohr's concept of complementarity as a case of contextualism, too. It all depends whether light occurs as particle, or as wave.

6. Semiotic interdependency theory for contextualism

What does contextualism offer? Gillespie feels in need of

a theory that would address my concerns about the situatedness of cognition and its relational nature. [p. xiii]

The ennead allows for a more precise formulation, with its variety of axiomatic elements. What is situated, is behavior. A corresponding concept is motivated, and a corresponding signature appears in context.

It may be objected that the correspondence theory of meaning is long dead and buried. Well, yes, but actually its background theory (also read: metatheory) was found lacking. With contextualism, the correspondence theory, radically enlarged, is back. Well, let me say that it stands ready to be noticed (which so far hasn't happened). And I'll call it interdependency theory. Chances remain slim as long as

most [people] seem untroubled by the lack of discussion about context, not to mention [...] subjectivity[.] [p. xiii]

7. Up against the power of logical atomism

How do 'we' get them sufficiently troubled to change motive, and so on? It is a thin edge, for most likely the messenger is attacked – when simply ignoring hasn't stopped her – to prevent the message from coming through. Gillespie's narrative of her initial self-censoring is illuminating in this respect. At least, I guess that she feared that ill-favor spent on her message would mean ill-favor directed at her. As a preemptive measure, she applied the reverse order, i.e. stopping herself, thereby self-suppressing her message. *The Mind's We* testifies to the happy (f)act that at some point in time she does not ... mind, not anymore. Wanting to replace

the theoretical framework common in mainstream cognitive research – mechanism, the view that the mind is like a machine[– ...] I endorsed [contextualism] as a robust alternative that took into account the interactional, situational nature of cognition[.] [p.. xiii]

For

mechanism so dominated psychology that its constriction of knowledge claims and inquiry practices had become unhealthy. [p. xiii]

Word for word, Gillespie's evaluation applies to the state of digitally facilitated information annex communication systems. That may not come as a surprise, for what looks to be quite different disciplines, should all draw on the same metatheory. And what looks healthy are profits by so-called IT companies. It comes at the price of resources able to facilitate less rather than more variety, if what is delivered as a so-called system works at all. The financial costs are huge, coming at the expense of the tax payer where exchanges should be in, and for, the public domain.

Immediately recognizable as relevant to IT academics and practitioners are Gillespie's remarks on

artificial intelligence (AI), a project that lent important credibility to the scientific study of the mind. AI enticingly combined [...] mechanistic processing with formal logic in a way that obscured other theoretical positions. [p. xiv]

What Gillespie indicates, is limited to first order “formal logic.” It offers a means of expression for “mechanism” in the reduced sense that was, and still is, predominant. Such mechanism is instrumental for logical atomism which is essentially acontextual. It simply follows that first order logic resists – actually, its proponents do, of course – contextually differentiated signs. With f-1 logic, there is just no way to handle those. It was subsequently considered impossible to give formal expression to pragmatic variety. And without means for formalization it couldn’t possibly be science, now could it? What Gillespie does in *The Mind’s We*, is build a solid scientific case for contextualism. In fact, never mind *separate* science. Her case is all about relevance for living. What more relevant for science can it be? For her, at least at the time of writing *The Mind’s We*, the question still remains,

[h]ow does the contextualist represent conceptual knowledge if not in formal, usually propositionally based models? [p. 171]

8. Some introductory remarks about a language for contextualistic modeling: Metapattern

My answer is that she can only do so, “the contextualist,” that is, by avoiding dogmatic logic, i.e. of the so-called first order. With Metapattern, I have developed a formal language of/for contextualism. So, even the lame argument that such a language is lacking can no longer be used against contextualism. It is easy to predict the next objection, though. Metapattern? No, that is not a language, for that is not how mechanism, or logical atomism, ‘wants’ it.

No, it certainly is not. Otherwise, it wouldn’t work for contextualism, now would it? Metapattern includes ... why not call it a second order? What ‘first’ of all needs to be expressed, is variety. Contextualism’s measure for variety is ... context.

It is probably easier to ‘first’ recognize the contextualistic mechanism when explained along the dimension of (f)act. One and the same object may exhibit a variety of behaviors. In the ennead as (meta)model several axiomatic relationships are contained. One is that an object’s particular behavior is always associated with an equally particular situation, a view that John Dewey (1859-1952) already propagated (and Gillespie attributes to him, too).¹³ It may then be assumed that an object exists as a set of situated object-parts, with only a behaviorally empty overall-identity for cohesion (allowing for ‘movement’ from – behavior by – one situated part-object to – that by – another of the same overall object). As such, and only after it has been specified, the situation may be considered the part-object’s type, that is, a first order expression always comes ‘second.’

There is of course much more to be explained about both the ennead and Metapattern. Especially relevant for discussing Gillespie on contextualism is that the modeling language applies recursion, resulting in still less notation. On purpose, the language is minimally constrained for variety. Recursion adds to the minimalism of – the single – language construct. It is from principle that an object is situated, with the situated object, effectively

¹³ I very much like how Gillespie makes explicit reference to, and thereby honors, earlier thinkers and their works: the science’s we.

a part-object, for exhibiting situational behavior. For subsequent differentiation, a situated object may in turn be taken up as situation and/or object, and so on. As Gillespie emphasizes,

contextualism is an integrative, not dispersive, worldview. [p. 178]

There is no pre-set limit to behavioralization (Metapattern: downward differentiation). The practical limit for situationalization (Metapattern: upward differentiation) is a horizon.¹⁴

9. Against reductionism

Meanwhile, I may have moved beyond Gillespie's

general purpose in this book[, i.e.] defin[ing] contextualism and describ[ing] its vitality and generativity as a viable metaphor for understanding cognition. [p. xiv]

But later, she makes a more inclusive statement by explicitly tying up cognition with behavior:

Cognitive psychology poses fundamental questions about knowing and acting, about how we come to understand our experiences in the world. [p. 1]

And still somewhat further on, it says:

Cognitive science is more identified as a cross-disciplinary enterprise between computer science, neuroscience, philosophy, psychology, anthropology, and linguistics. [p. 2]

The semiotic ennead suggests in detail that “understanding cognition” is irreducibly linked not only to understanding behavior, but also to understanding language.¹⁵ For information system design, I gladly endorse Gillespie's list of relevant disciplines. With so-called IT specialists mainly oriented at mechanics seen originating from first order logic – which is how they believe that a computer can only, and therefore must, be programmed – it cannot come as a surprise, I repeat, that information systems that should provide infrastructural facilities are mostly irrelevant, at best.¹⁶

¹⁴ For an introduction to Metapattern, see *The pattern of metapattern: ontological formalization of context and time for open interconnection* (in: *PrimaVera*, working paper 2004-01, Amsterdam University, 2004). This paper more or less reproduces part I of the book *Metapattern: context and time in information models*. Metapattern's notation was later partly changed; see *Metapattern, development of notation*.

¹⁵ As far as language goes, Gillespie does mention “use [of] symbols” (p. 1), and that “[c]ontextualism [...] gives language prominence because it alters our ways of being in the world and in relationship” (p. 25), but she makes no attempt at structural integration, at least not how I could recognize it as such. Let's say that she left something to do for me.

¹⁶ With adherents to logical atomism continuing their dominance, what they refer to as design is actually analysis, i.e. the mere labeling of objects believed to exist absolutely with invariant behavior. Design according to contextualism is qualitatively very different. The designer can only express her (own) interpretation. Of subjects. Of how subjects situate objects ... Of subjects' motives, thereby explaining their concepts. Immediately referring to objects is a short-cut, to be avoided as soon as real variety runs the risk of becoming overly reduced.

Design in the sense of contextualism is what happens at and for, following the distinctions of traditional logic, the second order. At and for the first order, and only there, it still is mostly a matter for design-as-analysis.

Without making clear such often huge differences in meaning, it remains virtually impossible to succeed with a request for compliance, even one that quite modestly is aimed at first of all raising some interest in grounding differences. That is of course far from modest ..., but I know of no alternative approach within increasingly urgent reason.

10. Gaining metatheoretical ground for overview

Gillespie labels mechanism and contextualism as the

two leading metaphors in cognitive psychology[.] [p. xv]

Declaring contextualism “leading” could have been an act of wishful thinking, notwithstanding the impressive array of earlier thinkers and their main ideas that Gillespie presents. Anyway, in information systems design contextualism is still completely absent. And Gillespie’s observation that

women [...] have historically participated in alarmingly small numbers [p. xv]

is also flagrantly pertinent to design and development of information systems as resources for sign exchange.¹⁷

Here, I am not going to follow Gillespie in her historical sketch of cognitive psychology. Please read it for yourself; you’ll both enjoy and learn from the overview. Of particular interest for my comments is what she presents as

a broader, metatheoretical view. [p. 10]

Before introducing a framework that S.C. Pepper (1891-1972) originally published in 1942 in a book titled *World Hypotheses*, Gillespie remarks that

[h]istorically, mainstream psychologists resisted metatheoretical discussions. [p. 11]

The situation in information system design still is no different.¹⁸ It explains stagnation. And with variety on the rise, resources not properly acknowledging variety are increasingly ill-equipped to facilitate sign exchange. Failure that is easily predicted from a variety perspective, is belatedly admitted, if at all. Without any metatheoretical clue it never dawns on decision makers and contractors alike that basic assumptions are at fault, and a shift is sorely needed. Speaking of competition, no initiative may be expected from IT companies. Expertise has in fact become a liability when narcissist decision makers are quickly prone to take offence. Just do what gets paid, is the commercial word. The mess that results holds the promise for more work. The chicken is indeed laying golden eggs. What about academia? It seems there they are all too busy publishing (papers) and polishing (reputation), that no time is left to keep up with the work of others. In the race for positions and money, academics are more and more in the business of competition, too. A balanced, honest book such as *The Mind’s We* has become exceptional.

Gillespie favors Pepper’s framework

because of its detailed analysis of philosophical perspectives and because of its clear delineation of the implications of taking up a particular worldview[. ...] In contrast to other metatheoretical frameworks, Pepper’s gives the best account of a contextualistic worldview. [p. 11]

From that framework, it becomes clear how

¹⁷ A woman whose contributions to – what is now known as – contextualism are still largely unrecognized, is Victoria Welby (1837-1912). I have tried to honor her work in *Victoria Welby’s significs meets the semiotic ennead* (2003).

¹⁸ For example, I am still awaiting the first reaction to *Information metatheory* (in: *PrimaVera*, working paper 2003-12, Amsterdam University, 2003).

[r]eliance on one worldview has admitted only types of investigation [...] and counted only certain types of thought as intelligent. [...] Such a pattern of exclusiveness [is] often hidden in the discourse[.] [p. 11]

Again, it does not auger well for whoever brings up whatever appears atypical. And by even criticizing “exclusiveness,” a proponent of contextualism runs the additional risk of being associated with chaos. What chance does she have where rule depends on a concomitant absolutist belief? Not to be deterred, quite rightly, Gillespie proceeds to declare

theoretical pluralism [to be] central[. ...] A metatheoretical framework such as Pepper’s allows us to raise questions about inclusivity and exclusivity, about what is made visible and invisible, controlled and uncontrolled, processed and unprocessed[.] [p. 12]

According to Pepper, and throughout I follow Gillespie’s account,

worldviews [...] contain basic or root metaphors that organize and constitute how a person makes sense of his or her world. [p. 12]

Of the many [such] hypotheses that might be proposed, Pepper claims that four have proved “relatively adequate[,]” [...] mean[ing ...] that none of them is totally adequate; that is, none of them can explain everything without remainder. The four hypotheses or worldviews [Pepper] deems compatible with science – formism, organicism, mechanism, and contextualism – are rooted respectively in the craftperson’s form, the living organism, the machine, and the historical event. Each provides a frame of reference for understanding the world. [p. 13]

Gillespie admonishes that

[m]etaphorical analysis [...] becomes relevant when the interpretations and the approaches conflict. What looks like progress from the perspective of one worldview appears baffling or nonsensical from another. [p. 13]

11. From stagnant rivalry to constructive alignment

What I would like to add, is that it might pay to question the concept of “conflict.” For I cannot help to recognize yet another assumption. When hypotheses are set up as rivals, it is inevitable that they will each be championed with the outcome that one, and only one, hypothesis should end up as the winner. All other hypotheses must therefore be battled against so as to turn them into the losers.

What if we refuse to go along with such conflict?¹⁹ Pepper still seems to be in two minds about it. While

any assertion that one [world hypothesis] is more adequate than another is simply dogmatic[, ...] Pepper argues that attempting to combine world hypotheses results in confusion. [p. 19]

I don’t agree. Yes, of course I realize that with being of a different mind I run the risk of getting blamed for creating yet another ... conflict. So, let me start by saying that – I find that – Pepper is completely right when, enter context, his argument is strictly limited to apply to one of the four root metaphors he suggests. I believe that what he calls formism

¹⁹ When this makes me a feminist in Gillespie’s book, I’m fine with that.

covers his implicit assumption for the impossibility of combining hypotheses. Then, of course, every departure from formism fails to be expressed in/with its correspondingly limited language (of first order logic). For example, if organicism could be modeled with such logic, it wouldn't really be a departure, period.

My sketch for synthesis is crude, I know; see figure 3. I associate the label of first order with (the) one: singular. Then, second order pertains to (the) many: plural.²⁰ It can now be recognized that the traditional hypotheses known as formism, organicism and mechanism are singularly oriented. As such, they may be called first order formism, et cetera.

Here comes the departure. What contextualism means to me is that it addresses the relationship between one and many. Their tension is too quickly avoided, as a matter of reflex, with reduction to f-1 formism et cetera, providing an escape (and continuing the "conflict"). This leaves *real* problems unsolved, *real* opportunities missed and therefore unexploited.

However, contextualism 'on its own' also does not offer solutions and means. For that, formism et cetera are indispensable. Of course, merely f-1 formism does not qualify (or else there wouldn't be a departure). A second order formism must be added to the mix.²¹ Ah, well, what is the chicken, and what is the egg?

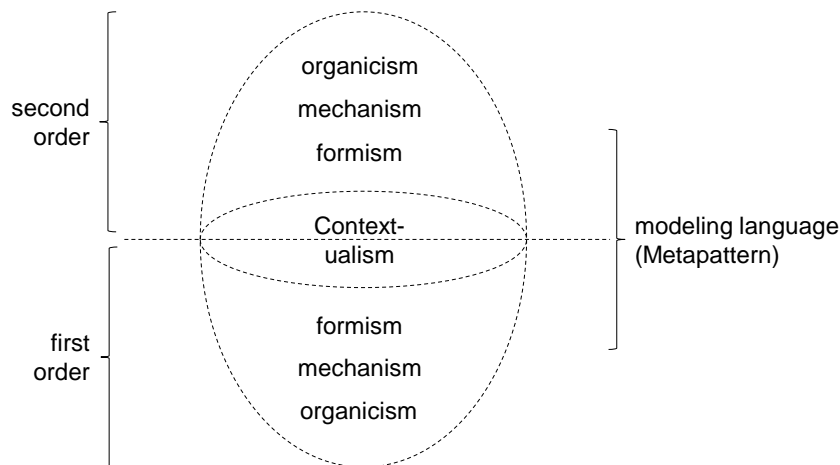


figure 3: more variety in metaphors for synthesis.

The ingredients for this synthesis I just copied from Gillespie's introduction to Pepper's root metaphors. Other isms might qualify, but my basic point about variety is that metatheory must be moved beyond whatever first orderings.

12. Situated objects all around

Contextualism-the-ennead-way is at the same time, on account of irreducible interdependency, both situationism and motivationism. The formalism of Metapattern

²⁰ Plato (approx. 427-347) writes in the dialogue *Philebus* (in: *The Collected Dialogues of Plato*, Princeton University Press, 1980, pp. 1087-1150) "many are one, and one is many" and continues to comment on variety, plurality, and so on.

²¹ I would prefer to reverse the labels. In my opinion, recognizing variety comes first, fixing properties second. But for now, for labeling I choose to follow the standard set by (first order) logic. Structurally seen, what's in a name, anyway? And later on, I propose that proper modeling requires iteration. Then, what comes 'first' is always followed by what comes 'second,' and so on. In other words, it doesn't matter, not really.

helps to bridge the shift in orientation with a single construct.²² Starting from a. behavior, it is attributed to b. a situated object. Next, this situated object is derived from c. originating situation and object. See figure 4 for this sequence.

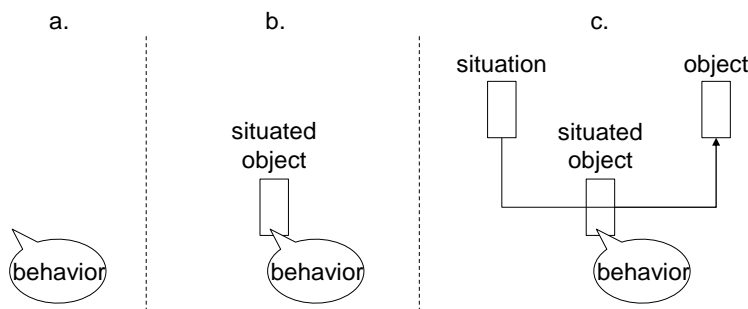


figure 4: formalism for upward differentiation.

Upward differentiation (also read: decomposition) may sound paradoxical, at first. In fact, strictly from a first order perspective, and the one-sided conceptual hierarchy its entails, it is nonsense. The first order many is positioned at the bottom; through – subsequent steps of – abstraction, one is supposed to result.

Characteristically, at least, that is my suggestion, the one of second order resides at the – metaphorical – bottom. There, behavior is not ambiguous, i.e. singular: one.²³ The determinants of such behavior, though, are many. This plentitude may be conceived through – subsequent steps of – specification under the headings of a constituent situation and a constituent object. A horizon as boundary value summarizes this many of second order as ... one, allowing for iterating (see figures 5 and 6) between second and first order perspectives (and expressing results in a single overview, i.e. model).

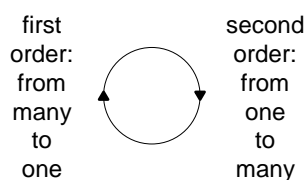


figure 5: iterating between (logical) orders for synthesis.

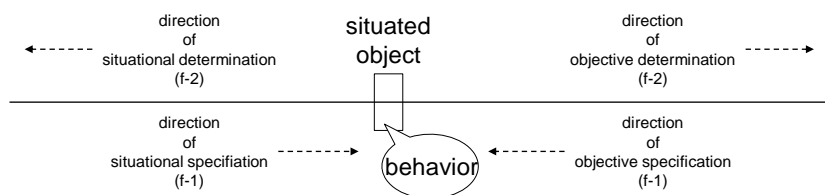


figure 6: making sense of differential directions.

How Metapattern's single construct suffices can be demonstrated when the focus shifts to one of the constituents the situated object in figure 4. In that capacity, it can only be – the

²² This might at first seem odd, extremely counterintuitive. How can more be done with less? The answer lies in differentiating orderings. By including situation into what is modeled, a value for variable 'forms' it, too. As such, just another valuation, it does not require a form different from what represents a property, vice versa. Recursion makes it all relative, anyway, once again suggesting the same variable throughout.

²³ I believe this is what Niels Bohr means by phenomenon. See also my remark on Bohr's work in a footnote above.

signature for – another situated object, inviting differentiation of its constituents. As I said, a horizon constitutes the boundary value (to avoid infinite regression); see figure 7.

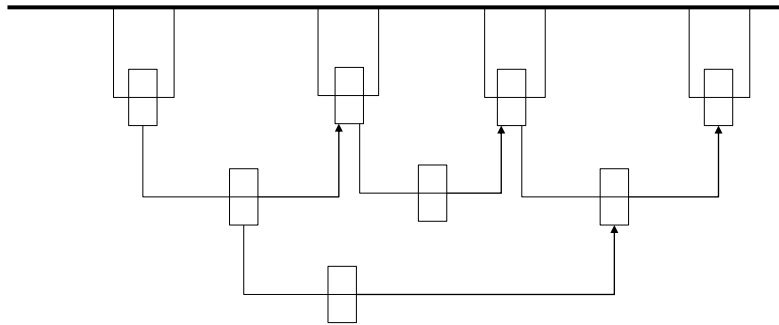


figure 7: Metapattern's notational minimalism.

In the other direction (as artificially established by the schematic notation, only), a situated object is not yet sufficiently positioned when its behavior is recognized to involve contradictions. Situational differentiation must continue until contradictions are sorted out, i.e. when behavior within a situation can be modeled unequivocally.²⁴

13. Mediate, or get out (to try elsewhere)

With the model's designer lies the responsibility to guide stakeholders. The stakeholder who commissions design is often unaware of this second order nature of variety, refusing to hear the voices of other stakeholders (who are often even left unidentified, especially when they try to raise their voices in disagreement). A responsible designer tries to convince her principal otherwise (and to include all relevant stakeholders). She usually fails. Then, what can she do? A designer can only contribute responsibly as mediator. Should it be clear that she stands no chance in that capacity, she should give back her commission. Or is that too easy to say? How desperately, for example, does she feel that she needs to make the money?

14. What is the contextualistic sting to an absolutist?

When stakeholders regress into “conflict,” how do they fight them out? Dismissively,

[d]evoted proponents of any of the worldviews often claim to handle the categories of the others. [p. 20]

As a sign, such a “claim” is also a request for compliance. I am inclined not to take it too literally. It is just part of a bluff, an attempt to make the enemy retreat and gain an easy victory.

Single-minded proponents are mutually caught in some first order absolutisms. They cannot be bothered to have a taste, not even just provisionally, of what they prefer to negate. And urging for antiabsolutism, which makes it qualitatively different, contextualism is ever more out of the question. For it might seem like undermining the self

²⁴ Considering Gillespie's orientation on mind, for further explanation I like to refer specifically to *Ontology for interdependency: steps to an ecology of information management* (in: *PrimaVera*, working paper 2007-05, Amsterdam University, 2007). I took the cue for my subtitle from Gregory Bateson's (1904-1980) collection of thoughtful essays *Steps to an Ecology of Mind*.

of an absolutist who believes himself singular, and probably superior while he is at it. This extends into his belief that first orderings provide security, however false precisely such a sense is from the perspective of ... contextualism. It is only by going *through* contextualism, making connection with – what I’ve loosely called – second orderings, that the fear of fragmentation is recognized as totally unwarranted. There is singularity – only – in plurality, vice versa. Is that really original? Well, no. It was common knowledge to several Greek philosophers of the classic age, like Plato.

15. In need of life’s lessons, absolutely

Gillespie’s emphasis on real life experiences indicates that plural singularity, or whatever, cannot be learned from a textbook, and not even from her – narratives in the – book *The Mind’s We* (let alone from this paper). It takes time for the need for synthesis to develop, sink in ... and that much longer for people in a society where ‘we’ allow a premium to be put on fragmentation, rather than on equitable variety.

Rather than stubbornly sticking to a

worldview [...] by reinterpreting strengths of opposing views in terms of its own categories[,] [p. 20]

we can do far better by concentrating on their different “strengths,” forget that we are dealing with “opposing views,” and promote synthesis. Well before a particular metaphor

dangerously overextend[s] its boundaries[,] [p. 22]

another, more appropriate metaphor should be applied in a complementary fashion. For

methodological pluralism brings relief. [p. 25]

It becomes a question of productive coordination, rather than counterproductive conflict. This makes metaphorical variety just another case of aligning many with one, and (thus) one with many.

What is there to gain from claiming autonomy for a particular worldview? Is it an attempt to claim autonomy for oneself? Now, isn’t that an outright preposterous, antisocial attitude in view of life’s through and through social nature?

16. Suffering from forced competition

And it is only from maintaining, implicitly at that, a first order orientation that

[t]he contextualistic worldview [...] offers competing explanations[,] [p. 23]

Adding a second order, framing as competition may be surpassed. Why engage in an illusory conflict? Of course I am being somewhat devious about ‘selling’ synthesis. I am telling proponents of, for example, formism that they have been on the right track all along. It is only that some upgrading is required. Are you interested, perhaps? Well, it is just that the first order version must be enhanced with second order features, that is all. But be assured, it still is formism. Indeed, it is. And so it is with both organicism and mechanism. Why doesn’t anyone fall for it?

All f-1 and f-2 orderings hinge on contextualism, which is probably not a good idea to put the spotlight on too soon (and also not that, and precisely how, they all change in the

process). But, then, how would people understand the shift? Or is their understanding too much to expect, and therefore to aim for? It seems that in fact they don't understand, not really, anyway, the worldview that – they say that – they are now committed to. For if they did, they would be open to its shortcomings, et cetera. It would already be great if we could halt interference from false, counterproductive assumptions. And if we could educate the next generation to be more open-minded. Gillespie does not sound hopeful, though, for it

assumes an eclecticism and tolerance that may be too idealistic given the combative realities of academic[, governmental and business] discourse where metaphors do become fixed. So reified, they become repressive epistemologically and socially. [p. 20]

People with questions and perspectives that fall outside the scope of [the ruling metaphor] are often excluded from public dialogues. [p. 20]

[D]ogmatic adherence silences other perspectives. [p. 22]

For cognitive psychology, Gillespie reports in 1992,

contextualism has been a catalyst in revisions[.] [p. 20]

With her overview, I am afraid that Gillespie confirms that contextualism has *not* been established:

[It] has remained, until recently, only intermittently visible. [p. 23]

Perceived as a “challenger” (p. 20), contextualism seems instead to have catalyzed more entrenched first order root metaphors. It is typical of a parasitic sign consumer that he turns a request for compliance strictly to his own advantage. He leaves the sign producer who is acting from a (more) socially oriented motive – which, as motive, remains inescapably her own²⁵ – to question whether or not her behavior was responsible to have addressed the other, considering the adverse outcome. Now, I did write this paper, didn't I?

17. Behavioral variety as an evolutionary advantage

Throughout *The Mind's We* Gillespie offers descriptions of contextualism. She contrasts it with especially

the mechanistic worldview in psychology. [p. 26] [... R]ather than stripping context away to isolate causal relations between artificial variables, [contextualism] reconstructs context by emphasizing interdependent relationships and meanings. [...] A particular event is usually nested in other events[.] [p. 27]

What I make of event, is that it should be considered behavior. As such, I take it to be exhibited by an object. And an object's behavior varies dependent on situation. Then, it is a situated object to which particular behavior, that is, an event, should be attributed,²⁶ i.e. a

transaction between the organism and its environment. [p. 27]

²⁵ At the time when it was originally published, in 1844, no doubt Max Stirner (1806-1856) especially meant to provoke with his book *Der Einzige und sein Eigentum* (translated into English titled *The Ego and its Own*). Indeed, immediately, Karl Marx was not at all amused. I find Stirner's book deserves to be read, among many other reasons, as a classic in (social) psychology. I am afraid, though, that it is still perceived as provocation for reasons that Gillespie helps us to understand.

²⁶ For example, see *The ontological atom of behavior: toward a logic for information modeling beyond the classics* (in: *PrimaVera*, working paper 2002-5, Amsterdam University, 2002).

18. Subsequent steps of two yield many

A situated object, as its label indicates, participates in two so-called nestings. It takes part in both situation and object, with each in their turn a situated object, and so on. See figure 6 for the two directions of determination. Where situation and object may no longer be distinguished, resides a horizon (and there nestings meet up again; check figure 7).

The semiotic ennead's irreducible elements imply that what is 'really' nested occurs in interpretation through the mutually relative elements of motive, focus, and concept (and expressed with signs along context and signature). Nestings therefore differ from one subject to the next, as developed from their different experiences.

Gillespie's description covers organicism, too. At least, I find interdependency primarily an organicistic concept.

The question 'how does it work?' pointing from causes to like effects leads to attempting an answer in terms of mechanism. That is where correspondence comes in.

I read Gillespie as offering "nested [...] events" as her answer to the – implicit – question she raises by suggesting "interdependent relationships" as characteristic of the organicistic worldview.

What is still absent from her account is formism. A formalization of nesting is provided by recursion.

19. Some uprooting necessary

Please note that Pepper's root metaphors have been repositioned. I don't see them as mutually opposing, with contextualism added as yet another such metaphor. Instead, I only consider logical atomism and contextualism as ontologies (also read: worldviews, root metaphors).

Each ontology affords first of all – following Pepper's classification as reported by Gillespie – an organicistic expression, which may subsequently be given more specifically in mechanistic terms, which in turn may be given formalized expression.²⁷

What has become known as formal logic operates under the assumption, thereby severely limiting understanding, I believe, that formism exists independently. This is of course precisely begging the question of logical atomism, i.e.

it presupposes what it attempts to explain[,] [p. 165]

but it can only be recognized as begging from the broader perspective of contextualism.²⁸ Starting out from a necessarily narrowed-down formism (strictly first order logic; Gillespie: "isolate[d] causal relations between artificial variables") unwittingly enforces

[t]he conflation of the formist and mechanist root metaphor[, i.e.] the seeming merger of formism and mechanism[,] [p. 44]

²⁷ See also my series of explicitly metatheoretical papers: 1. *Multiple axiomatization in information management* (in: *PrimaVera*, working paper 2002-6, Amsterdam University, 2002) 2. *Dia-enneadic framework for information concepts* (2003) and 3. *Information metatheory* (in: *PrimaVera*, working paper 2003-12, Amsterdam University, 2003).

²⁸ Of course, contextualism cannot escape this circularity. It eventually applies to whatever axiomatic scheme: the ground of rationality is inevitably irrational, i.e. beyond explanation in terms of cause and effect. That is why such ground is called sufficient.

from which only a correspondingly reduced organicism can ‘follow:’

Aspects of experience that proved relatively difficult to fit the procrustean bed of formal logic, such as felt connections, metaphorical structuring of meaning, imagination, and historical process, were set aside. [pp. 34-35]

It is accompanied by

the tendency of traditional approaches to confine thought to static structures, formulas, and bounded knowledge. [p. 173]

For living design, the order must be radically reversed.²⁹ Since people have been effectively indoctrinated by logical atomism, however, and still are, for that matter, they find it near impossible to take a contextualistic turn. We are denying interdependency at our peril. We fail to commit ourselves to partake in interdependency – as if it is at all possible to extricate ourselves: hubris – because we feel we lack the formalism for acting accordingly. Actually, when you come to think of it, that is really quite stupid.

Starting out from the opposite end – which is only productively possible *after* having unrooted and aligned organicism, mechanism and formism – it is not a matter of truth in an absolute sense that can be claimed for the semiotic ennead (mechanism) and Metapattern (formism). What counts is pragmatic consistency. How far is variety explained? How optimally is behavior varied between situations? Whatever improvements should be of primary interest? Or, are they? Gillespie cannot contain her surprise:

In retrospect, since the works of [John] Dewey and William James were widely available, one might think that the pragmatic theory of situations would have had a more powerful influence[.] [p. 31]

What may have remained an obstacle is their lack of formalization. That would not have helped overcome the difficulty, though, as I myself experience during already more than twenty years with Metapattern. As long as the framework in which the qualitatively different formalism is supposed to fit, continues to be – it may sound like a contradiction in terms – the organicism of logical atomism, whatever formalism as befitting contextualism will simpl(isticall)y be rejected as ... formalism. It is not even acknowledged, just ignored. Meanwhile ...

20. Going for contextualistic consistency

Gillespie convincingly argues that most supposedly new theories in psychology are merely restatements of already established mechanism, all sharing an

emphasis on reductionism[.] [p. 43]

tend[ing] to mirror bureaucratic organizational structures and practices[.] [p. 61]

For example,

²⁹ A related issue is that of rigor *versus* relevance. It originates from the claim of predominance for formism. With rigor ... rigorously secured, relevance is scientifically considered more less ... irrelevant. Gillespie:

These theories derive their explanatory power from logic or computability. [p. 185]

But without relevance, for strictly limited to such logic, what else can they possibly explain except themselves? Rather than opposed – in order to be able to dispose of relevance – relevance and rigor should be properly aligned. If anything, relevance – as in organicism – comes first, to be explained, supported, et cetera, by rigorous mechanism and, especially so, formism. Metapattern resulted from taking this, say, organic route. Its formalism leads to an qualitative extension of “computability.”

[w]hat is generally referred to as strong artificial intelligence (an extension of the information processing [theory] not just to problem solving but to thinking or intelligence generally) claims that the mind is a machine. [p. 43]

What may continue to cause confusion, is that “machine” implies context, too. I suppose that Gillespie’s criticism is based on an assumption that a machine operates acontextually, say, in some first order mode as it

hums along in isolation[.] [p. 47]

Under that assumption, when it is not a, say, logical-atomism machine it is not a machine at all. An object, however, may be seen as a contextualistic machine, thereby cognitively being equipped as a ... subject. No, we don’t master artificial intelligence to the extent that we can build organicistic copies. In fact, what – I hold that – contextualism teaches is that the concept of such copies is nonsense:

An event has temporal and spatial spread and occurs in a context that has overall quality that gives the event cohesiveness. [p. 27]

[N]o abstract, transhistorical, transsituational perspective or system of thought can be superimposed over experience[.] [p. 47]

With event-as-behavior, the situated object as it behaves is an irreducible part of it. Different situated object cannot occupy the same “temporal and spatial spread,”³⁰ hence different experiences et cetera from semiosis:

Contextualism [...] begins with complexity and interrelatedness. It brings the mind out from behind closet doors and into social spaces[. ...] The body and the world are not separated from mental experiences [...]; rather the body and the world intertwine with the mind in experience[.] [p. 47]

This does not rule out mechanism, but points to a mechanism of a kind qualitatively different from what corresponds with – and supports social organization based on propagating – logical atomism. The semiotic ennead suggests ‘mechanics’ for such inclusive organicistic dynamics³¹ required for

[o]ur sociality and engagement with other [which] can [and does] result in a revisioning of our situations. [p. 53]

21. When in first order power, simply deny variety

I am sure that every person, when asked informally, acknowledges that he learns from experience. Nonetheless, he will most likely avoid to even consider contextualism. As Gillespie observes,

[m]echanism[.]

or, as I would call it more organicistically, logical atomism,

tends to be reinforced in situations where formal and calculative forms of thought dominate. [p. 61]

³⁰ The idea they can, is first order logic’s failing ground: the law of identity.

³¹ See *Semiotic connectionism in artificial intelligence* (2007) for the briefest of introductions to an economy of behavioral configurations in cognition.

Let me for the moment pass over reflexivity, i.e. that an unmotivated concept is an impossibility in contextualistic logic. We should not be naïve, Gillespie urges. She regrets

the proclivity in Western thought to reduce all reason to a monolithic conception of objective rationality and discard any remainder as illegitimate. [p. 166]

Please note that Gillespie still uses the terminology associated with such reductionism. A contextualistic rephrasing would emphasize a qualitatively different, far more encompassing “rationality.” It is not about just sort of clearing some “remainder,” but instead establishes variety’s fullness, fully legitimate at that, when legality should imply formalism. Of course, that formalism is qualitatively different, too.

To acquire reductionist power, to keep it and possibly enlarge his power, a person can most economically request for compliance by insisting on doctrine. Not for himself, of course, but for his ‘subjects’ to comply with. Making his request largely implicit, for those sign consumers it might not feel like obeying. They may even pride themselves for behaving voluntarily. Well, contextualism as a ‘doctrine’ of emancipation certainly has nothing going for it to gain a dictator’s favor.

22. But ...

Don’t we live in a democracy? After all, civilization depends on variety, diversity, et cetera. Doesn’t that make it even obvious that government’s first and foremost task is infrastructural management, i.e. facilitating and promoting varied exchanges between citizens? How else can government serve a viable society except (sic!) from an organicistic vision of contextualism?

Politicians get elected, managers promoted, by claiming to promote some interests of some people at the expense of other interests of some other people. Occupying a position of some authority, the functionary feels bound to ‘keep his promise’ – made mainly to himself: motive – if only for reelection, for further promotion, et cetera. The tragedy is that power’s preference makes blind to contextualism, undermining society’s health that would secure it as civilization:

It is not surprising [...] that contextualism [...] casts itself as challenger to the major cultural tradition[.] [p. 61]

In many ways, that “tradition” is actually a- or anticultural in the sense of being put to use by the people-in-power to maintain and strengthen their social-economic position, at the expense of equity. Strange as it may sound,

[w]ithin the field of psychology, to consider ordinary experience worthy of study is very radical, epistemologically and politically. [p. 174)

What is far worse, this adverse attitude to take “ordinary experience” seriously extends throughout society.

23. Is there a politics of contextualism?

Whatever but “ordinary experience” could possibly be worthwhile?! Apparently, there is no escaping becoming associated with urging for a political departure when promoting contextualism. One-sidedly declaring someone a dissident, an oppositional person, is a way

to eliminate her influence. Again, there is no insight required from the powerful to do so, on the contrary. He readily experiences that contextualism does not agree with ... well, it already takes considerable reflexivity to recognize oneself to apply a worldview, especially when it *always* is – limited to – logical atomism. Whatever does not agree with, well, no idea, actually ... but, anyway, cannot possibly be right, now, can it, so, therefore, who cares?

Gillespie devotes separate chapters to perception and memory, and they also deserve to be read carefully for both criticism of traditional mechanistic theories of cognition and further introduction to contextualism. In a typical section, she states:

Because perception and memory are interactional events, [... t]he separation is somewhat arbitrary[. ...] Contextualism does not oppose framing or structuring information from a given event, nor does it oppose descriptions of local mechanisms. Rather, it objects to the reification and rigidity of either the structure or the mechanism superimposed over the experience itself. A contextualistic theory of memory thus works to integrate past experience, perception, and language in interpretations of ordinary situations. [pp. 148-149]

I can only recommend adding a sign dimension for an even more integrated (meta)model such as the (dia-)ennead. For

[t]hrough dialogue with others whose perspectives may differ from ours, we come to understand situations anew. [p. 150]

What if the motive is lacking for exposure to different ideas, et cetera? The world continues to change, with us continuing to meet it from an old, sooner or later counterproductive, understanding of situations. Indeed, the chance grows that we fail to adapt, with increasingly maladaptive results.

A person in a position of power may be able to insulate himself at length from adverse effects, often largely of his own making. Resisting change, his interior dialogue appears as exterior monologue, that is, including the request not to be interrupted by whatever reciprocal request for compliance. At best, he is impatient with

the contextualist [as someone who] threatens the current practices and discourses of the dominant psychological model of cognition, laden as it is with technical jargon and hierarchically defined categorical relationships. [p. 151]

24. Ockham's razor applied to contextualistic dynamics: the minimalism of the semiotic (dia-)ennead

In fact, it is categories that Gillespie turns to next in *The Mind's We*. Enneadically speaking, they are concepts, I would say. Gillespie mentions that

a category occurs in a particular context and is evoked almost always by indeterminacy in the situation. [p. 156]

As an occurrence, there should be some process. Peirce calls it semiosis. My idea is that it is motivated by an "indeterminacy" of subsequent behavior. Its situatedness needs to be optimized:

Information from our experience in the environment must be naturally integrated in our conceptual processes. Concepts are coordinated with the environment but in ways that are constrained[.] [p. 179]

A particular motive is such a both constraining and guiding factor, it ‘means’ looking for a corresponding context, mediating a corresponding situation (which is unknowable directly). Of how semiosis proceeds, I only strongly suspect that traditional computational models are way off. I suppose that in semiosis some behavioral threshold is reached when subsequent configurations of motive-focus-concept no longer diverge (whatever the criteria). As the correspondence relationships of the ennead suggest, the particular concept-in-motive determines the execution of behavior-in-situation. Monitoring behavior through signature-in-context then becomes part of the next indeterminacy, and so on.

Yes, this is highly, highly speculative. But with the ennead’s irreducible elements, all contextualistic angles seem comprehensively covered.³² Indeed,

[c]onceptual structures vary [...] dramatically[.] [p. 177]

25. Economics aka efficiency as an evolutionary criterion

Variability of focus, et cetera, should, I find, be valued as an evolutionary mechanism. Therefore, (an) economy is at stake. Explaining it along the enneadic dimension of (f)act, what comes to be recognized as situation-object-behavior triplets reflect a subject’s, say, variety management. It requires maintenance for continued optimization:

Habit blinds us to the richness of information available in the environment. [...] Contextualism raises tensions between change and stability. [p. 181]

There are reciprocal, and I believe basically dynamic, relationships between enneadic dimensions and their respective elements. One and the same signature may be used in (also read: together with) different contexts. For economy, it is the total effort of staging context plus producing signature that counts, not just of a single sign, but between signs. And it is not merely some original effort by the sign producer that enters weighs in; probably more important, even, is the rate of compliance with – relevant – sign consumers that it helps to induce.

The so-called golden mean might be conceived as some middle ground from which differentiations in all directions, also see figure 6, can emerge without unnecessary effort. Then, future differentiations may become more or less prone to occur dependent on previous occurrences. What Gillespie puts forward as “basic level categories” precisely seem such hubs for optimized interdependency both along and between enneadic dimensions:

In interactions with the environment, we do not easily shed this level [...], but go upward to abstractions and downward to particulars given certain purposes or undertaken actions. [p. 169]

³² Logic atomism requires a subset, indicating that contextualism is an encompassing ontology. See *Dia-enneadic framework for information concepts* for my argument that the dia-enneadic (meta)model is a set of eighteen elements. Its so-called power set – and please note that power again means something very different in this context – is the set of theories. (Only) with all elements of the dia-ennead is full-fledged dynamic contextualism described.

However, with purposes in mind (enneed: motive), and nesting as also supposed by Gillespie, differentiating between abstract and concrete/particular may even be confusing. For a concept in its irreducible motivatedness merely ... is as abstract or concrete as that motive entails. Gillespie does actually say so:

[N]o category will be evoked in quite the same way across situations[.] [p. 180]

A situation evokes behavior, corresponding with motive and concept. Seen across the enneed, a concept is different because with a motive the situation is interpreted as different. The enneed as a (meta)model and Metapattern's formalism should help to counter objections that

[c]ontextualism [is] like wild abandonment of reasonable standards[.] [p. 186]

However, the obstacle remains that people will consider it "abandonment" of rationality altogether, unaware as they are of – the need for – changing between rationalities as different worldviews:

[C]ontextualism frames the possibilities and problems [...] along very different lines from the dominant mechanistic tradition. [pp. 188-189]

26. Hardly anything to add, just a final reference

In *The Mind's We*, Gillespie told her

story [...] about breaking away from traditional authority and cognitive claims to certainty. [p. 191]

In spurring us to reform our perspectives, [contextualism] forces us to face the ambiguities and tensions that characterize modern life, the relation between experience and knowledge, community and the individual, knowledge and power, history and freedom, and morality and technology. [p. 193]

And so on ...

Every behavior turns out to be a matter of design, and design entails

investigation as an open-ended process in a never fully determinate situation, [... with] contextualism invit[ing] mutual dialogue and publicly shared discourse as important for responsible action. [p. 193]

These acts of disclosure create difficult vulnerabilities. But this [...] leads to participation, openness, and heightened awareness of alternative perspectives. [...] It opens the possibility for mutuality in a world whose meanings constantly need to be negotiated and renegotiated. [pp. 194-195]

As Gillespie herself repeatedly makes clear, contextualism's emancipative potential is all too often all too quickly done away with:

[Traditional] mechanists buttress their objectivistic view [...] by appeals to economic rationality [...] in a technical discourse that mirrors the language of the political and social order. It operates to foreclose discussion[.] [p. 194]

Should that leave us cynics, and stop trying? I don't think so.

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