From Transcendental Pragmatics to Cognitive Sociology:
An Architectonic Comparison in Memory of Karl-Otto Apel

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Abstract

In this contribution, I briefly reconstruct the shift from Karl-Otto Apel's transcendental pragmatics to the version of cognitive sociology I have been promoting for a number of years. Overall, the account takes the form of a juxtaposition of two distinct yet intimately interrelated architectonic conceptions which is pursued through retracing the selective appropriation over decades of Apel's ideas from the viewpoint of a possible new social scientific departure.

The main body of the chapter is in three parts, the first of which presents a selection of Apel's key ideas that informed the conceptualization and construction of cognitive sociology.

The second part sketches how these key ideas were critically appropriated, transformed and developed so as to arrive at a philosophically informed approach that theoretically and methodologically dovetails with critical theory.

The final part offers indications of the resultant cognitive-sociological architectonic conception from which the deep relation to, as well as contrast with, Apel's architectonic becomes apparent.

Keywords: constitution of meaning, cognitive order, critical theory, cultural model, ideals and ideas, nature, reflection on validity, reflexivity, semiotics, transcendental presuppositions.

I *Transcendental-pragmatic architectonic*

The first requirement for tracing the development from transcendental pragmatics to cognitive sociology proposed is a reconstruction of Karl-Otto Apel's transcendental-pragmatic architectonic – an architectonic he indeed discussed on various occasions in comparison with other authors, yet of which he never gave an integral account, least of all offering a graphic icon in line with Peirce's emphasis on diagrammatic thinking. In the opening part, this task is executed by presenting a selection of his closely interrelated key ideas which went into the construction of his architectonic conception.

Initial indication of direction

Apel's critical comparison and contrast of analytic philosophy of language and the *Geisteswissenschaften* published in English in 1967 served as my eye-opening introduction to his thought

which has ever since shaped my mind. Besides the initial outline of the nascent tripartite positivist, hermeneutic and critical methodology of the social sciences built on the acknowledgement of different cognitive interests and goals, it was his single-minded focus on synthetic *a priori* structures or presuppositions that drew the attention and fuelled the imagination.

Rather than the general category, however, it was Apel's unfailing suggestion of a distinction between two different types of synthetic *a priori* structures and their functions instead that captured and held the fascination. Beyond the exposure of the limitations of Russell and Wittgenstein's logical structure of language, Carnap's constructive semantic frameworks and effectively also the hermeneuticists' interpretative schemes or frames, this distinction became unmistakably clear in Apel's (1967: 47-57) penetrating three-point criticism of Wittgenstein's proposed language game analysis and Winch's related endeavour to analyse and draw out the implications and consequences of this approach for the social sciences. Apel showed, first, that the concept of language game is static insofar as it consists of content and a corresponding rule which lack reciprocal interrelations and thus leave it shorn of developmental potential. Second, although an infinite plurality of language games is postulated, an immanentist view relativistically encapsulates each one in an internally closed monadic unit which forecloses reflexive self-critical evaluation, the mutual conditioning and interrelation of language games, and transcendent critique in terms of, say, the common human criteria presupposed by all language games whatsoever. Finally, an undialectical and hence naïve harmonistic conception excludes any possibility of acknowledging internal discrepancies between the components of a language game – that is, language use, form of life and understanding of the world – and thus the need for the objectification of offending features enabling their external explanation or critique. Some two decades later, Apel (1998: 609-647) repeated in upgraded form his analysis in a debate with Winch, originally published in 1990, in which he contrasted 'universal principles' with the English author's emphasis on 'particular incommensurable decisions and forms of life' or real communication communities which, moreover, are able to deploy only when directed and guided by regulative principles such as 'the ideal communication community' in the face of 'actual limits'.

The overall thrust of Apel's argument in this relatively early essay, then, was the crucial parametric distinction between synthetic *a priori* structures of an immanent and a transcendent kind. The former are the internal context-bound conditions for the possibility of meaning, understanding and knowledge in the case of every particular language game, embracing both action structures and the regulative principles in the form of ideals or goals pursued. In contrast, the transcendental presuppositions concern the context-transcendent conditions, presupposed by all language games without exception, for the possibility of reflexivity and eventually also of critical evaluation, explanation and critique. Below the immanent and transcendent features, the actual limits of sociocultural forms of life, including objective features and reified structures, also received mention. In retrospect, then, already here one glimpses the faintly appearing contours of Apel's architectonic.

Consolidation of architectonic parameters

Subsequently, the formulation of his transcendental pragmatics during the 1970s afforded Apel the opportunity to definitively consolidate the parameters of his architectonic. Most obviously, this

involved the justification of the distinction between two types of presuppositions, but it required also coming fully to terms with Heidegger and Wittgenstein with the help of Peirce.

As regards the structurally vital distinction between two types of presuppositions, for Apel it was not simply a matter of a rehabilitated Kantianism in the form of, say, Strawson's categorial schemes in the sense of the presuppositions of the propositional content of world representational knowledge. In contrast to such a context-bounded sense of the transcendental, he considered it as of decisive importance to include also the concomitant dimension of the context-transcendent presuppositions that are necessarily and unavoidably assumed, activated and mobilized from within the context in a transcendent way relevant to both theoretical and practical philosophy. This vital distinction which Apel marked by what he calls the 'transcendental difference' received its emphatic statement in the late 1980s in an essay on the constitution of meaning and reflexive justification of validity (1998: 505-568) in which he ostensibly redoes his earlier analyses of Heidegger but, in fact, critically covers a wide range of positions bearing on the transcendental question.

Despite being critical of Heidegger as of Wittgenstein, Apel by no means rejects their redirection of attention to those presuppositions that serve as the conditions for the possibility of meaning, understanding and knowledge within sociocultural forms of life. Rather, he regards the excavation of those taken-for-granted structures, whether Heidegger's 'aprioristic perfect' *qua* 'pre-structure' in the sense of the pre-understanding underpinning world- and self-understanding or Wittgenstein's 'indubitable certainty', as an indisputable achievement. For what they did was to graft below the level of the objective propositional content of knowledge in order to expose the deeper hermeneutic, linguistic and pragmatic level. Evaluating their respective interventions positively as far as they go, he regards them as having made visible what he calls 'the *quasi-transcendental problem* of the *constitution of the meaning* of the lifeworld' (1998: 509). By contrast with Kant whose conception of 'pure consciousness' as transcendental condition of objectivity did not and could not account for meaning, Heidegger's idea of humans who find themselves 'thrown' into an always already interpreted and publicly articulated world and who are compelled by their finitude to adopt a stance of 'concern' and 'care' within the world, filled out and thus corrected the wanting basis of transcendental philosophy inherited from the 18th century. Likewise, the taken-for-granted background assumptions that Wittgenstein sees operating, not as representations, but rather as linguistic instruments or means that enable common understandings and orientations in language games, what he calls a 'sample' or 'paradigm', embrace the quasi-transcendental presuppositions that function as conditions for the possibility of the constitution of meaning, understanding and knowledge. Quasi-transcendentally, then, there is engagement in the sociocultural world, on the one hand, and a corresponding hermeneutic, linguistic and pragmatic form, whether Heidegger's already interpreted and publicly articulated world or Wittgenstein's sample or paradigm, that directs and guides the activity, on the other. Apel's own characteristic notion of 'the real and ideal communication community' (1980: 145; 1998: 794) is intended precisely to capture this very '*a priori* of meaning constitution'.

Once having acknowledged this corrective supplementation of the concept of the transcendental, however, Apel (1998: 505-68) embarks on a criticism of Heidegger's inauguration of a tendency, also exhibited by Wittgenstein, towards what he calls the 'detranscendentalization' and thus 'historicization' of Kant's transcendental stance. Heidegger's temporalizing reinterpretation of transcendental apriorism did not just make the quasi-transcendental problem of meaning constitution visible, but simultaneously also detranscendentalized the transcendental *a priori* of reflection on

and justification of the validity of claims and knowledge. That this was tantamount to an undesirable destructive move with disastrous consequences for transcendental philosophy, however, is borne out for Apel by its legacy as exhibited, among others, by Ryle's ordinary language philosophy, Quine, Davidson and Putnam's circular meaning holism, Kuhn's incommensurable scientific paradigms, Lyotard, Vattimo and Villani's postmodernism and Rorty's detranscendentalized neo-pragmatism, but also by Habermas's incoherent and inconsistent attachment to detranscendentalization (Apel 1998: 651).

Given his prioritization of the transcendental difference, Apel's own response is to retain the quasi-transcendental problem of meaning constitution and to displace detranscendentalization by what he calls 'retranscendentalization' (1998: 512). His reason for censuring detranscendentalization and the accompanying fixation on the immanent conditions represented by the background presuppositions of the lifeworld is that it leads, as in the case of Heidegger in particular, to thinking in what Apel calls '"happening" categories' (*"Geschehen"-Kategorien*, 1998: 565). Earlier already, he similarly rejected Wellmer's counterproposal to jettison all regulative instances by submitting that a self-respecting transcendental philosophy which places a premium on reason cannot afford to withdraw into 'the continuum of history' (1998: 139). In criticism of Habermas, similarly, Apel (1998: 659) submits that he shares the notion of a rationalization and learning process pursuing a long-term goal which originally derives from the philosophy of history, yet only insofar as it is complemented by transcendental presuppositions. Detranscendentalization and historicization suffer from a 'reflection deficit' (1998: 567) insofar as that part of the background containing those high-level or deepseated transcendental presuppositions to which immanent practices and arrangements necessarily point or appeal is neglected. Generally speaking, then, retranscendentalization implies a conditional return to Kant's (1968: A 569=B 597) transcendental dialectic, not just his 'ideals of reason', but in particular also his 'ideas' through which reason 'sets bounds'. Qualified in Peircean terms (Apel 1998: 563), however, these bounds are quite differently associated with the continuum so as to allow for reflection on and justification of the universal validity of claims, knowledge and norms in the long run. Simultaneously, Apel nevertheless stresses that an emphasis on universal validity must be combined with historicity and temporally conditioned meaning constitution in concrete sociocultural forms of life.

In accordance with his defence of the transcendental difference between constitution and validity, Apel (1998: 224, 653) elaborates on the types of presuppositions implicated. Under constitution, on the one hand, fall the background certainties of actual concrete lifeworlds and sociocultural forms of life, including the plethora of pre-reflexive immanent or context-bound habits, beliefs, orientations, rules, norms, values, examples, models, ideals and goals. Prime modern ideals or goals are a discursive morality and an associated universalization procedure which, in turn, regulate institutions such as law and democracy (1998: 813). Under validity, on the other, there are the only reflexively ascertainable and cognitively accessible context-transcendent conceptual conditions that operate as the transcendental principles of lifeworlds, sociocultural forms of life and their content, thus making possible the justification of their validity through argumentation and reflection. Centrally amongst them are 'primordial moral principles' (1998: 783, 811-12) like justice, equal right, reciprocity, solidarity, co-responsibility and so forth.

What is important, however, is that for Apel it is by no means simply a matter of postulating the transcendental difference. As is apparent from his work since the late 1960s, he rather more broadly

understands the relation between the constitution of meaning and reflection on and justification of validity in dynamic, indeed, dialectical and eventually semiotic terms. In this respect, he speaks emphatically of a '*dialectical imbrication apriori*' (*dialektischen Verschränkungsaprioris*) (1998: 806). It is here that a sense emerges of the intricate interplay not only between the two obvious poles captured by the difference between immanence and transcendence, but also between the much less emphasized 'ideals' and 'ideas' of reason that respectively define the limits of the transcendental difference, namely constitution and validity.

Semiotic inferential dialectics

It is precisely to come to grips with the intricacy of the dialectical interweaving of the quasi-transcendental and the transcendental dimensions within the immanent-transcendence framework that Apel (1975) has recourse to Peirce's theory of sign mediation or semiotics, including in particular the inferential processes of abduction, induction and deduction together with the phaneroscopic categories of 'firstness', 'secondness' and 'thirdness'. With Peirce, Apel (1998: 563) accepts that all linguistic constructions, including both immanent and transcendent presuppositions, are more or less deeply rooted evolutionary sedimentations of inferential processes, themselves obviously evolutionary achievements, which are central to the constitution of meaning, understanding and the advancement of knowledge. A conception thus emerges, on the one hand, of a historical-constructive process of the constitution of concrete sociocultural forms of life and, on the other, the evolutionary stabilization of emergent structural properties of both a transcendent (e.g. universal validity concepts) and an immanent (e.g. achievement concepts like conventional norms) kind which, in turn, respectively work back in a structuring and regulative way on forms of life and the processes whereby they are generated. The dialectical imbrication of the generative and structuring processes continue indefinitely, but this occurs under the – at least for the time being – evolutionarily stable conditions of the version of humanity that over the past 6000-2000 years have acquired a self-understanding congruent with a relatively restricted range of universal validity concepts. Here Apel has in mind principles of theoretical, moral and ethical significance. In this respect, he mentions the significance of the Axial Age as well as periods of enlightenment such as ancient Greece and, in particular, the Enlightenment.

For Apel, following Peirce, it is semiotically necessary to incorporate the material dimension or the objective world in the set of dialectical relations transpiring in the sociocultural form of life, not just the material or objective features of this form of life, but also nature. His proposal is thus couched not in the mould of a dichotomy, as it might superficially appear, but instead of a 'trichotomy' (1998: 125). Besides meaning and concepts with their entailments, therefore, 'the vote of nature' (1998: 127) must also be semiotically incorporated. At least as early as the 1980s, accordingly, Apel criticized Habermas for neglecting this architectonically important requirement. In terms of the semiotically vital inferential processes at the heart of the dialectical relations, this means that besides abduction and deduction, induction also has to be brought in. To begin with, pre-reflexive experience which provides sensory certainty regarding a particular quality of something given (firstness) kicks off the process, while the conceptual conditions (thirdness) allow that particularity to be generally identified as something nameable, for example an object or an event.

But this relation between experience and conceptual delimitation remains deficient unless there takes place simultaneously an encounter or confrontation (secondness) with the something in question (i.e., the firstness of secondness) so as to complete the three-sided dialectical process. It should be noted that beyond the situational incorporation of nature, yet in architectonically less developed form, Apel (1979: 135; 1998: 162, 193, 563) over decades showed that he is also acutely aware of the general relevance and, indeed, importance of human evolution, from the schematic biological-psychological underpinnings of experience and the generation of meaning to the stabilization of human-defining conceptual structures.

Reflection on transcendental presuppositions

The defining feature of Apel's transcendental-pragmatic approach is reflexivity, particularly the role of reflection in bringing to light the transcendental presuppositions serving as conditions of possibility at various levels. Rather than being confined strictly to the dimension of the objective or propositional content or even the hermeneutic, linguistic and pragmatic features of the sociocultural world, it is vital from Apel's perspective to appreciate the concomitant reflexivity on the performance involved. Instead of restricting himself to speech acts, as does Habermas (1979, 1984), he penetrates still deeper by shifting to the interrelated inferential processes at the core of action, including speech acts. What reflection on the performance of action through inference in its different modes does is to bring to the fore the whole range of implicated presuppositions in the form of what Apel (1998: 130, 694) calls reflexive 'performative action knowledge' (*performativen Handlungswissen*) which mark the phases in the overall dialectical inferential process. And what is more, according to him, is that the presuppositions revealed in this manner are 'structures' of the sociocultural form of life which are characterized by being 'cognitively accessible' only through reflection (1998: 630).

Within the concrete situation in which the dialectical inferential process unfolds, those involved have in principle theoretically and practically significant reflexive knowledge of their performance in respect of each of a sequence of moments: first, the experience of categorial intuition of quality; second, drawing on a concept or concepts to make sense of the quality; third, the proposal of an hypothesis which emerges from the conceptualized experience; fourth, the adoption of a stance over against the evidence presented by the relevant aspect of the objective world, whether a physical thing, a social relation or a norm, cultural product or artefact; fifth, the claim to knowledge advanced when the hypothesis is tested against relevant evidence; sixth, recourse to conceptual conditions to support the claim; seventh, the moment of argumentative or discursive appeal made to the relevant transcendental validity concepts in order to defend and justify the validity of the claimed knowledge; and, finally, the most important insight pervading these moments, namely 'the mutual recognition of the equal rights of all' those involved and beyond (Apel 1998: 740).

Due to its neglect in the wake of the trend towards detranscendentalization and historicization in 20th-century thought, including Habermas's ambivalent stance between transcendentalism and detranscendentalization, Apel is particularly concerned with the significance of both the transcendental dimension of validity concepts and the inferential processes together with their accompanying reflexive performative action knowledge which brings that dimension and its structuring role to

light. Only by acknowledging the presuppositions underpinning the active performance of inference that are brought to the fore by penetrating reflection, particularly the transcendental conceptual conditions, is it possible to obtain a grasp of the thrust of Apel's epistemologically and morally relevant transcendental-pragmatic approach. It moreover opens a vista on the cognitive metaproblematic – namely, that we humans, while forming part of the world, indeed only a miniscule part, are nevertheless able to distinguish ourselves from the world and to develop a creative, conceptually structured yet self-correctable perspective on and a variety of relations to the world to such a degree that goal-oriented action upon the world in all its dimensions, including society and ourselves, has become possible.

II Appropriation, transformation and development

The presentation of key aspects of transcendental pragmatics thus far was motivated by a two-fold intention: to pinpoint, on the one hand, moments in Apel's thought that open the way for the introduction of an integral cognitive sociology in the sense of one that incorporates both a sociocultural and a naturalistic component; and, on the other, moments that require either creative continuation or critical supplementation for the purposes of this new departure. In the second part, accordingly, indications are given of how the relevant aspects of his work were appropriated, transformed and developed.

Immanent transcendence, cultural models and the cognitive order

The transcendental-pragmatic notion of the 'transcendental difference' which Apel plays out against a variety of 20th-century philosophical and social-scientific trends is exceedingly important for the cognitive sociology intended here. While being a reconfiguration of the Kantian conceptual pair of the empirical and the transcendental, its importance is rendered comprehensible by Apel's restatement of it in terms of the distinction between the constitution of meaning and reflection on validity and his portrayal of the relation between them as a dynamic dialectical interweaving of immanence and transcendence. The overarching significance of the immanent-transcendence complex for the founding of cognitive sociology resides in its provision of the top metatheoretical parameter of the architectonic design.

Apel's filling in of the immanent and transcendent spaces with their respective content opens the door for the introduction and development of the sociocultural dimension of an integral cognitive sociology. Besides lifeworld background certainties, the immanent space of the constitution of meaning embraces, more concretely, action, communication, argumentation, discourse, conventional norms, organizational and institutional arrangements of various kinds, from law, democracy and the state on both a national and global scale to science and technology, but more abstractly also corresponding ideals or goals that operate in a regulative capacity. Starting points for the sociological development of cultural models of different kinds and levels are thus made available.

Rooted in yet stretching beyond the immanent space, the transcendental dimension harbours the reflexively ascertainable presuppositions, particularly in the form of the principles that operate as conceptual conditions for the possibility of reflection and the weighing and justification of claims, judgements, knowledge and whatever sociocultural structures and arrangements might flow from them. The contact point Apel's '*transcendental-reflexive cognitivism*' (1998: 251) provides is of the greatest importance for cognitive sociology since it allows understanding of the superordinate structural level of the sociocultural form of life, the whole complex of transcendental principles that defines what humans are and ought to be. At this level, Apel's reflexive unearthing of performative action knowledge and hence presuppositions has two significant implications in that it effectively clarifies the nature of the transcendental stratum.

The first, given that it depends on the human reflexive capacity and its exercise, is that the complex of transcendental conceptual conditions is of a virtual nature. Unlike, for example, the critical realist conception of the cultural system in terms of propositional content or the Parsonian systems theoretical concept of culture, the virtuality of the transcendental dimension is not intelligible from an objectivistic standpoint since it requires the adoption of a reflexive stance instead. The second related implication, given that reflection as a mode of 'cognitive access' works on and brings 'structure' to light, is that the transcendental principles are themselves of a cognitive nature. And they are cognitive since they are virtually available for selection and flexible composition in the medium of communication for the purposes of the pursuit of a wide variety of ideals or goals. This is a most significant outcome for the articulation of cognitive sociology. It specifies the theoretical conception of the superordinate structural level, namely, the set of transcendental principles operating as the conceptual conditions of the sociocultural form of life – what can be called its 'cognitive order' (Strydom 2019). Apel's (1998: 237) conception of the cognitive tends towards the narrow side, though, insofar as he distinguishes sharply between cognitive principles and non-cognitive motivation. Without diminishing the force of non-cognitive generative motivation, it should be stressed that each of the cognitive order principles as a triplet of objective, social and subjective or of syntactic-semantic, moral and pragmatic significance can potentially and does exert motivational direction subjectively and pragmatically in combination with the remaining components. In the dialectical imbrication of immanence and transcendence, moreover, motivation from below and from above become interwoven.

Apel (1998: index) characteristically of course attaches a strong philosophical claim under the title of 'ultimate grounding' (*Letztbegründung*) to the reflexive cognitive access to and ascertaining of transcendental principles. Rather than the usual dismissal of this idea which in any case does not deny immanent rootedness, it is sufficient for present purposes to assume the transcendental concern and to shift the problem from strict reflection to the cognitive sociological plane. Not only philosophy, but also language use in social life, particularly 'the *meta-institution of communication*' (1998: 377) to a greater or lesser degree involves the activation and mobilization of context-transcendent validity concepts. Unlike Habermas's anti-foundationalist reversion to the substance of the lifeworld, however, it is entirely plausible to insist that there are meta-cultural transcendental conceptual conditions that have a structuring and indexing function in relation to the immanent space of freedom, places and reasons, including discourses. For the cognitive-sociological approach, moreover, the emphasis cannot be confined to the crucial moral subcategory of transcendental principles alone, since a grasp of the quasi-digital selective compositional interweaving of all

three transversal categories – intellectual, moral and ethical – requires a more comprehensive notion of normativity, that is, the normative significance of the cognitive order.

Convergence, divergence and limit concepts

If there is a relatively serious inadequacy in Apel's articulation of his architectonic, it is to be found in an occasional lack of consistent observance of the difference between the two vital dimensions implicated in its vertical parameter. From time to time, a subtle ambiguity appears in his writings which needs to be ironed out if a consistent cognitive sociology were to be established. Wellmer (1986) at least partially glimpsed this problem with his criticism of Apel's notion of the anticipation and realization of a counterfactual ideal state under actual conditions, but he went off on an unfruitful tangent.

The two dimensions in question relate to Aristotle's (2015, Book III, Part 6) distinction between 'potential infinity' and 'complete infinity' which were radically transformed by modern mathematics into the 'convergent series' and 'divergent series' (Dantzig 2007: 150) and then incorporated into philosophy by Kant (1968: A 327=B 384-A 332=B 389). For him, the crucial distinction was between the 'potential…*descending…process of becoming*…of the conditioned' and the '*ascending* series…of the conditions…given *in its completeness*'. The mathematical differentiation (Nelson 2008: 45) of Aristotle's (1961: 32) related notion of 'limit' into a 'ratio' and a projected 'sum' appears respectively in Kant (1968: A 569-71=B 597-99) as 'ideals of reason' *qua* immanent achievement concepts and 'ideas of reason' *qua* transcendent validity concepts. As distinct types of limit concepts, for him the former ideals include 'archetypes', 'models', 'examples' and goals which are only approximately realizable in the descendent case, while the latter 'transcendental ideas' represent a 'totality' projected by the mind to render the ascending series intelligible and manageable.

Presenting the ancient-modern contrast differently, whereas the Greek *horror infiniti* confined Aristotle to being a finitist, the moderns from Galileo to Kant and beyond assumed continuity and accordingly embraced infinity with enthusiasm. Instead of being content with 'existence', they prioritized 'conceivability' (Kant 1968: A320-B377; Ugaglia 2018; Dantzig 2007) as well as realizability. If Kant excelled in articulating conceivability, the honour of definitively placing realizability on the agenda undoubtedly belongs to the Left-Hegelians, including Peirce. His 'pragmaticist maxim' suggests, however, that he was acutely concerned with both conceivability and realization due to his sophisticated grasp of the problematic of the divergent and convergent series and their respective limit concepts (Peirce 1992: 319; 1998: 100-1, 340-2, 403-4, 419-20).

Needless to say, it is this Kantian-Peircean legacy that Apel inherited. Yet, despite acknowledging the problem of 'infinity' (1980: 15, 104, 123; 1998: 646, lacking in index) implicated in the difference between quasi-transcendental and transcendental presuppositions, he never emphatically endorsed potential and complete infinity and their respective limit concepts – the former implicating the problem of the degree to which the pursuit of a goal at best only approximates the ideal and the latter the entirely different problem of making an endlessly expansive set of relations conceivable. A re-reading of a selection of key passages from Apel's early and late work against the background of the intertwined philosophical-mathematical development consequently proves revealing. What

jumps off the page at a number of critical points, as it were, is a tendency to short-circuit the convergent and divergent axes due to an apparent ambivalence regarding the status of their respective limit concepts. To select but one example, this is unmistakably borne out by a passage from 1990 focused precisely on the problematic of infinity:

'In think, on the one hand, that *forms of life* – individual as well as collective – in a certain sense are really *incommensurable*. They are thus insofar as they belong to *finite* living wholes which nevertheless are not reducible to a combination of finite elements, but are rather different realizations of the *infinite*. On the other hand, it seems, *universal principles* of ethics as "regulative ideas" are something *infinite* which finite living beings, insofar as they are rational beings, nonetheless ought to realize' (Apel 1998: 646, my translation).

Despite Apel's apparently careful formulations in this quotation, close reflection makes a number of problems visible which result from his blurring of the distinction between the convergent and divergent axes due to opacity surrounding the corresponding limit concepts. First, the nature of the 'infinite' realized by forms of life is unclear in that it seems to be equated with the infinity of the ethical principles; yet 'ethical principles' operate as the limit concepts of the divergent axis representing complete infinity, whereas forms of life, which lie on the convergent axis representing potential infinity, have limit concepts taking the form of only approximately realizable ideal-dependent goals. Second, the 'infinite' in the case of completely perfect universal ethical principles means something entirely different from infinity in the case of concrete forms of life; complete infinity should be clearly distinguished from potential infinity. Finally, unlike concrete goals depending on ideals, abstract transcendental ethical principles cannot be realized, since they only set the bounds within which concrete pursuits and attempts at realization occur; rational beings can only conceive them and, within that framework, they can then pursue the goal of the realization of their historically specific concrete ideal versions structured by those ideas of reason.

The elision that occurs here, it seems, can at least partly be attributed to Apel's appropriation of Peirce. For one, Apel's adoption and profuse use of Peirce's vivid yet subtle image of 'in the long run' seems to tilt strongly towards thinking in terms of anticipation, approximation and realization, while not consistently reflecting his own acute insight into the importance for Peirce of the constitutive function of the 'logical interpretant' on the next higher level – that is, the cognitive property of regulative ideas that reaches beyond Kant's static a priori towards infinity. Had the distinction been observed and the balance kept, no confusion of concrete ideal-dependent goals and transcendental principles could have arisen.

From the argumentation presented thus far the conclusion follows, then, that Apel consistently maintains the immanent-transcendent parameter in the construction of his transcendental-pragmatic architectonic, while being less clear about the convergent-divergent parameter, indeed, tending at certain junctures to collapse it by effectively merging the corresponding limit concepts. It is obviously necessary for the purposes of the construction of a coherent architectonic for cognitive sociology to observe both parameters to their full extent. In the process, particularly close attention needs to be paid to the rehabilitation of the respective limit concepts of the convergent and divergent axes and their relation to each other.

Naturalistic dimension

The third moment completing Apel's trichotomy of constitution, validity and the objective world or 'nature' is the final important aspect of his transcendental-pragmatic architectonic that had to be appropriated. This is absolutely essential for the conceptualization of an integral cognitive sociology that possesses not just a sociocultural dimension, but also a naturalistic one. It is fortunate that Apel enhances this aspect by recognizing, even if only cursorily, the relevance of a number of features of the problem of nature. Among these are the importance of evolution as distinct from history, the human organic endowment, the life of the human species, the evolutionary origin of all linguistic phenomena and the problematic of first and second nature. Elaboration of the naturalistic dimension of cognitive sociology would obviously require attention to these aspects. Noteworthy is that Apel's recognition of nature obviously entails a certain qualification of the strength of his *Letztbegründung* claim – an aspect of the implicated problem of the subject he leaves unaddressed.

Apel's approach to the incorporation of nature, the objective world or the material dimension, as indicated in Part I, is couched in the terms of Peirce's semiotic theory of signs, the complementary phaneroscopic categories and inferential processes. These represent a set of dialectically interrelated epistemological, ontological and methodological features that has to be retained in the shift to cognitive sociology, yet Apel's account needs some further differentiation and specification. This applies in particular to the role of the conceptual conditions and, hence, deduction which are operative abidingly at the transcendental level of the framing of the world as such and duplicated at the immediately lower immanent level of the modelling of the world of the kind of activity undertaken. As regards the cognitive process, then, the pre-reflexive experience providing sensory certainty regarding a particular quality (firstness) of some natural thing that abductively opens the process already presupposes the conceptual conditions framing the world as such (thirdness *qua* thirdness), but it also has to make a deduction from the more specific relevant conceptual conditions such as, for example, the physical, biological or social scientific paradigm and theory (secondness of thirdness) in order to generally identify the particular quality as something nameable, for example a feature of a physical, living, social or cultural object or event. This more specific relation between experience and conceptual delimitation still requires simultaneously an encounter or confrontation (secondness) with the quality of the something in question (the firstness of secondness). But this inductive step does not yet complete the three-sided dialectical inferential process, since it is yet again itself in need of deductive recourse to the composition or configuration of concepts (the thirdness of secondness) relevant to the field of activity in point. Of the utmost importance from a cognitive sociological perspective, then, is recognition of the under-emphasized immanent conceptual conditions, the composition or configuration of concepts delimiting a field of activity, which invoke the wide range of cultural models operative in social life. Here we obviously have another perspective on the need to acknowledge the operation of immanent quasi-transcendental regulative principles, for example intellectual paradigms and theories as cultural models, in distinction to bounds-setting transcendental ones.

Quite apart from the epistemological-ontological-methodological problem of incorporating nature into argumentation, Apel takes a definite if undeveloped position on evolution. At the turn of the 1960s, he (1980: 126) observed that Mead developed his version of pragmatism in dependence, not on Royce's hermeneutically and transcendentally relevant continuation of Peirce, but rather on

Darwin's theory of evolution and Dewey's naturalistic pragmatism. Yet, this did not lead Apel to censure the naturalistic problematic, quite the contrary, since by 1987 he (1998: 162) made the bold proposal that it would be possible to show that the transcendentally necessary presuppositions are nothing less than the outcome of human evolution. Later the same year, he (1998: 193) also acknowledged the possibility that the continuation of evolution could potentially transform humans, but he dismissed it as a basis for advancing relativistic contingency claims. He obviously accepted the current version of humans, *Homo sapiens sapiens* (Mithen 1998), with their characteristic meta-representational or reflexive capacity and matching sociocultural form of life as a given for the time being. After all, already as early as 1972 Apel (1980: 167) affirmed 'the life of the human species [as the] *real* basis and genetic starting-point'. And by 1989 (1998: 536), he offered some substantiation for his proposal regarding the evolutionary origin of transcendental presuppositions. Following Peirce, he submitted that all linguistic constructions, including Kant's 'synthetic principles *a priori*' and therefore also his own transcendentally necessary presuppositions, are deeply rooted evolutionary sedimentations of the operation over time of the inferential processes. These processes, which operate on the convergent axis of the historical continuum, are of course themselves products of evolution. Interestingly, all this implies that Habermas (2003: 294) is not entirely correct in regarding his choice for '"weak" naturalism' as the 'deeper source' of the differences between Apel and himself.

There is still a further related aspect of Apel's account that is of great importance – what he calls 'nature and quasi-nature' or 'first nature and second nature' (1979: 316, 324). With this important distinction, he opens a possibility of understanding better the complex relation between the life-supporting physical, chemical and biological systems, what he calls the 'biotic system', and the human 'psychic and sociocultural systems' that have over time emerged and stabilized in the medium of history and evolution. This conceptual pair is highly relevant for the cognitive-sociological development of the naturalistic dimension and, in particular, to do so in a way that dovetails with critical theory. For example, those features of second nature that impede or block the establishment and maintenance of a relation between humans and nature which allows the former to appreciate the latter, not just as a utilitarian resource, but also and in particular as a teleologically relevant criterion with which they should harmonize their long-term goals, could be objectified, explained and critiqued with liberating effect. Today in the new age of the Anthropocene which Apel clearly sensed *avant la lettre*, this is a highly relevant topic, indeed, a burning issue.

To conclude the current section, one can hardly overstate just how helpful Apel's statements regarding nature are, yet their embryonic state obviously makes a more detailed articulation of the suggestions and implications an unavoidable task for an integral cognitive sociology that needs to include the naturalistic dimension and link up with critical theory.

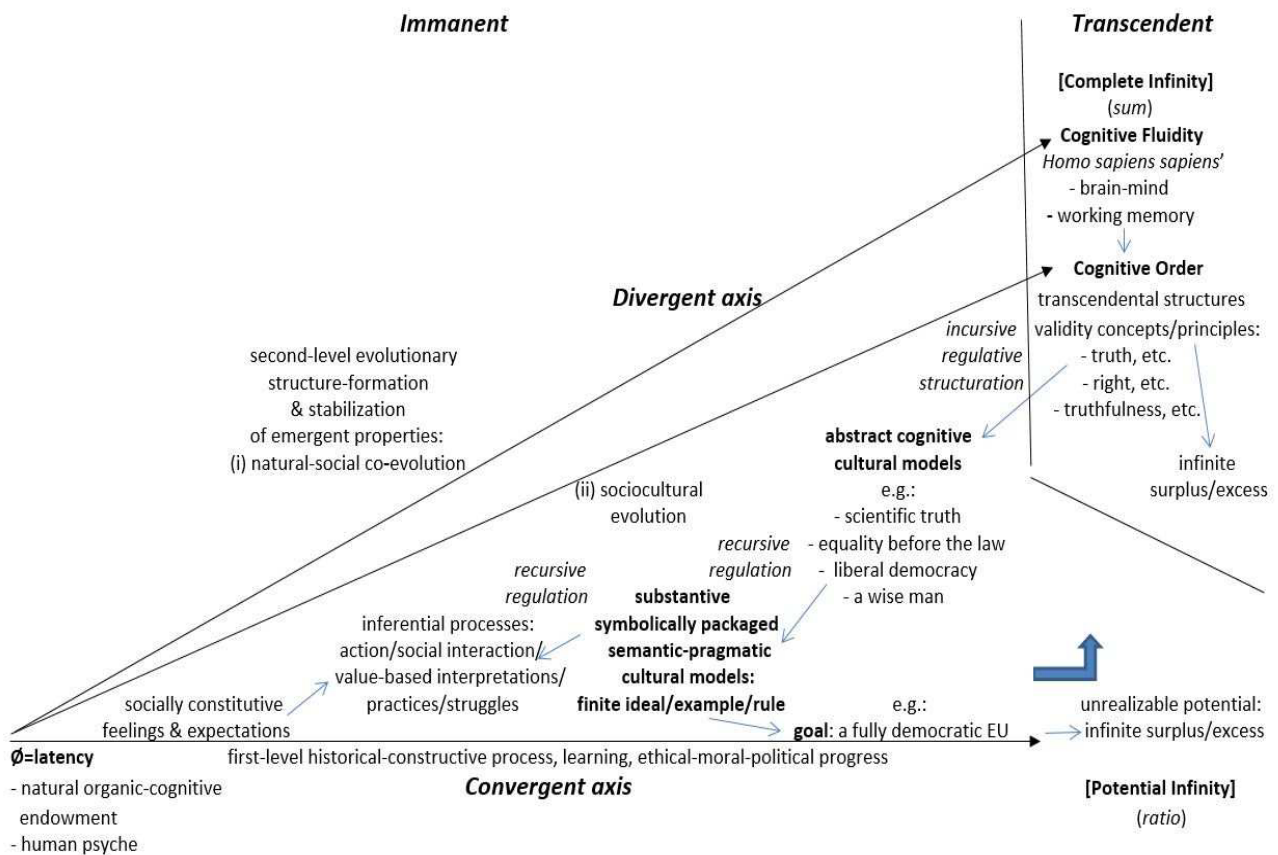*III Cognitive-sociological architectonic*

The selective overview of Apel's thought and the shorthand indications of the appropriation, transformation and development of key aspects thereof given in the above lead to the final part reserved for a rather brief and schematic presentation of the cognitive-sociological approach which in

central respects is inspired by transcendental pragmatics. For this purpose, I resort to a number of supportive diagrammatic icons. Intended to complete the projected comparison, this part essentially takes the form of a presentation of the proposed integral cognitive sociology's architectonic against the background of the reconstruction offered of Apel's transcendental-pragmatic design.

Immanent-transcendent and convergent-divergent architectonic

The cognitive-sociological architectonic seeks to represent a coherent and consistent rendering of both the immanent-transcendent and the convergent-divergent parameters (see Figure 1). In the case of the former, both the internal structures and relations of historically specific sociocultural forms of life and the universal human features exceeding historical and sociocultural particularities are accommodated. As to the latter, both the generative process of history and the structurally stabilizing process of evolution and their respective teleological (e.g. models, ideals and goals) and transcendental (e.g. conceptual conditions or validity concepts) limit concepts are incorporated.

Figure 1: Cognitive-sociological IT-CD architectonic

The fact that it is the specifically human sociocultural form of life that is of core interest and, further, that the evolution of both humans and their form of life cannot be ignored, from the very outset

dictates that the proposed cognitive sociology has to adopt an integral sociocultural and naturalistic perspective. This applies despite the sociocultural component predominating sociologically. As a sociological endeavour, the concern is with actors, orientations, action, interaction, practices and social and cultural, including organizational and institutional, structures in their multiple manifestations; and as a cognitive endeavour, the specific focus is on the cognitive features or properties of those sociological objects, from the micro, via the meso, to the macro and meta dimension. Besides cognitive structures at all levels, attention is paid also to the dynamics among them (see below). The starting point is cognitive as well insofar as the role of the human organic endowment in history and evolution, comparable to the latent mathematical empty set (Ø), has to be observed. Interest in cognitive properties does not remain confined solely to objective ones, for example neurological components or the propositional content of expressions and culture, but extend also and in particular to such ones as are cognitively accessible only by reflection. Whereas the former would cover much, although not all, of the immanent sociocultural domain's content, such as for instance action and identity schemata and both substantive symbolically packaged semantic-pragmatic and abstract cognitive cultural models, the latter applies above all to the transcendental presuppositions typically taking the form of conceptual conditions or validity concepts, but these of course leave structuring feedback effects lower down the immanent scale.

The cognitive order and cultural models

As regards the cognitive-sociological interpretation of the respective limit concepts of the convergent dimension of history and the divergent dimension of evolution, the focus falls on the structurally important cognitive properties that in a socio-culturally relevant sense bring closure to historical construction and the stabilization of formed structures respectively (see Figure 1).

Historical construction, whether individual, social or collective, following the thrust of the arrow of time in the present, drawing from the past and directed towards the future, presupposes an orientation complex or a collection of such complexes, depending on the particular kind of human activity from the wide variety available. Any particular activity engages in the pursuit of a concrete goal which is itself a rendering of an ideal, example or rule which has a feedback effect on the process of its realization. Besides the concrete goal, this means that the orientation complex comes in the form of a substantive symbolically packaged semantic-pragmatic cultural model or collection of related models. But every such complex for its part presupposes a corresponding abstract cognitive cultural model or models (see Figure 1). If a substantive cultural model recursively regulates orientations, actions, interaction, practices and so forth, then an abstract model fulfils the same general function in respect of the substantive ones. Whereas the abstract model secures the immanent conceivability of an activity, the substantive model in its translated form of an ideal, example or rule cast as a goal makes possible the pursuit and realizability of the intent of the activity. Important to note is that the ideal, example or rule *qua* goal represents the limit concept of the historical-constructive dimension. Comparable to the mathematical number pi (π), such a pragmatically translated structure represents a finite value towards which a corresponding activity tends yet is in principle unable ever to reach and fully realize, since it possesses an inherent surplus or excess of potential that keeps on deferring or withdrawing into infinity. For example, the ideal goal of a crime-free Dublin or of a fully democ-

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ratic EU is a finite value worthy of pursuit, yet it remains unattainable or, at best, attainable only by approximation.

In contrast to cultural models, the limit concepts of the divergent evolutionary axis, while made possible by the brain-mind characteristic of contemporary humans, *Homo sapiens sapiens*, are the outcome of sociocultural evolution. They take the form of the meta-cultural cognitive order composed of the conceptual conditions of the sociocultural form of life that fulfil their transcendental function as validity concepts or principles. As such, they exert an incursive-regulative effect on abstract cognitive cultural models which is transmitted lower down the immanent scale by recursively regulating instances such as substantive cultural models, institutions, organizations, action and identity schemata as well as ideal and goals. Since each of the principles comprises objective, social and subjective or syntactic-semantic, moral and pragmatic aspects, its effect is transmitted in the form of a triplet, both in the sense of its own threefold structure and its imbrication in that of the cognitive order. The cognitive order principles also possess an infinite surplus or excess which, by contrast with pragmatic models *qua* ideal-dependent goals, has to be understood in terms of the divergent characteristic of the sum or stabilized totality of an increasing or expanding series of conditions. Each of the principles such as truth, right, justice, truthfulness and so forth represents such a totality, but they also belong to an inexhaustible holistic conceptual totality which is pervaded by informational redundancy. Thus each might yield a novel nuance under extraordinary circumstances and a related interpretative disclosure.
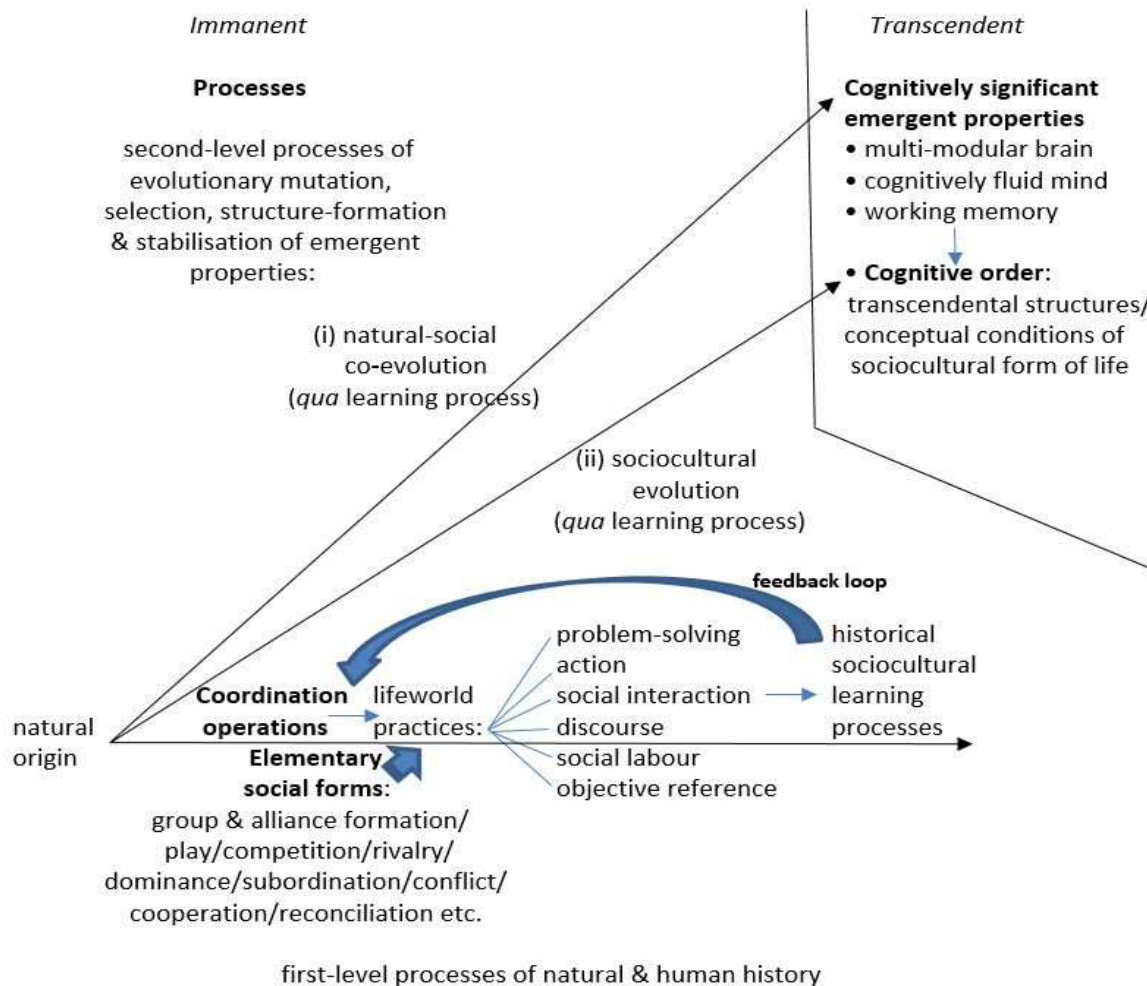
The weak naturalistic dimension

A theoretically adequate cognitive sociology would be fatally flawed if it did not adopt a naturalistic – or at least a '"weak" naturalistic' (Habermas 2003: 22) – perspective to complement its predominant sociocultural one. It has to start from the natural origin of the sociocultural form of life, that is, from 'the life of the human species [as the] *real* basis and genetic starting-point' (Apel 1980: 167), which is at work in its historical construction and its structuring in both a latent and a manifest form (see Figure 2).

On the historical-constructive plane, both the neurophysiologically based 'coordination operations' (Piaget 1983) and 'elementary social forms' (Bateson 1973; Jackendoff 2004; Kaufmann and Clément 2007, Maestripieri 2012) which humans share with their *Homo* ancestors and primate neighbours have to be taken into account. Operations such as perceiving, attending, thinking, remembering, comparing, counting, relating, combining, ordering, interacting, evaluating and judging as well as elementary forms such as group and alliance formation, play, competition, rivalry, dominance, subordination, conflict, coordination and reconciliation, not only serve as links between nature and socio-culture, but are also central driving forces in the constitution of the sociocultural world. On the evolutionary plane, the cognitively significant properties that emerged from the primary generative historical-constructive level and became structurally consolidated and stabilized at the secondary level, including both the natural and sociocultural ones serving as conditions of the sociocultural form of life, are of special interest. Their overall structuring effect is what ultimately renders possible the human world. Among the natural properties are the multi-modular brain, cognitively fluid mind and working memory at its core (Mithen 1998; Wilson 2012; Wynn and Coolidge

2007), while the cognitive order operating as the transcendental conceptual conditions of the human world is a set of properties which falls under the sociocultural outcomes of evolution.

Figure 2: Weak naturalistic dimension

Developments at all the implicated levels take the form of learning. Not only natural-social co-evolution can be interpreted as a learning process, but both sociocultural evolution and the historical construction of society exhibit well-established moments and phases of learning of various kinds. Important from a weak naturalistic perspective is that the coordination operations and elementary social forms sub-structuring the sociocultural world are not monolithic, but are open to the historical sociocultural learning processes at times having a transformative feedback effect on them (e.g. Bateson 1973).

Cognitive sociology's commitment to weak naturalism raises a crucial issue which has the advantage of cementing its relation to critical theory – namely the problem of what Apel calls 'first nature and second nature' (1979: 324). Nature *qua* first nature, both as history and as evolution, is a fecund generative and structure-forming force that gives rise to a wide variety of emergent properties, including the human species and its form of life. But nature is simultaneously also a law that

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leaves its mark on the emergent properties. Humans and their form of life exhibit this inheritance in the form of the above-mentioned coordination operations and elementary social forms. While such natural individual and social capacities open up possibilities and opportunities for the articulation and elaboration of human lives, social relations and the sociocultural form of life, they by the same token also impose constraints and limitations. Second nature, that is, the sociocultural form of life as such, is the site of the resulting tensions and contradictions. The historically and evolutionarily sedimented personality structures, organizational social forms and cultural models it harbours, all of which are best conceived in cognitive terms, are enabling yet also disabling. In certain respects, they cause and perpetuate social pathological phenomena, some of which have been mitigated through learning processes leading to relations of mutual recognition and cooperation, the acknowledgement of principles such as truth, justice and truthfulness, and organizational arrangements like the rule of law and democracy, but others are more elusive and difficult to subject enduringly to transformative learning. This is where critical theory enters through the normative identification of social pathologies, objectifying the mechanisms producing them, and critically explaining them in a way that allows people to see through them and thus to neutralize their odious efficacy (Strydom 2011). Critical theory would be and, indeed, are better able to execute this series of subtasks imposed on it by the inherently contradictory character of second nature to the extent that it proceeds in conjunction with cognitive sociology.

Cognitive dynamics

The cognitive-sociological architectonic sketched above, comprising the immanent-transcendent and convergent-divergent parameters as well as the sub-structuring naturalistic objective world dimension, represents the framework within which the intricate cognitive dynamics of the sociocultural world transpires (see Figure 3).
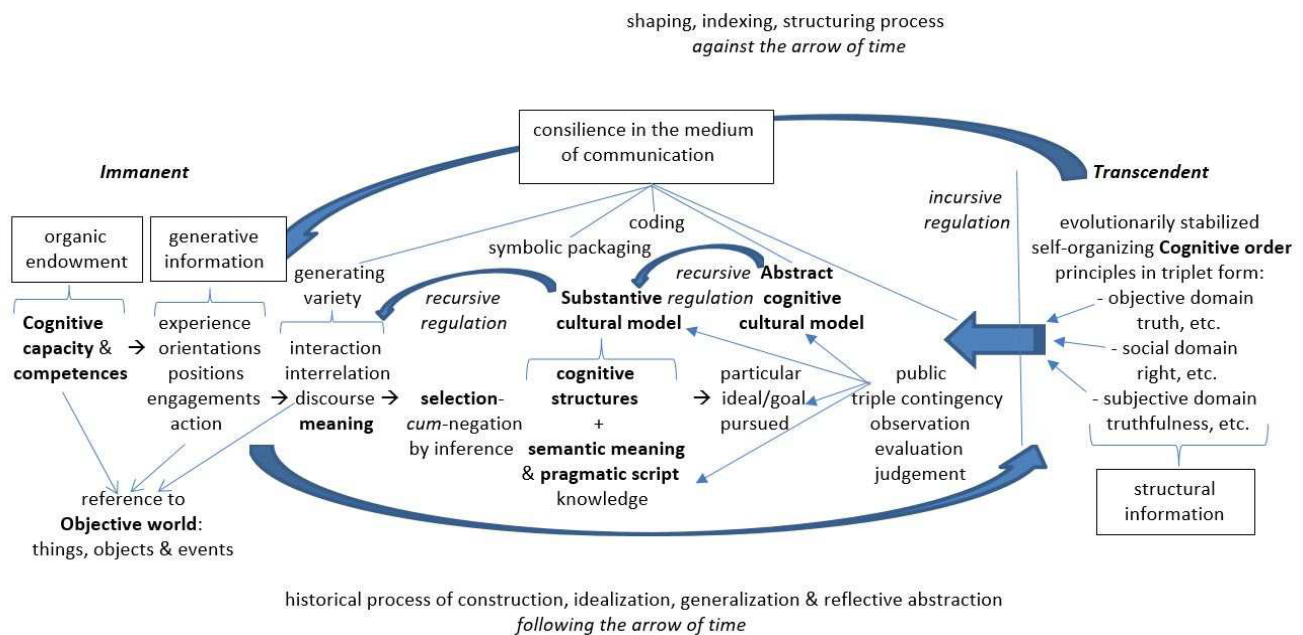
Overall, two countervailing processes, one constructive and the other structuring, delineate the socio-cognitive space of the dynamics which allows the mediation of generative and structural information. While the former process in generating or constituting society follows the arrow of time, the latter exerts a transversal shaping and indexing force counter to the temporal flow.

The historical process of the construction of society originates in the latent cognitive capacities given with the human organic endowment and elementary social forms and it deploys through the interrelation of differently indexed positions and cognitively schematized experiences, orientations and engagements. In their pursuit of a particular ideal-dependent goal, the actions undertaken are selectively oriented towards relevant cognitively structured substantive and abstract cultural models which recursively regulate the actions as they unfold. The historical process as a whole originally helped give rise to the meta-cultural structures defining the human sociocultural world and continues to exert its constructive efficacy, but together with its content it is in turn itself structured by the presupposed cognitive order.

The countervailing transversal structuring process proceeds from unavoidably presupposed cognitive structures serving as the conceptual conditions of the sociocultural form of life. As universal, they variably shape, index and structure individual minds, actor frames, orientations, actions, communication and all types of cultural models which, in turn, mediate their structuring effect lower down the immanent scale. Although subconscious and pre-reflexive, these cognitive order

concepts or principles – for example truth, right, truthfulness, appropriateness – are activated and mobilized via mediating structures, at times to great effect also reflexively, by the plurality of cognitively equipped individual and collective agents partaking of and involved in the historical construction of society.

Figure 3: Cognitive dynamics

Corresponding to the countervailing processes, the cognitive dynamics of the sociocultural world involves two different procedures for the synthesis or fusion of generative and structural informati-on. The coding of cognitive properties is associated with the incursive regulation exerted from above by the cognitive order in triplet form via abstract cognitive cultural models' recursive regula-tion, whereas the symbolic packaging of logical, semantic, moral-ethical and pragmatic significations is achieved from below through the inferential selection-*cum*-negation process borne by social interrelation, interaction, discourse and decision-making. The overall outcome under particular historical conditions of the dynamic mediation of the two countervailing processes amounts to consilience. It entails the achievement of a synthesis in the communication medium of structures, meanings and knowledge deriving from a variety of sources in a way that, while allowing constructive ambiguity, furnishes those involved with adequate situational orientation, un-derstanding and motivation to be able to engage in appropriate action.

While instances of consilience are of central cognitive-sociological interest, it detracts neither from failed and socially pathological syntheses, nor from rational dissent and even less from the misrecognized, suppressed, oppressed and excluded. Each instance of such a nature requires critical theory to undertake a normative diagnosis and to offer an explanatory critique of the underlying mechanism (Strydom 2011), but it would be able to do so adequately and convincingly only if it solicits the support of an integral cognitive sociology.

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Conclusion

For the purpose of tracing the decades-long intellectual trajectory from transcendental pragmatics to cognitive sociology, this paper was cast in the mould of an architectonic comparison which is itself an argumentative technique derived from Karl-Otto Apel.

Part I was devoted to the presentation of a selection of Apel's key ideas on which he erected his transcendental-pragmatic architectonic. Among them are: the transcendental difference between the constitution of meaning and reflection on validity; the distinction between quasi-transcendental ideals and transcendental principles; the semiotic trichotomy; the distinction between first and second nature; the role of inference and performative action knowledge; and, above all, his signature insistence on reflexive insight into necessary and unavoidable presuppositions.

In Part II indications were offered of how these ideas were mobilized, that is, critically appropriated, transformed and developed, for the purposes of conceptualizing cognitive sociology and constructing a corresponding architectonic. The transcendental difference was identified with the overarching horizontal meta-theoretical parameter of immanent transcendence; the necessary and unavoidable transcendental presuppositions or validity concepts were taken as equivalent to the cognitive order; the occasionally ambivalent treatment of achievable ideals and transcendental principles was mitigated by the introduction of the vertical convergent-divergent architectonic parameter; the account of reflexive performative action knowledge paralleling inferential processes was taken as suggesting that the structure of the sociocultural form of life was of a virtual and cognitive nature and as being applicable in full force to the cognitive order; and, finally, the inclusion of nature as an architectonic parameter and its manifestation in the sociocultural world as a tension-laden relation was seen as a crucial respect in which cognitive sociology and critical theory dovetail and can cooperate.

On this basis, finally, Part III was assigned to a concise schematic overview of the major architectonic dimensions and content of the intended integral cognitive sociology. On the whole, the architectonic comparison thus presented unmistakably exhibits, despite certain creative departures and contrasts, the deep relation of this version of cognitive sociology to Apel's astonishingly innovative and inspiring transcendental pragmatics.

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