



## THE HUMAN EVOLUTION THEORY IS BUT A WITTGENSTEIN LANGUAGE-GAME<sup>1</sup>

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**Dates:**

Received: 25 June 2019

Accepted: 30 Aug. 2019

Published(Online): 30 Sept. 2019

Published(Printed): 30 Oct. 2019

**Keywords:**

Family Resemblance, Human  
Evolution, Wittgenstein  
and Language Game

**How to site this article:**

Pizarro, Charito, "The Human  
Evolution Theory Is But A  
Wittgenstein Language-Game,"  
*Scientia* Vol 8 no. 2. (2019), p. 59-68.

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*Wittgenstein in the Blue Books speaks of our craving for generality in connection with our tendency to look for something in common to all the entities which we assume under a general word or term. According to him, misconceptions arise when we tend to look for something 'common' to all the entities which we then associate with a general term indicating quality or property. Taking note of this insight of Wittgenstein, we note that our propensity for generalization is what buttresses the mode of inference in the human evolution theory.*

*Wittgenstein in de Blue Books zegt dat we naar generaliteit streven in verband met onze neiging om iets te zoeken dat gemeenschappelijk is voor alle entiteiten die we veronderstellen onder een algemeen woord of term. Volgens hem ontstaan er misverstanden wanneer we de neiging hebben om te zoeken naar iets "gemeenschappelijk" voor alle entiteiten die we dan associëren met een algemene term die kwaliteit of eigendom aangeeft. We nemen nota van dit inzicht van Wittgenstein. We merken op dat onze neiging tot generalisatie de manier van gevolgtrekking in de menselijke evolutietheorie versterkt.*

*Wittgenstein in den Blue Books spricht von unserem Streben nach Allgemeinheit im Zusammenhang mit unserer Neigung, nach etwas zu suchen, das allen Entitäten gemein ist, die wir unter einem allgemeinen Wort oder Begriff annehmen. Seiner Ansicht nach entstehen Missverständnisse, wenn wir dazu neigen, nach etwas zu suchen, das allen Einheiten "gemeinsam" ist, die wir dann mit einem allgemeinen Begriff assoziieren, der Qualität oder Eigentum angibt. Unter Berücksichtigung dieses Erkenntnis Wittgensteins stellen wir fest, dass unsere Neigung zur Verallgemeinerung die Art der Inferenz in der Theorie der menschlichen Evolution untermauert.*

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## INTRODUCTION

“*The world is made up of facts...*,” claimed Ludwig Wittgenstein in the *Tractatus Logico-Philosophicus*. We know this is true, so among the facts in the world, of the world, must be facts that could lead to our knowledge about the origin of man. From the facts he assembled from his exploration of biological life, Charles Darwin wrote his famed *The Origin of Species* in 1859. He thought of a ‘primordial ancestor,’ and crafted what he supposed was the overarching theory of genealogical succession spanning all ‘animal species,’ on and on, ever earlier in ‘time.’ After all, the various texts of the world’s religions, legends, myths and folktales address this presumably human need to discover what was ‘primordial.’ For the ‘scientific’ version, Darwin gave the concept of speciation from an evolving ‘primordial ancestor’ and called it, ‘common ancestry.’ It became the pillar of the evolution theory.

### ‘FAMILY RESEMBLANCE’ AND CLADES

However, the evolution theory is showing itself to be one manifestation of what Wittgenstein calls man’s desire for generalizing. In it we are demonstrably dealing with the terms used by Wittgenstein in his concept of ‘language games,’ i.e. ‘family resemblance,’ ‘form of life,’ ‘move’ and ‘grammar.’

The term ‘family resemblance’ is used in both the notion of ‘common ancestry’ in evolution terminology and in Wittgenstein’s philosophy of language. So on one hand, ‘family resemblance’ is invoked in cladogenetic trees, and on the other hand, there is Wittgenstein’s ‘family resemblance.’ ‘Family resemblance’ is the respect in which objects resemble one another. To the realist who

talks of properties and qualities, pointed out by the term would be the resemblances between the objects that are characterized by such and such a property or quality.

There are various characteristics common to the members of a biological family: build, gait, color of eyes, eyebrows, temperament etc. Wittgenstein maintains that there is no better expression to describe these characteristics than ‘family resemblances.’ Wittgenstein, however, questions the ultimate value of resemblances of ‘properties’ or ‘qualities.’ According to him, misconceptions arise when we tend to look for something ‘common’ to all the entities which we then associate with a general term indicating quality or property.

Wittgenstein in the Blue Books speaks of our craving for generality which is generated because of our tendency to look for something in common to all the entities which we assume under a general word or term.

Misleading indeed is the notion of ‘resemblance’ when applied in describing, for example, crocodiles and lizards. They seem to us somehow to ‘resemble’ each other, or seem to ‘have resemblance,’ but evolutionary biologists do not consider them members of the same ‘family.’ That is, they are not considered to belong to a monophyletic group or clade or, in the language of phylogeny, they do not have an ‘ancestral taxon.’

Furthermore, researchers now claim that crocodiles share a more recent common ancestor with birds than with lizards. Thus, current concepts of “Reptilia” generally include birds as members of this clade. This would raise the eyebrows of the layman thinking of ‘family resemblance’ in terms of the lexical meaning of ‘resemblance.’

<sup>1</sup> Part of the forthcoming book, *It’s Not Human Evolution. It’s Quantum Physics as the Maturation of Metaphor* by the same author.





Indeed, it is because of such problems with non-monophyletic groups that modern systems of classification strive to give formal names only to groups which are monophyletic. That should lead us to reflect on the predicament of 'family resemblances' between the apes and man being taught to all children in the science subject from the elementary school levels and up. How is 'family resemblance' indicative of 'common ancestry' between the two?

That is a good question since a clade or phylogenetic tree, by definition, only depicts the branching history of common ancestry. A common ancestry is thus being presumed when building a phylogenetic tree or clade. In other words, the 'truth of' common ancestry is presumed in constructing a phylogenetic tree. In the situation of the tree (clade), the 'root' (common ancestry) is also its branches (species), which is absurd. That amounts to a hypothesis pointing to itself as proof of itself. Although such a manner of providing proof is obviously fallacious and ought not to be admissible, it is what phylogeny has been doing all along. The fact is that phylogeny merely assumes a 'common ancestor' and then diversifies it into 'species.' 'Speciation' is thus the differentiation of a 'common ancestor' whose reality is yet unproven. The species which are differentiated from the unproven 'common ancestor' are then given names in Latin, according to the practice of taxonomy in science. Every new fossil discovery will have its Latin name. Every more recent dating arising from a new fossil find or new reflection on existing data may change the dating of the 'origin' or the geologic age of the 'common ancestor' a number of hundreds of thousands or millions of years forward or backward as the case may be. But phylogeny's hypothesis of common ancestry or the premise of the existence of a common ancestor remains unproven. Phylogeny's practice of confusing

the roots of the tree with its branches remains absurd.

The phylogenetic system founded on the notion of 'common ancestry' is the most detailed and worked-out network of catering to the craving for generality which Wittgenstein warned about. It has led to the prevalent thinking that named biodiversity is evidence itself of the premise of common ancestry. With all those taxonomic names of 'species,' with the current terminology in Molecular Phylogenetics now to add credibility to those 'names,' the resulting impression is that 'common ancestry' is as good as proven. What have been brought forth, however, are merely names for the diversity of forms of life appearing throughout geological time. The names of all those 'species' do render a semblance of order and organization in the 'animal' phyla. Categorization gives a sense of relief to those who see the scientific in that kind of order, but the theory of human evolution founded on 'common ancestry' is founded on a 'common ancestry' that is unproven.

How are we safeguarded from this 'craving for generality' which occurs when we apply general terms for qualities and properties that are based on 'family resemblance,' which practice has resulted in the most undetected blindness in the history of science?

### LANGUAGE GAMES

The answer is in recognizing the legitimacy of Wittgenstein's concept of language games. The word 'game' as he applies it in the analysis of language extends the meaning and application of the word 'game.' In his concept of 'language games,' Wittgenstein affirms at one and the same time the realist claim that there is an objective justification for the application of the





word ‘game’ to games and the nominalist claim that there is no element that is common to all games.

In the realist sense, the use of the word ‘game’ is justified in that a game incurs conformity with rules. But it is also a game in the nominalist sense, i.e. every game has its own set of rules for the players to follow.

In order to have a complete picture of the role of language in directing the trajectory of the process involved in ‘believing’ and ‘thinking’ of ‘missing fossils’ that Darwin believed had to be found in order to prove his theory, we would also have to use with the concept of ‘language games’ other key concepts of Wittgenstein, i.e. ‘move’ and ‘grammar,’ which are all related. The grammar of our language games excludes those moves that are not within the realm of possible moves for a specific discourse and action dictated by that grammar.

The notion of ‘family resemblance’ initiated the discourse in the theory on human evolution. Complex taxonomic systems (phylogenetic trees) have been constructed founded on a linguistic-conceptual hybrid, i.e. the term ‘family resemblance’ mixed with the term ‘common ancestry.’ With phylogeny as (false) ‘evidence’ of common ancestry, action on finding fossils as proof of common ancestry was then propelled by the words ‘family resemblance.’

What automatically come to mind are various characteristics common to the members of a biological family, for example, skull, build, gait, features, etc. which have come into play in a discourse on human evolution.

However, in the case of the human evolution theory, the function of the word ‘resemble’ becomes trivialized as, for example, using ‘size of

cranium’ to distinguish the so-called species of the hominins, which misses out on the fact that the cranium’s central use is to house the brain, which justifies its being called ‘brain case.’

After ignoring other ‘unfossilizable’ physiological parts, the next action after finding the fossil of a skull, a mandible, or teeth is the museum ‘reconstruction’ of the “complete” form of the fossil as it is extrapolated on the model of the ‘present-day human form.’ A decision based on ‘circumstantial evidence,’ which would not be admitted in the legal courts, this is the ‘final’ action triggered by the assumption of ‘resemblance’ of the primates, particularly apes, based on fossils of the fossilizable skull. The ‘human-ness’ of, for example, the *Homo heidelbergensis* in its ‘complete form’ is thus constructed on the strength (why is it not weakness?) of the fossil of a jaw<sup>2</sup>, or the *Homo naledi*’s skull and tooth measurements<sup>3</sup>.

Projected onto the ‘complete form reconstructed’ in the museums is the supposition that the bigger the skull or cranium of the fossil hominin, the ‘nearer’ is the ‘resemblance’ of the fossil to the ‘modern’ human form.

However, the size (smaller) of the cranium (skull) of the geologically more recent *Homo naledi* contradicts the supposition that the bigger size of cranium is an indicator of nearer ancestry to man.<sup>4</sup>

That the cranium is the strongest fossil evidence of our ‘link’ to what we ourselves as ‘naming humans’ have called ‘the hominin’ is also a gross undermining of the complexity of the parts of

<sup>2</sup> The fossil of a jaw found in Mauer near Heidelberg, Germany has become known as the fossil of *Homo heidelbergensis*. <https://www2.palomar.edu/homo2>.

<sup>3</sup> Mana Dembo et al. “The evolutionary relationships and age of *Homo naledi*: An assessment using dated Bayesian phylogenetic methods.” <https://www.researchgate.net>.

<sup>4</sup> Cope’s rule, named after American paleontologist Edward Drinker Cope, postulates that population lineages tend to increase in body size over evolutionary time. <https://en.m.wikipedia.org/wi>.





the human physiological structure that defy fossilization.

### FORM OF LIFE

Aside from the use of the Wittgensteinian term 'family resemblance' in the human evolution language-game, the term 'form of life' as used in both the biological sciences and in Wittgenstein terminology has also to be examined. Language-game analysis is a specific way of looking at practices which are semiotic in character and reliant on language use. Initiated by Wittgenstein, such analyses view language use as operations governed by a set of discrete concepts.

The biological concept of 'forms of life' can be pitted against Wittgenstein's "form of life" concept. The latter is the cultural environment in which the language game occurs, and is applicable to the "*community which is bound together by science and education*" (Wittgenstein, 1969, p. 38e)<sup>5</sup>. Insofar can we consider this 'community bound together' as a fertile ground for the culture of semiotic practices.

"The culture of semiotic practices": This is the case to be looked into in the semiotic environment at the time of Darwin's publication of the *Origin of Species* in 1859, when a "*community bound together by science and education*" was eager to have an alternative to, or contrary to, the biblical explanation of the origin of man. Such a community 'developed' a kind of *sensus communis*, i.e. the spontaneous common-sense response of the entire community to a phenomenon or to phenomena.

### THE 'PICTURES' OF LANGUAGE

The *sensus communis*, however, is propagated by means of language. As pointed out by Wittgenstein, language embeds countless pictures. If we assimilate language analysis to science, gaps in knowledge may be solved. We ask: Is there perhaps an explanation that could have lain as an enduring undercurrent attending intellectual development and aesthetic expression in history?

Pursuing the answer to this question has inclined us to search for explanations instead of examining grammatical conventions, to conceptualize and construct ideal languages instead of analyzing our own, to conceive of metaphysics as some kind of a superordinate physics instead of searching for the roots of metaphysical paradoxes, which, as argued by Wittgenstein, are the result of linguistic confusion. It is the contention of later Wittgenstein that grand philosophical systems can finally be traced to linguistic confusion. The notion of a linguistically confused system can be applied to the human evolution theory. Note that the notion of zoology as 'philosophy' is implied in the title, *Philosophie Zoologique* (1809) of the phylogeny of Jean Baptiste Lamarck. Lamarck's regard of phylogeny as philosophy perhaps best concurs with Wittgenstein's characterization of philosophy; namely, that philosophy is not a theory, or a doctrine, but rather an activity. Wittgenstein saw philosophy as an activity of clarification (of thoughts), and more so, of critique (of language). So long as we can view phylogeny as a step in the clarification of thoughts and critique of language in our quest for knowledge regarding the origin of man then we are doing well.

For when we think, like Wittgenstein, that an analysis of language will help us determine the sources of our thinking and thought-orientation

<sup>5</sup> Wittgenstein, 1969. [www.signosemio.com/wittge](http://www.signosemio.com/wittge).





troubles, then can we begin with a critique of the notions of ‘family resemblances’ and ‘form of life.’ They are examples of words that do not have a single use and are being employed in the evolution theory to satisfy our desire for generalization.

When this re-orientation of thought regarding language use is added to the realization that Darwin’s evolution theory used a metaphor or simile as model, it seems the esteemed evolution theory can be traced to the ‘linguistic confusion’ that Wittgenstein was referring to. The language game involved in the use of the term ‘family resemblance’ in the evolutionary concept entails the tension between the functions of literal and figurative speech, as it was in the use of the metaphor/simile of the ‘tree.’ To begin with, it is on a ‘tree’ as a figure of speech, a metaphor/simile, that an evolutionary tree is modeled. This underscores the fact that the “tree of life” is a **metaphor**. Used as a “model and research tool,” it is, nevertheless a ‘mere’ figure of speech and would seem not to conform to the requirements of articulation of scientific knowledge.

#### ON METAPHORS AND SIMILES

Tree diagrams – phylogenies – which have made a system of ordering and organizing the diversity of biological life forms or organisms came up with ‘clades,’ ‘taxa’ and ‘species’ with reference to a ‘tree of life.’

However, as Wikipedia<sup>6</sup> states it, “The **tree of life** or **universal tree of life** is a *metaphor*, model and research tool used to explore the evolution of life and describe the relationships between organisms, both living and extinct, as described in a famous passage in Charles Darwin’s

The Origin of Species (1859).” In revisiting Darwin’s ‘Tree of Life,’ we find that Darwin referred not to a metaphor but to a figure of speech affiliated with it, i.e. the simile. He wrote:

*The affinities of all the beings of the same class have sometimes been represented by a great tree. I believe this **simile** largely speaks the truth.*<sup>7</sup> (Darwin, 1859; emphasis added)

Darwin’s reference to a tree signals an entry to the special domain of mankind – language. Confronted now with ‘figures of speech,’ we thereby go into the metaphorical-literal clash at the roots of the phrase ‘the tree of life.’ Obviously, there is here a brush at the existing controversy between literal and metaphorical expression as ‘the preferred authority’ in language.

The whole system of phylogeny is founded on a ‘figure of speech.’ In other words, ‘continuity’ of species across hundreds of thousands, millions of years is conjectured from a ‘tree’ that is a metaphor, or in Darwin’s choice of a figure of speech, a simile, in order to arrive at knowledge about, ultimately, human ‘origin.’

It seems Darwin could not do without using a figure of speech in conveying his ideas on a theory of evolution. He himself found it difficult to give, in a ‘strictly scientific’ language, a ‘scientific explanation’ for the features of his theory. This is shown, in addition to the above quotation, by the following statements where he admits having to resort to “imagined illustrations” and the “metaphorical sense” for a wished-for explication that he wanted for his ‘science’:

*“In order to make it clear how, as I believe, natural selection acts, I must beg permission to give one or two*

<sup>7</sup> Charles Darwin (1859) “Four: Natural Selection; or the Survival of the Fittest”. *On the origin of species by means of natural selection, or, The preservation of favoured races in the struggle for life* (First Edition, First Thousand ed.). London: John Murray. p. 129. In [https://en.wikipedia.org/wiki/Tree\\_of\\_life\\_biology](https://en.wikipedia.org/wiki/Tree_of_life_biology); retrieved 11 August 2018; emphasis added.

<sup>6</sup> [https://en.wikipedia.org/wiki/Tree\\_of\\_life\\_\(biology\)](https://en.wikipedia.org/wiki/Tree_of_life_(biology)).





*imaginary illustrations...*" (Origin of the Species, emphasis added)<sup>8</sup>

"I should premise that I use the term *Struggle for Existence* in a **large and metaphorical** sense..." (Ibid, emphasis added)<sup>9</sup>

The term 'phylogeny' and the Latin names in the 'tree of life' in the system of phylogeny may try to offset the 'figurativeness' of Darwin's theory and produce something more in the league of the 'exact language of science.' However, neither taxonomic Latinizing nor changing the word 'tree' to 'phylogeny' makes this tree a 'scientific model' for us to arrive at such knowledge of our 'origin.' In the first and most important place, as already mentioned, phylogeny is founded on an unproven premise of common ancestry.

The illusion of tracing the origin of man through phylogeny is rooted in deep features of our language. Wittgenstein claimed we can mostly trace 'linguistic confusion' to pictures embedded in our language. Deep and complex features of language determine our way of thinking and accommodate our approach of looking for 'scientific geologic periods, e.g. fossils of the Precambrian- Cambrian interface<sup>10</sup> and fossils of '*Homo naledi*' breaking Cope's Rule.<sup>11</sup>

The reason for the prevalent attitude may be that it is rooted in making equivalent the following notions: 'complex' with 'advanced,' 'simple' with 'not advanced,' and 'not advanced' as 'beginning.' Initiated by the Darwinian 'tree of life' conception, this has fostered the depiction of the human form as an 'advancement' from the form of the ape, i.e. the ape-to-man 'evolution.'

<sup>8</sup> Ibid, p. 81.

<sup>9</sup> Ibid, p. 62.

<sup>10</sup> Maoyan Zhu, 1997. Precambrian-Cambrian Trace Fossils from Eastern Yunnan: Implications for Cambrian Explosion. [https://www.researchgate.net/profile/Maoyan\\_Zhu](https://www.researchgate.net/profile/Maoyan_Zhu).

<sup>11</sup> SMStanley, 1973. An Explanation for Cope's Rule. <https://www.jstor.org/stable/2407115>.

The 'scientific' theories of the origin of man have been susceptible to such a fixity of a pre-determined mindset and its consequent action for research although they are based on a subjective (recall Husserl's dependency and correlation hypothesis) presupposition - a belief - in 'common ancestry.' The research methods consisting of 'collection of evidence' (fossils) and 'conclusions from evidence' (reconstruction of the whole form of which the fossils are parts) are glued to this **bias**.

Such a procedure goes against the scientific method's own stringent criterion of 'objectivity.' The existing 'scientific' theories of the origin of man are the outcome of a reality built by the action motivated or boosted by the notional use of words. The 'language' of phylogeny, on closer analysis, is really simply a categorization based on 'family resemblance' in extended application through the use of the words 'ancestral taxon.' The word 'taxon' is itself a morpheme of 'taxonomy,' revealing the *Teufelskreis* of names substituting for true evidence of 'common ancestry.'

The later Wittgenstein recommended a thorough analysis of language to determine the sources of problems of a notional nature. In the way Wittgenstein looks at different methods of analysis as different therapies with a view to liberating the philosopher from what he calls 'deep and pervasive puzzlement,' the thinker on the origin of man has to turn to different methods to relieve him/herself from puzzlement. According to Later Wittgenstein, problems, i.e. philosophical ones, do not have a solution like mathematical questions do. That particular thought of Wittgenstein is a plus for quantum physics, since it makes us aware that this discipline offers a picture of reality based on the empirical answer (verification) to a mathematical question, e.g. "Is the 'top quark' real?" - a question posed by a prediction in the form of a mathematical equation, which is then





corroborated by direct empirical evidence as ‘answer.’

Wittgenstein avers that there is no single use of words as tools. When one speaks of ‘use,’ one may think of rules which are employed in language, not only by the language users educated in the language but also the native speakers at even the basolect level. That is, by observing what other people do, one knows that people who speak the language will use it in certain, idiomatic ways.

A central theme of Wittgenstein’s Investigations rests on the concept of meaning. Wittgenstein asserts that to use the same word is not meant to have the same meaning. That is quite clear with the word ‘quark.’ It means differently in *Finnegans Wake* and in Physics. Another word is ‘flavour’; what it means in an ice cream store is different from what it means attached to a description of ‘quark’ in quantum physics. A word has a function within a context of rules, and within rules of contextualization.

#### THE MOVE OR GRAMMAR: ‘FORM OF LIFE’ AS SOCIAL OR CULTURAL BEHAVIOR

Wittgenstein uses the word **move** as one of the concepts included in the actual language game. According to him, most of the rules of the language game are not learned explicitly, but are discovered *a posteriori* by examining the moves: “*I do not explicitly learn the propositions that stand fast for me. I can discover them like the axis around which a body rotates. This axis is not fixed in the sense that anything holds it fast, but the movement around it determines its immobility*” (Wittgenstein, 1969, p. 22e)<sup>12</sup>. If ‘immobility’ is taken as defined in Wittgenstein’s statement, we can say that physics has moved from Democritus’ concept of the atom to

quantum physics’ ‘granularity,’ without denying the conceptual origin in Democritus, although Democritus’ concept of the indivisibility of the atom is ‘outdated’ and superseded.

Within a language game, the word may become the stimulus to an action. That action which is established is thus said to be belonging to a group and which has a common meaning shared in by the members of that group. To Wittgenstein, that action is a **form of life**. It covers all social or cultural behavior in so far as it is meaningful. It should be added that what Wittgenstein calls ‘forms of life’ are what social philosophers call social facts or “institutional facts.”

The search for fossils to ‘fill the gap’ and ‘complete the fossil record’ to establish the affinity of man to ape falls within the category of ‘action’ stimulated by the words ‘family resemblance’ as applied to biological parts or forms capable of fossilization – an action combined or mixed with the ‘move’ to act on Darwin’s words, “incomplete fossil/geological record.” To think of a language is to think of a **form of life**. That is, we must take into account what people are, what they want, and do. Such a ‘form of life’ is to be noted in the case of the ‘family resemblance’ theory of man and ape, from the hominin fossil-hunter’s action – in research and manipulation of projection for ‘complete forms’ for the purposes of museum displays. Comparing ‘Form of life’ and ‘language game’ as Wittgensteinian terms, J. F. M. Hunter (1968) says: “*A form of life is the same as a language game and calling a language game a form of life is saying that it is something formalized or standardized in our life.*”<sup>13</sup>

‘Moves’ are directly related to the rules of the language game. Wittgenstein’s theory of language games fits in a semiotic discussion.

<sup>12</sup> Wittgenstein, 1969. [www.signosemio.com/wittge](http://www.signosemio.com/wittge).

<sup>13</sup> J.M. Hunter, 1968. Wittgenstein on Language and Games. *Philosophy* vol. 55, no. 213 (Jul., 1980), pp. 293-302.







Indeed, any interaction with signs, production of signs, or attribution of meaning owes its existence to its status as a move in a language game. A Wittgensteinian **move** is **grammar** in the Wittgensteinian sense. The grammar of our language games excludes the moves that are not within the realm of possible moves for discourse and action dictated by the grammar. The said grammar, however, can be described as a 'move' because it is made up of the concepts of intention, goal, agent, motive, cause, etc., which all imply a trajectory or direction. As such a move, it is grammar discovered *a posteriori*. It is a conceptual architecture, a grammar that can be uncovered.

#### THE NARRATIVE SEQUENCE IN THE "MISSING FOSSILS" DISCOURSE

In order to have a complete picture of the role of language in the evolution theory, we would also have to use the Wittgensteinian sense of 'move' and 'grammar,' this along with his caveat in our using the notion of 'family resemblance,' since the terms are all related in his theory of the games which we play with language.

The statement of Darwin regarding the need to find the 'missing link' in order to 'complete the geological record' is a narrative utterance which is a move in a language game. It is an action game. An analysis of it must try to reveal the concepts that constitute its grammar.

The grammar of the language game of 'reading fossils' makes it possible to see a particular fossil as a move in a discourse in evolution, which then allows us to imagine the fossil world that this discourse represents. The grammar of the interpretation of the fossil of a *hominin* is what makes it possible to see a piece of a jawbone, a skull, as a **sign**.

Identifying a sign is thus a move in the language game that will lead to the interpretation of the sign within the framework of the evolution theory's language game. The sign can then be read as an evidence of agreement with the 'discovery of the missing link.' From this standpoint, the entire theory of human evolution can be seen as an enormous undertaking in which the **move** and the **grammar** of Darwinism are revealed.

An example of an analysis of the grammar of language games is Aristotle's "Poetics," which is an attempt to analyze the grammar of the language games of the tragedy and the epic. This analysis has been formulated in terms of the canonical narrative schema (CNS) consisting of the following elements: manipulation, competence, performance, sanction or contingency, and initiating and completing the action. In Darwin's work, the narrative sequence (and the chronological sequence) is a formulation of the grammar of Darwinian narrative according to the mentioned narrative schema. These would be seen as elements in the grammar of the language game of representing action spurred by the words, 'family resemblance' and 'common ancestry.'

Using the CNS we can organize the elements of the action involved here into a structure consisting of five components: the action component itself which can be broken down into two components, competence, which results from the factors that are required in order to accomplish the action (wanting-to-do, having-to-do, knowing-how-to-do, and being-able-to-do); and performance, the actual realization of the action, made possible by the acquisition of competence. Manipulation is the component that deals specifically with wanting-to-do and having-to-do. The last component, sanction, has to do with evaluating whether the action was truly realized, and the corresponding retribution





(reward or punishment) that the performing subject has incurred.

Here is the action on the CNS of the evolution language game:

1. manipulation (having-to-do): Darwin states that 'missing fossils' have to be found to validate his evolution theory; this has led to the subsequent search for the 'missing fossils';
2. performance: fossil finders submit discovered fossils;
3. competence (knowing-how-to-do and being-able-to-do): the researchers establish model/s, taxonomy (e.g. phylogeny), and technology (e.g. of current molecular phylogenetics);
4. sanction: evaluating whether the action was truly realized as cultural and social behaviour in the Wittgensteinian sense;
5. reward (positive retribution): the finders are then granted their 'reward' as their discovery of a lower jaw (mandible), a tooth, a skull, from a 'partial' or 'initial' work is 'completed' as extrapolation is done on the assumed 'whole physical form' of the hominin or 'pre-human' form according to the model of the human form or 'homo sapiens' accepted in the scientific society.

## CONCLUSION

The language game of the evolution theory is a battle of reasoned intelligence against the bewitchment of fossils and the speculative properties of descriptive language to 'project' the meaning of such fossils as signs in a semiotic network. The job of the kind of linguistic analysis initiated by Wittgenstein is to liberate us from the manipulations of 'natural language,' i.e. the linguistic confusion arising from misuse of language in manipulated application to pseudo-scientific 'facts' such as generalizations based on speculative premises like the 'family resemblance' between skulls of fossils and the skulls of modern apes, monkeys and humans,

and propping up the assumption of a 'common ancestry' by giving the fossils Latin names and submitting them to sophisticated, 'modern' technology. That is just like attributing 'common ancestry' to Leonardo da Vinci's 15<sup>th</sup> century visionary sketches of an airplane and the 21<sup>st</sup> commercial jet planes. The 'continuity' is not of an 'ancestor' to its 'species.' It is the **idea** or **concept** of man being borne on air on a 'flying vehicle' that is common to Leonardo's and to the Wright brothers' airplane, to history's first navigable airplane, the commercial airplanes of the 21<sup>st</sup> century, and all those contraptions that have brought astronauts to the moon and the like.

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