

A Davidsonian Truth-theoretic Semantics Treatment of an EkeGusii Proverb

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Abstract: The paper examines some doctrines of the Davidsonian Programme of truth conditional Semantics that relates truth to meaning using Tarski's T-Convention, in relation to its efficacy in a semantic valuation of the EkeGusii proverb: *Nda 'indongi ereta morogi ereta moibi* which exemplifies a kind of complex sentence that a given system of Semantics is meant to account for. The coverage of Davidsonian truth-conditional notion of T-convention and that of compositionality are considered to have only a partial reach in accounting for the meaning of the proverb by not incorporating pragmatic aspects. The failure of T-convention is not alleviated by the adoption of radical interpretation as posited by Davidson but is extended to consider aspects of pragmatic enrichment and dynamic Semantics.

Keywords: truth-conditions, pragmatics, axiomatic truth-conditional semantics, compositionality, radical interpretation

1. Introduction

One of the pursuits in Semantics has been to construe a formal representation of meaning in relation to some theory's internal notion on how form is paired with meaning. How is the form-meaning relation formalized? That depends on whether one assumes a formalist (Structuralist) or functionalist approach, a compositional or non-compositional approach, and a constructionist or non-constructionist approach. The form-meaning relation sometimes is unpacked by proposing a kind of meta-language that indicates what the form of a

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syntactic form is that is mapped to a semantic representation. This can be realized by using some mathematical formula (or Logic) in which the primary carriers of meanings are logical operators or proof systems.

There have been attempts to use mathematical models to analyse the form-meaning relation. Such are given in Model-Theoretic Semantics (MTS) which was first implemented in the work of Tarski (1935) in analysis of truth, and succeeded by Montague (see Thomasson, 1974) involving relative truth-conditions. Another attempt includes Davidson (2001) involving absolute truth conditions. Currently there has been a bid to develop an alternative Semantics based on proof, which is Proof-theoretical Semantics (PTS) (Francez, 2015). In this study we will not delve any further into proof theoretic systems. Most of the former theories are realistic (consider truth as a constraint) whereas the latter are non-realistic as most constructionist grammars.

Compositional semantic systems consider semantic objects to be compositional. The Principle of Compositionality, considered to have been introduced by Frege (1884), states that the meaning of a complex linguistic expression is determined by the meaning of its component words, and the structural relations that ensue between the words. The basic assumption in compositional Semantics is that there is a homomorphism^① (a one-to-one mapping) from form (Syntax) to function (Semantics). However, several studies have been carried out on the limits of compositionality in accounting for meaning in language within the model-theoretic programme: they suggest that compositionality is limited in accounting for meaning in copular expressions, in belief sentences, in quotations, in idioms and in ambiguous constructions. There have been attempts to incorporate some pragmatic functions in the accounting of meaning (Pelletier, 1994; Maienborn, 2005; Potts, 2007; Nunberg, Sag & Wasow, 1994; Pagin & Westerståhl, 2010). Just to give a particular note, Westerståhl (1998) pursues a bid to give an algebraic formulation of the notion of context (pragmatic enrichment) in the formal structuring of a proposition.

Constructional Grammars (Goldberg, 1995, 2013) are basically interested in the analysis of constructions which in the Generativist tradition are considered epiphenomenal. Constructions are considered to be compositional but have many related senses as opposed to an abstract one. A construction may be composed of many constructions that have senses that have “inheritance links” with an independent constructional meaning. Hence lexical meaning is related and to some degree dissociated from sentence level meaning. Further, constructionists try to deal with this problem by considering the pragmatics. However, constructionists do not have a clear distinction between Semantics and Pragmatics as per

^① The homomorphisms between Syntax and Semantics are not necessarily full but can also be partial as argued in Mecha (2017).

Leclercq (2021). In this work we consider a proverb to be a construction but do not attempt to carry out a constructional analysis.

The Davidsonian Programme is a species of the realistic kind of semantic representation of meaning. The use of truth in Semantics is endorsed in the Davidsonian programme of axiomatized truth-conditional Semantics (Davidson, 2001; Lepore & Ludwig, 2007). Truth assignment in a realistic account of Semantics is done in two ways: one can ascribe truth to either a sentence, which is considered a referential based truth-conditional ascription, or to its meaning (or the meta-representation), and the latter is the kind that a Davidsonian approach is meant to fall under. Davidson appropriates the Tarskian T-Convention (Davidson, 2001[1967, 1973a]) and compositionality (Davidson, 2001[1965]) as the main constraints for proffering a Semantics of any human language that is learnable^①. The focus is primarily on how the Semantics of sentences is given to the exclusion of its pragmatics.

This study investigates the viability of compositionality in accounting for meaning in proverbs. One other interesting posit of the axiomatic truth-theoretic Semantics in this paper is that the truth of a construction can be construed in Semantics from the perspective of a radical interpreter (Davidson, 2001[1973b]). The reaction to the latter proposal in this paper is that a radical believer is in a way only acquainted with the beliefs of a speaker if their beliefs are shared to some degree. Whenever one uses a proverb, they seem convinced that its utterance circumscribes some truth. Proverbs are synonymous with wise sayings. Hence in a common-sensical perspective, they package some wisdom^②. The individual who decodes this wisdom is by extension wise too. These statements are understood by the interlocutors (agents), and are considered to be meaningful as such. Does that imply that they express some eternal truth? We consider the possible meanings of such constructions to therefore be subject to conditions that are theorized in truth-theoretical Semantics to some degree.

Davidson hints that a good semantic theory should give a system that covers the entire sets of sentences in a given language, and this has been done for sentences which are common in speech, but proverbs are not considered to be mainstream constructions despite their primacy in communication contexts in every known human language. This study utilizes one of EkeGusii proverbs given in (1) below with the aim of testing the viability of a contextualized axiomatic truth-conditional Semantics proposed in the Davidsonian programme.

^① The idea that human languages are learnable is controversial. The arguments posited in Generative Linguistics indicate that language is not learnable, it is essentially acquired in the early years of an infant (using the Poverty of Stimulus argument).

^② This popular view of proverbs as encoding wisdom is posited in Ogechi (2006) in deference to social wisdom. It is problematic to accord such a credential to socially conventionalized statements without due tests of rationality and truth.

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(1) <i>Nda</i>	<i>'indongi</i>	<i>e-ret-a</i>	<i>mo-rogi</i>	<i>e-ret-a</i>
Womb	is pot-pourri	NC9SG-bring-FV	NC1SG-witch	NC9SG-bring-FV
<i>mo-ibi.</i>				
NC1SG-thief				

'The womb is a pot-pourri it brings forth a witch it brings forth a thief.'

The proverb will be used to demonstrate the extent to which a truth theory may be used to derive T-Sentences for paremiological tokens (proverbs and sayings) in the EkeGusii Language which can be extended to other languages. Davidson (2001) collects some of the works in which the programme is set out and, most of the postulations adopted in this paper have been formalized in Lepore and Ludwig (2007). This paper extends the Semantics by adopting a richer form of indirect compositionality that considers not only the externalized form of the proverb but its entire derivational history as stipulated in current Minimalist Program accounts (Chomsky, 1995).

The paper starts by outlining Davidson's program, provides a Davidsonian account of the EkeGusii proverb under study, and later discusses compositionality as expounded in Davidsonian Semantics. Section 4 provides an analysis of the Logical form in Davidsonian Semantics and Model Theoretical Semantics, while section 5 discusses Radical Interpretation and section 6 elaborates the integration of pragmatic aspects into the Davidsonian program.

2. Davidson's program

The Davidsonian program is pegged on the notions of truth, meaning (Davidson, 1967), and radical interpretation (Davidson, 1973) in the development of a truth-theoretical Semantics for natural language (Lepore & Ludvig, 2007). Further, the Davidsonian truth-conditional Semantics assumes a structural view of truth that consists of three things: logical form, iterative structure and compositional structure. In this section we give a brief overview of these notions that will serve as the theoretical framework for analysing the test item in (1) above.

The search for an efficacious way of linking truth and meaning is still challenging. The concepts of truth and meaning are ambiguous and divergent in a number of ways and can only be construed in a manner limited to the given theoretical assumptions held. The Davidsonian approach typically consists of a species of a correspondence theory of truth (though this is not the theory that he sticks to through his philosophical career) which eschews the assignment of truth to sentences and prefers its assignment to meanings. Davidson has not espoused a single theory of truth-conditional Semantics. He began with a correspondence-based notion of truth (Tarski, 1935, 1944) whose roots are in the classical Aristotelian conception of truth. In Aristotle's *Metaphysics* it is put that: "*To say of what is*

that it is not, or of what is not that it is, is false, while to say of what is that it is, or of what is not that it is not, is true." This definition is adapted into modern philosophical terminology to be: "The truth of a sentence consists in its agreement with (or correspondence to) reality." (For a theory of truth which is to be based upon the latter formulation the term "correspondence theory" has been suggested.) That forms the basis for realism. The rendition of the syllogism in Aristotle's work finds resonance with the inferential or deductive systems devolved in Gentzen's sequent calculus and Prawitz's natural deduction.

Davidson's notion of truth is appropriated from Tarski's work in a bid to provide a theory of meaning. Davidson interprets Tarski's works in the paper *Truth and Meaning* (Davidson, 1967). The theory of meaning which Davidson proposes is a variety of the correspondence theory of truth which conflates Quine's (1953) theories of meaning and reference to the latter, which he considers to be entirely a "Tarski-type truth" (Davidson, 1967:310). The intensional phrase "means that" in "*s* means that *p*" is substituted with an extensional predicate and connective "*s* is T iff *p*" as in the example "'*Snow is white*' is True iff *Snow is White*" also referred to as a T-sentence (or T-Convention) in the literature. This study examines the usage of this mode of translation in the analysis of a proverb.

2.1 A Davidsonian account of the EkeGusii proverb

The assignment of truth in the Davidsonian programme is an attempt to give meanings that are translated into a meta-language. The application of the T-component is only determined after the given sentence has been translated into a function of its meaning in a regimented formal language. Davidson thus envisages a system in which a sentence has to be reduced to some logical form, in which the words are compositionally assigned intensions which are deleted in the surface, once the meaning of the sentence has been determined. Tarskian Truth is then applied to the meanings (the translations of sentences) and not to the sentences produced by the speakers. The work of an analyst is to replace "*s*" and "*p*" with "*s* is true iff *p*".

The basis for truth assignment for the proverb is the T-sentence given in (2) below.

(2) "*Nda 'indongi ereta morogi ereta moibi*" is true iff *Nda 'indongi ereta morogi ereta moibi*.

"A womb is a pot-pourri it brings forth a witch it brings forth a thief" is true iff a womb is a pot-pourri that brings forth a witch and brings forth a thief.

Davidson stipulates that "a true statement is a statement true to the facts". Can the proverb studied in this paper be considered to be true to fact as stipulated by Davidson? The creation of proverbs, as far as we are concerned, is a phenomenal issue rather than a factual issue (as we are going to see in the ensuing discussion). Facts are necessarily and aprioristically true, whereas proverbs are contingently and aposterioristically true. Facts are considered to be eternal truths but the proverbs are dependent on probabilistic proof as and

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when a given human action (due to folly) coincides with the givens of the proverb. As per the T-sentence given in (2) above, it is only true that some births can result in some people becoming witches or thieves as given by the proverb only if it so happens in the world and is established *a posteriori* that it is the case. Maybe, this could be a pursuit that will interest some forensic scientists interested in discovering the gene that turns some individuals to akratic behaviour (being thieves and the like). If the sciences we know of were ever to look that way, then we would consider the correspondence between the truthfulness of the proverb under examination with scientific facts. Further, this raises a familiar problem in the philosophy of language in which the meaning we accord to sentences has to rely on some expert providing us some deferential concepts^①: we have to wait till we learn that water is H₂O from some chemist for us to determine the meaning of the lexeme *water*. The recourse to deferential concepts complicates the search for truth for a Davidsonian by virtue of the interpreter (more so a radical interpreter) not being in possession of the concepts even after he has learnt of them. The objection to the application of deferential concepts is raised by Putnam (1975 in Callaway (1988)) who points out that a T-sentence such as is given below has no way of giving us the meaning of a word such as *water*.

“*water*” is true of *x* iff *x* is H₂O.

Hence, we cannot accord the sentence meaning using T-sentences by adducing any scientific facts such as water being H₂O. We have to rely on the knowledge of a speaker who simply knows that:

“*Water*” is true of *x* iff *x* is water.

2.2 Interpretation for “*Nda ’indongi ereta morogi ereta moibi*”

From the proverb *Nda ’indongi ereta morogi ereta moibi*, it is believed that the womb brings forth every sort of person. It does not bring forth only good people, nor does it bring forth only bad people; it does not know how to discriminate. The Gusii believe that all children who are conceived by their mothers are perfect but in the process of growth, they get to change their behaviors and personalities and so become either good or bad. As a result, the Gusii treat all people without disregard, despise or discrimination.

In order to interpret this proverb, one needs to know what the AbaGusii believe, which is the reason as to why they hold this proverb to be true. By understanding this, then we can infer the meaning of the proverb. The AbaGusii believe in living in harmony with one another. They believe in respecting life and giving equal opportunities to members of the community whether they are good or bad. It is this belief that makes the AbaGusii hold this proverb to be true. This is seen to be a factor that AbaGusii elders refer to when handling

^① Deferential concepts are rejected in the assignment of content to terms in the literature in the works of Fodor, and are discredited by meaning externalists like Putnam (1975).

various issues and conflicts in the society. The truth they hold in this proverb emanates from their belief that all people are equal since they are all born of women; they come from the womb. The social attitudes, beliefs in this case, that form the background satisfaction conditions are difficult to factor into the assignment of the T-sentences though. These are intrinsic properties, whereas the Davidsonian system relies on the link between the external world and meaning, because he was an externalist, in relation to meaning.

That this proverb contains a set of linguistic expressions which do not contribute to its truth-conditions is one of the main problems of adopting such an approach entirely. The proverb is supported by false predicates, elliptic or reduced (pronominal) terms. The analysis has to activate invisible sentential elements in order to assign semantic value to the said aspects of meaning.

The elliptical referents, such as the deleted copies of the term *enda* ‘womb’ in the construction, cannot contribute to the meaning of the proverb since the theory provided by Davidson does not provide for how the language binds empty variables. Consider (3) below.

- (3) *Nda* $\left\{ \begin{array}{l} \text{niigo enga} \\ \text{niigo ere buna} \end{array} \right\}$ 'indongi, [~~nda~~] ereta morogi, [~~nda~~] ereta moibi.
 The womb $\left\{ \begin{array}{l} \text{is like to} \\ \text{is similar to} \end{array} \right\}$ a pot-pourri, [~~the womb~~] it brings a witch, [~~the womb~~] it brings a thief.
 ‘The womb $\left\{ \begin{array}{l} \text{is like to} \\ \text{is similar to} \end{array} \right\}$ a pot-pourri, it churns out witches, it churns out thieves.’

If one assumes a syntactic view of the construction then there is much that depends on the structure of the proverb in the construction of its meaning. The notion in Syntax is that if something is not expressed in the sentence then it does not exist. However, in the pragmatics of the construction, much of what the speakers and hearers make of the sentence extends beyond what is said by the words. The interlocutors extend the sense of the construction beyond its compositional meaning.

The first verbal complex in the complex clause is elided for purposes of ease of articulation and the only overt phone is interpreted as an enclitic of the complement.

- (4) [_{FOC} ni- [_{PTL} -igo [_{AgRP} e- [_{SG} e- [_{AUX} -re [_v buna...]]]]]]

This is done so because of the poetic license accorded the maker of proverbs. The construction suffers due to the excluded elements because the meaning is preserved despite the sentence being ill-formed syntactically.

In the contexts in which the terms are elided, the subject agreement morpheme is expanded to accommodate the pronominal function; hence the verb *ereta* can be labelled as shown below.

- (5) [_{TP} [_{S_{AgRP}} e [_{SG} e [_{Nom} e [_v reta...]]]]]

The pronominal slot is realized by a null agreement morpheme which is interpreted in the semantic component (C-I interface) but is not externalized by the articulatory percep-

tual interface.

3. Compositionality in Davidsonian Semantics

The theory of meaning proposed by Davidson is compositional because it aims at showing “how meanings of sentences depend on the meanings of words” in order to arrive at the meaning of every sentence in a given language. His aim is to show how the meanings of words compositionally yield the meaning of sentences. In the treatment of compositionality, a Davidsonian is limited to considerations of reference and satisfaction.

The determination of meaning as per Davidson should conform to the Fregean Principle (The Principle of compositionality), which requires that in giving the meaning of a complex construction one has to consider how the parts and the syntactic structure contribute to the meaning of the sentence. However, there is no single view on how the relation between Syntax and Semantics, the pairing of sound and meaning, should be implemented due to the various divergent views in the literature. In the paper *Semantics for Natural Languages*, Davidson (1970) proposes that Syntax should inform the Semantics and be of the Chomskyan variety of Generative Grammar. The notion of compositionality in the Chomskyan Generative brand of linguistics was frowned on till his recent attempts to develop the Minimalist program (Chomsky, 1995). The notion of compositionality was not held in any regard by Chomsky in his earlier theorizing and the syntactic theory in the Generative Enterprise has evolved to the extent that in the current species of the Minimalist Programme it is posited that phrases are not only compositional in the narrow Syntax but are inherently so. This was in lieu of the fact that he considered Syntax to be autonomous. The evidence adduced is as in the sentences such as (6) below.

(6) *Colorless green ideas sleep furiously.*

The assumption that the logical form (LF) either mediates or diverges from the phonology and syntactic description of a given clause is pursued by some generativist analyses, however in Kobele (2006) we have a case in which a directly compositional Semantics is adopted. As far as Chomsky is concerned, the object created by Syntax is semantic and any formal Semantics system is a species of Syntax (Chomsky, 2013).

Jacobson (2000) is one of the main proponents of direct compositionality who holds that there is a one-to-one relationship between Semantics and Syntax. This is considered so because the Syntax builds the elements that the semantic assigns value. The notion of compositionality adopted for implementation relies on whether the proof-theoretic mechanisms meet the standard of the principles of compositionality, that is, if the structural rules and the connectives utilized, meet the methodological rigour compositionality calls for. In order to understand the proverb in (1) above, we have to accept the fact that language is compositional and holistic; sentences are based on the meanings of words, but

the meaning of a word depends on the totality of sentences in which it appears. This holistic constraint, along with the requirement that the theory of truth is law-like, suffices to minimize indeterminacy just enough for successful communication to occur as per the literature. This is not the case in a Chomskyan approach. The system used in Davidsonian Semantics and any direct composition approach appropriates the notion of compositionality as ensuing from the form that is the output of the articulatory-perceptual interface. The proverb we are considering cannot fully be accorded its Semantics by overlooking the derivational history of the construction. This is because the output that is externalized and memorized in formulaic form is highly impoverished. The failure to address the asymmetry between phonetic form (the A-P interface) and Logical Form (C-I) interface is the main loophole in direct-compositionality theories.

4. Logical form in Davidsonian semantics and model theoretic semantics

The Davidsonian approach to meaning is characterized by Francez (2015) as being in line with the model theoretic tradition given that he follows the Fregean Principle of compositionality, which subsumes the word as a primitive for meaning assignment. In order to assign Truth to a sentence, to a given construction in a given language, Davidson proposes a number of avenues that avoid some of the problems he noted in earlier models. In the Davidsonian Programme the notion of logical form is proposed:

What should we ask of an adequate account of the logical form of a sentence? I would say, such an account must lead us to see the semantic character of the sentence “its truth and falsity” as owed to how it is composed, by a finite number of applications of a finite number of devices that suffice for the language as a whole, out of elements drawn from a finite stock (the vocabulary) that suffice for the language as a whole. To see a sentence in this light is to see it in the light of a theory for its language. A way to provide such a theory is by recursively characterizing a truth predicate, along the lines suggested by Tarski (Davidson, 1968).

As per the quote above, the logical form is a word level element, and is then extended to the sentential level. In order to determine the satisfaction conditions of a given language's construction one has to determine the T-sentence recursively defined from the parts of the sentence to be interpreted. The structure of meaning is considered to be dependent on the Syntax of the sentence under consideration.

In the Generative tradition, Logical Form is construed not to be directly homomorphic to the Grammatical form (or Phonetic Form). This has been pursued, under the guidance that the semantic component is an autonomous module from the syntactic component, hence both are subject to constraints that result in some disturbing mismatches. The structural ambiguities that arise depend on how a given sentence is bracketed as shown in (7) below.

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- (7) a. [*Nda 'indongi,*] [ereta morogi ereta moibi.]
 [Womb is pot-pourri,] [it brings a witch it brings a thief.]
 ‘The womb is a pot-pourri, it simultaneously churns out witches and thieves.’
- b. [*Nda 'indongi,*] [ereta morogi] [ereta moibi.]
 [Womb is pot-pourri,] [it brings a witch] [it brings a thief.]
 ‘The womb is a pot-pourri, sometimes it churns out witches sometimes it churns out thieves.’

The sentences in (7) have an infinite number of possible propositions (content) and the limitation of surface Syntax is not sufficient to accord the possible readings required in communication situations. The notion of how Syntax relates to Meaning in Chomsky (1982), which is the early period of Principles and Parameters (or Government and Binding) that is around the same time Davidson is propounding the T-Convention system, is not the same as that given in Davidson’s work.

4.1 Davidson and a Minimalist Logical Form

In this section we give the Logical Form of “*Nda 'indongi ereta morogi ereta moibi*” as proposed in some essays in Davidson (1968) that are given under the label *Truth and Meaning*. In Section 4.2 the compositional combinatorics considered in Davidson's work is provided.

4.2 Davidsonian decomposition and propositions

The mode of analysis used in Davidsonian Semantics assumes the notion of a proposition. A complex sentence is decomposed into its constituent propositions in the course of determining the truth-conditions. The proverb “*Nda 'indongi ereta morogi ereta moibi*” is a complex sentence that is a product of the rhetorical astuteness of mature native speakers who can infer meaning from elliptical expressions. It consists of four propositions as given in (8) below.

- (8) a. *Nda 'indongi ereta morogi ereta moibi.*
 Womb is pot-pourri it brings a witch it brings a thief
 ‘The womb is a pot-pourri, it churns out witches, it churns out thieves.’
- b. *Nda 'indongi ereta morogi.*
 Womb is pot-pourri it brings a witch
 ‘The womb is a pot-pourri, it churns out witches.’
- c. *Nda 'indongi ereta moibi.*
 Womb is pot-pourri it brings a thief
 ‘The womb is a pot-pourri, it churns out thieves.’
- d. *Nda 'indongi.*
 Womb is pot-pourri
 ‘The womb is a pot-pourri.’

In (8b-d) we have decompositions of the proverb “*Nda 'indongi ereta morogi ereta*

moibi". The decomposition of the proverb in this manner as provided for by Davidson does give us one of the attested atomic propositions in (8d) above, which is a kind of "is a" claim. The clause can be reduced to the proposition given in (9) below.

- (9) "*nda* 'womb'" represented as: $\lambda PP\{n\}$
 "'*indongi* 'is pot-pourri'" represented as: I'
 "*Nda* '*indongi* 'womb is pot-pourri'" represented as: $\lambda PP\{n\} = (I')$

Hence the womb is a pot-pourri

The proposition simply states that "*The womb is a collection of various things*". The proposition as per the Davidsonian rendering can be assigned truth conditions in the following way:

- (10) "*Nda* '*indongi*'" is true if *Nda* '*indongi*'
 The womb is a collection of various things is true if "the womb contains various things"
 (10') For all functions f , f satisfies $[s, t]$ " x *n*" *enda* 'womb' iff f satisfies $[s, t]$ " x *n*" *enda* 'womb'
 and f satisfies $[s, t]$ " x is *enda* 'womb'"
 For all functions f , f satisfies $[s, t]$ " x '*indongi*'" iff f satisfies $[s, t]$ " x '*indongi*'" and f satisfies
 $[s, t]$ " x is '*indongi* 'pot-pourri'"

As per the propositions in (10) and (10') the womb is a womb if and only if it satisfies the description given for a womb; it has the ability to carry a foetus and churn a baby. Moreover, a pot-pourri is a pot-pourri if and only if it satisfies the description for a pot-pourri; it contains a mixture of various things. The entailment is not a sufficient interpretation of the folk epistemic states that are part of the meaning of the proverb. The belief that the good attributes of persons are determined right from the time of their conception is implied by the proverb. They are deeply ingrained in ones' "blood" which in scientific terms, is a matter of genetics. That level of naturalistic intuition cannot be accorded to a person whose inferences to reality are "naively" ascribed.

4.3 Recursion

The meaning of the proverb accrues from the meaning of the words used in it. However, it also should be understood that the meaning of every word that is used in the proverb depends on the totality of the proverb in which the words appear. Each word in this proverb has its own meaning but the meaning of that word is dependent on all the other words that are used in the proverb: *Nda* '*indongi* *ereta* *morogi* *ereta* *moibi*'. A close examination of the words indicates that they cannot be a reliable source of the kind of meanings that native speakers accord the proverb. The arguments in the sentence are indefinite and result in rendering the meaning of the proverb indeterminate. The indefinite aspects of the proverb are considered in section 4.4 below.

4.4 Terms in the proverb and indefiniteness

The research on the terms, in the subject and predicate positions, have been further

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distinguished in relation to the notion of number (singular, plural) which are given distinct analyses, whether they are definite or not; if plural, whether they are distributive or collective. The number of semantic distinctions has led to the weakening of the arguments for giving a purely quantificational account of terms.

The tendency of using terms which do not have an augment in proverbs, beside the one under consideration, which in EkeGusii is preponderant. Consider the examples given in (11) below.

- (11) a. *Nyama nke ya-koora bo-kima kee.*
 Meat Little PRES-finish PL-porridge dish
 ‘A little meat clears a dish of porridge.’
- b. *Mo-minchori imi taa-nga mo-sera ibu.*
 NC1SG-passer dew NEG-like NC1SG-sweeper ash
 ‘The one who passes in the dew is not like the sweeper of ashes in the hearth.’
- c. *To-saner-a mo-kaa mo-mura no-ta-ra-moror-a.*
 NEG-praise-FV NC1SG-wife NC1SG-son and-NEG-MOD-see-FV
 ‘Do not praise your daughter-in-law before you see her.’

The proverb *Nda 'indongi, ereta morogi ereta moibi* is composed of three singular indefinite terms or bare noun phrases; *nda*, *morogi* and *moibi*, which can be considered to be determiner phrases. The latter two take the positions of object while the former is the subject of the clause. The three lexemes are used in the proverb without the augment (or pre-prefixes).

(12) Singular form	Plural Form	Unaugmented Form
<i>e-nda</i> ‘womb’	<i>chi-nda</i> ‘wombs’	<i>nda</i>
<i>o-mororogi</i> ‘witch’	<i>a-ba-rogi</i> ‘witches’	<i>morogi</i>
<i>o-moibi</i> ‘thief’	<i>aba-ibi</i> ‘thieves’	<i>moibi</i>

The term, *enda* ‘womb’, is rendered in the singular but in the sentence, the proverb for that matter, it is supposed to quantify over “every womb that can beget” that is excluding those that for any reason cannot do so. The word cannot be given range over those situations in which there is no ontology. The complex sentence can be given the interpretation that the womb is a vessel which carries a variety, or mixture of things, and in this case, it specifies the things as either *morogi* ‘witch’ or *moibi* ‘thief’, both of which can be assumed to be a set of bad things of which the mixture is predicated. In the interpretation, the mixture contains good things too. Though they are not given in the subsequent propositions, they are pre-supposed to be implied in the word *indongi* ‘a mixture of good and bad’.

In the literature on quantification in Bantu languages, the dropping of the pre-prefix is in most analyses associated with the notion of indefiniteness. In traditional studies of determi-

ner phrases DPs the divarication between definite and definite determiner phrases (DPs) is assumed (cf. Heim, 1982) and among logicians it is between referential and quantified expressions. Dobrovie-Sorin & Beyssaide (2012) assume an analysis that assumes a three way distinction between indefinite and definite, in which the former is further divided into quantificational and referential expressions. The indefinites are considered by Dobrovie-Sorin and Beyssaide to be neither quantificational nor referential, and this paper follows this definition.

The term *enda*, which is a mereological term for woman, has additional encyclopaedic senses tied up to the natal process and is an indefinite DP by virtue of dropping the augment which helps in the specification of the count of the entities or individuals involved. The term can be accorded a generic meaning because of being used indefinitely to quantify over a set of fertile wombs that can potentially conceive and give birth to bad people, and thus is represented with a null determiner after it, which is plural as shown in the syntactic schema in (13) below.

(13) [DP[CL_e[PL_∅[NP *nda* [DP_∅...]]]]

In the representation provided above the plural is usually interpreted as being part of the classifier which is dropped from the overt determiner phrase. The nominals are not given any overt determination marking that will enable the hearer to process the exact population that is quantified over.

The Semantics of the indefinite determiner are rendered in a number of ways depending on whether they are conceived as being “weak” or “strong” as per Milsark (1977) (Dobrovie-Sorin & Beyssaide (2012) for an overview of literature on definiteness). In strong readings of indefinites, they are rendered as existential quantifiers (Heim, 1997; Winter, 1997; Kamp, 1981), or as Skolem terms (Steedman, 2003, 2007). The weak readings come in two varieties, viz, those that analyse them as a property of denotation (van Geenhoven, 1996), or as VP-level existential closure (Diesing, 1992). The property denotation analysis is considered empirically inadequate, whereas the latter is counterintuitive because it involves syntactic lowering for VP-level existential closure to apply. The property analysis of indefinites proposed by van Geenhoven (1996), which they used in Dobrovie-Sorin & Beyssaide (2004), is rejected by Dobrovie-Sorin & Beyssaide (2012) for a new one in which they distinguish between individualized entities (e_i) and amounts (e_a). They then treat weak indefinites as generalized existential quantifiers over amounts (type $\langle\langle e_a, t \rangle, t \rangle$), while strong indefinites are analysed as either skolem terms (Steedman, 2007) or as quantifications.

Given that the subject of the complex sentence employed as a proverb under analysis, *nda* ‘womb’ is a bare singular noun phrase, it may be assumed to denote properties or sets. The problem to be sorted out in any given analysis is how it quantifies over the sets in an

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extensional analysis. The lexeme is not to be taken as being similar to a plural since in our case it is followed by a singular verbal agreement *e-*. The dropping of the pre-prefix becomes problematic in such a usage. The meaning is rendered opacious and the scope of the indefinite is ambiguous; between wide and narrow scope. This renders the proverb usable in either sense that is to refer either to atomic entities or sums unless it is fixed by context. The proverb can then be used to quantify over plural groups, that is, all fertile wombs or individuals. The former is a strong reading and is given a Skolem term (a) or quantificational (b) rendition, while the latter is a weak indefinite rendering as having existential closure (c).

- (14) a. $SK_{35} [x=enda: enda (a_e)]$
 b. $\forall x [x=enda: enda (a_e)]$
 c. $\exists x [x=enda: enda (a_i)]$

The reading in (14c) is further differentiated in relation to specificity. The speaker may refer to a specific case known only to her or him, or known to both interlocutors.

4.5 The predication and event semantics

The complex sentence (proverb in this case) has three predicates. The interpretation of predicate complements poses a major challenge in the literature on sentential level Semantics. The issues that arise in assigning value to a given predicate are closely tied to the type of verb, which may be either intensional or extensional, and the kind of complements that follow it.

The first predicate given in (15) below is constituted either by the combination of the neutral focus particle and the comparative *enga* ‘like’, or a more complex verbal with three elements as shown below.

- (15) $Nda \left\{ \begin{array}{l} niigo\ enga \\ niigo\ ere\ buna \end{array} \right\} endongi\dots$
 $Nda \left\{ \begin{array}{l} is\ like \\ is\ similar\ to \end{array} \right\} endongi\dots$
 ‘The womb is like a pot-pourri.’

The modal particle consists of a focal particle *n-* which marks the epistemic certainty of the utterer, which is ellipted in the surface for poetic reasons and is followed by a stabilizer *-igo*. The verb *enga* ‘like’ or *ere buna* ‘is like’ is comparative, and is a function that takes the properties of a womb to properties of a pot-pourri as shown in the derivation schema in (16) below.

- (16) “*Nda nigo enga/ere buna endongi*” iff $\lambda x \lambda y [\forall x (x)enga/ere\ buna <is\ like>(x, y)]$
 $(nda <womb>)(indongi <pot-pourri>): IDENT (nda = indongi)$

The verbal element in the predicate (10) above is meant to point to there being an identity relation between the subject and the subject complement. The identity requirement is too strong if it is assumed in absolute terms as $a=b$, in this case there is only a partial

identity between *nda* ‘the womb’ and *endongi* ‘pot-pourri’, in that both may contain a variety of things. Therefore, the identity is calculated not by virtue of the two entities being the same but insofar as a property *P* is in both *α* and *β*.

4.6 Quantification

Having dealt with the first proposition further entailment relations with two other sub-structural propositions should be assigned value that contributes to the final readings accorded the proverb by an interpreter. The main worry is, how does one establish the quantificational force of the complex sentence? The proverb’s scope of reference or the quantificational force is then delimited by two further predicates to the main term by according it an attribute which is a complement of the subject. The predicates are introduced by a metaphorical verb *reta* ‘bring (to the world)’. The verb *reta* ‘bring’ is used in the two predicates illustrated in (17 and 18) below.

- (17) [TP [S_{AgrP} e [S_G e [N_{om} e [v *reta* ...]]]]] *morogi*
 [TP [S_{AgrP} e [S_G e [N_{om} e [v bring ...]]]]] witch/sorcerer
- (18) [TP [S_{AgrP} e [S_G e [N_{om} e [v *reta* ...]]]]] *moibi*
 [TP [S_{AgrP} e [S_G e [N_{om} e [v *reta* ...]]]]] thief

The two predicates rule, given that they only refer to individuals who are viewed in a negative light in society, rule out the first reading of the proverb given in (19) below. The meaning is narrowed down to only refer to a set of individuals who may be considered bad in some way.

- (19) a.² *The womb begets bad and good people.*
Beget (womb, x, y) & bad (x) good (y)
- b. *The womb begets a witch and a thief.*
Beget (womb, x, y) & witch (x) thief (y)
- c. *The womb begets a witch who is a thief.*
Beget (womb, x, y) & witch (x, y) thief (x, y)
- d. *The womb begets a witch or a thief.*
Beget (womb, x, y) & witch (x) or thief (y)

The two predicates in the phrase are not quantified over by the term *enda*, but by the entire proposition “the womb is a mixture”. In the literature on Semantics, statements are considered to be ambiguous between a wide scope (*de dicto*) and a narrow scope (*de re*) reading. In order to assign a *de re* reading most semanticists assume most of the time an existential commitment, and so use an existential quantifier ($\exists!$) or an iota operator (*i*) which cannot be assigned in the case of our test paremic construction.

The strong reading of the proverb is given by quantifying over the set of mentioned entities as shown in (20a) below and the weak reading is given in (20b).

- (20) a. $\forall x: x \rightarrow \text{Enda } [e, \text{ is } (e, \text{ ndongi})] \rightarrow \text{beget } (e' \leq e \text{ beget } (e', y (m_1))) \vee \text{beget } (e'. z (m_2)) = 1 \text{ and } 0$

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otherwise. Where $y: \{y \mid y = m_1 \ \& \ m_1 \geq 1\} \ \& \ \{z \mid z = m_2 \ \& \ m_2 \geq 1\}$

b. $\exists x: x \rightarrow \text{Enda} [e, \text{is} (e, \text{ndongi})] \rightarrow \text{beget} (e' \leq e \text{ beget} (e', y (m_1))) \vee \text{beget} (e'. z (m_2)) = 1$ and 0

otherwise. Where $y: \{y \mid y = m_1 \ \& \ m_1 \geq 1\} \ \& \ \{z \mid z = m_2 \ \& \ m_2 \geq 1\}$

The analysis given above fails to quantify on actual situations in which there is an actual birth of either a witch or a thief; or both. For the proverb to quantify over actual situation, the admissibility conditions require that a Kripkean model of Semantics be adopted in the interpretation language for the EkeGusii which we may here label L_{Eke} , which consists of worlds, w , that are real, and others counterfactual, hence modalized, and constitute temporal states of affairs that interlocutors can talk of and interpret.

In order to affect the truth conditions of the clause, we require that the analysis recognizes that the clause that begins the proverb is meant to be generic. Following Carlson (21) we adopt the idea of a dyadic operator (GEN).

(21) GEN, $\lambda x [\exists x: x \rightarrow \text{enda} (e, \text{enga} (e, \text{ndongi})) \rightarrow \text{beget} (e' \leq e \text{ beget} (e', y (m_1))) \vee \text{beget} (e'. z (m_2))]$

=1 and 0 otherwise. Where $y: \{y \mid y = m_1 \ \& \ m_1 \geq 1\} \ \& \ \{z \mid z = m_2 \ \& \ m_2 \geq 1\}$

4.7 Ellipsis or anaphora: structural ambiguity in a Minimalist account

The proverb *Nda 'indongi, ereta morogi, ereta moibi* can be rendered as involving an elliptical process, which is considered a controversial form of accounting for sentential Syntax in some linguistic analyses that have stuck to a representational system of Syntax especially within the Generative tradition (Chomsky, 1982); which is currently based on a derivational system of Syntax (Chomsky, 1995, 2000). There is no great change in how the interpretation process is construed in Chomsky's work in the period spanning the work of *Aspects* (Chomsky, 1965), in which the T-model is introduced, stipulating the asymmetry between Phonetic Form (PF), and Logical Form (LF), with some significant alterations which we may not pay attention to now, the main insight that there is asymmetry between the conceptual-intentional (CI) and Sensory Motor (SM) interfaces (Chomsky, 2015). Due to the said asymmetry, the Internal merge (IM) yields forms for semantic interpretation which are inappropriate for SM interpretation, hence triggering a form of post-syntactic deletion through the operation of Minimal Computation. The sentence chosen for analysis poses filler-gap problems which are somewhat addressed in this paper.

The generativist approach can be classed under anti-realist programme, given that meaning is part of a proof-process, involving a syntactic projection of form and substance, the theory however does not take any cognisance of there being a homomorphism from syntactic projections to some form of semantic projection, because semantic labelling is subsumed in the entire process under the dictates of the Labelling Algorithm, as per the labelling theory used. In so far as Chomsky (2015:3) is concerned, compositionality, which is mainly syntactic compositionality, is a core property of language which arises from the interaction between Phrase Structure Grammar (PSG) and Transformational Grammar (TG).

In the constitution of Phase Theory (Chomsky, 2001), he hints at phases being compositional too. However, no attention is paid to semantic compositionality, a problem which is addressed by Heim & Kratzer (1998).

Let us consider the semantic issues in the proverb at hand. The lexeme *nda* is ambiguous between a reading in which it refers to the organ, *enda* ‘a womb’, and the spatial preposition, *inda* ‘in(side) the womb’. The two senses are given below.

(22) a. *Nda* 'indongi, ~~nda~~ *e_ireta morogi, ~~nda~~ e_ireta moibi.*

‘A womb is a pot-pourri, a womb brings forth a witch, a womb brings forth a thief.’

b. **Nda* 'indongi, ~~enda~~ *e_ireta morogi, ~~enda~~ e_ireta moibi.*

‘A womb is a pot pourri, the womb brings forth a witch, the womb brings forth a thief.’

c. **Nda* 'indongi, ~~inda~~ *e_ireta morogi, ~~inda~~ e_ireta moibi.*

‘Inside a womb is like a pot-pourri, womb brings forth a witch, womb brings forth a thief.’

The shift of the form of the subject from a prefix-less bare nominal, to a prefixed nominal is syntactically anomalous; hence sentence (b) and (c) crash semantically. The pre-prefix licences a definite reading, whereas the sentence refers to unknown referents.

If we assume a Chomskyan account, the proverb is structurally ambiguous between a control theoretical account, if the gap before the two gaps is considered to be occupied by an empty category PRO as in (23a) below, or a binding theoretical account in which a trace element *e* is bound by the antecedent *nda* as in (23b) below, or if the anaphoric nature of the subject agreement markers is taken into account. Consider the two renditions in (23) below.

(23) a. *Nda_i* 'indongi, PRO_i *ereta morogi, PRO_i ereta moibi.*

b. *Nda* 'indongi, *e_ireta morogi, e_ireta moibi.*

The analysis in (23) above is problematic since the construal of multiple subjects is illusory whereas recourse to indicate binding violates the Inclusiveness Principle that requires that no new elements be introduced in the syntactic computation during a construction’s derivation.

5. Radical interpretation

The notion of radical interpretation was construed by Davidson (1973c) through the influence of Quine’s (1960) notion of radical interpretation. In both notions the processes involve an agent who lacks prior knowledge of the target language, or attitudes of speakers translating/interpreting texts by commencing “from scratch”. This means attempting to do interpretation without relying on translators, dictionaries, or specific prior knowledge of their mental states. A radical interpreter is in essence not omnipotent as assumed in most semantic systems.

In Davidsonian Semantics T-sentences are empirical hypotheses of meanings of object

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language sentences that are generated by speakers and which are accessible to radical interpreters (see Davidson, 1973c, 1974). The truth can be assigned only if it meets the criteria meted out by any interpreter who is a realist, and knows that every bit of the truth-bearing elements of the sentences is known to be true. The criteria may be met by sentences that are ontologically closed, that have referents in the real (or ersatz) world, and that cannot be adequately realized if the elements that are meant to bear truth do not. For radical interpretation to succeed it has to adhere to the norms prescribed by the principle of charity. These norms include assumptions that speakers are right in their beliefs; they are rational, coherent agents with stable desires, beliefs and preferences (Pagin, 1999). The interpreter has to assume that the speaker holds true beliefs as per the Principle of Charity. Radical interpretation is therefore meant to reveal true beliefs and meanings. The interpretation of a true sentence depends on the beliefs and knowledge of the native speakers of the meaning of the parts of the sentence subjected to T-sentences. The speaker holds an attitude that what s/he says is the truth that can be picked by an interpreter. Holding true can be considered to be a belief that as Pagin (2013) puts it, is “very coarse grained”. The attitude is used as evidence to assess the validity of given T-sentences which when considered in relation to the beliefs associated with constituent parts of a given utterance can be usable in supporting a meaning theory.

Radical interpretation holds that, for an utterance to be understood, the stages of interpretation have to be observed and the conditions under which an utterance is made be considered. It holds that there are rules to be followed if a proper interpretation is to be made. These rules are believed to operate in stages. Meaning is dependent on how one puts such rules into operation.

Stage 1. An interpreter holds that a particular sentence is held to be true at a particular time.

Stage 2. At the time of uttering the speaker holds his/her sentence to be true.

Stage 3. Truths are to be matched with the sentences ($S_1 \dots S_n$).

Stage 4. The best overall fitting from the matching provided in stage 3 has to be determined.

As regards the proverb in our discussion, the womb is a *pot-pourri*, it churns a witch, it churns a thief, the proverb is assumed to be true only and only when the womb churns witches or thieves. In this case this proverb may not always be true since it is not true that the womb would always bring forth bad people in the society.

Considering stage 3 of radical interpretation, by matching up the truths with the sentences:

- (24) a. *Nda* *'indongi*.
Womb is pot-pourri
'The womb is a pot-pourri.'

- b. *Enda igo ekorenta omorogi.*
Womb does bring a witch
'The womb churns out a witch.'
- c. *Enda igo ekorenta omoibi.*
Womb does bring a thief
'The womb churns out a thief.'

The terms *nda* in (24a) and *enda* in (24b & c), bear similar meaning; they both refer to the womb. *Nda* is an ellipted form of *enda* and is mainly employed as a result of poetic licence by the native EkeGusii speakers. Considering (24), it is likely that an interpreter will be constrained in rendering a correct interpretation; although there is some truth in these sentences that the womb at times can churn a witch or a thief, this is not always the case. The womb also brings forth good people. It is likely that the interpretation for this complex EkeGusii sentence would reach an impasse hence the radical interpreters are likely to have varied interpretations and hence different meanings from the same proverb (Fodor & Lepore, 1994).

Assuming that the radical interpreter has no knowledge of EkeGusii and is not conversant with the situation in which the utterance is made, it would be a herculean task to render a proper interpretation for the utterance (Sinclair, 2002). Even when the interpreter has knowledge of the language, they may be limited in rendering the correct interpretation for the utterance *Nda indongi ereta morogi ereta moibi* due to the fact that his/ her knowledge of the situations under which the utterance is made is limited. Furthermore, his/her lack of information about the speaker's intention would also hamper a correct interpretation. The interpreter therefore is dependent on observations of what the speaker does and his/her surrounding/environment at the time of uttering. Truth has therefore to be relativized according to time and place. Again, unless the radical interpreter understands the beliefs held by the community from which the proverb emanates (EkeGusii), it would not be easy to render a correct interpretation to the proverb. If this is ignored, then the radical interpreter is likely to make an assumption that what the speaker says (in this case, the womb churns out witches and thieves) is true. This however may not attain since not in all cases does it occur that only bad people are born in society.

Proverbs are considered as preserves of collective beliefs and by implication they should be easily ascribable by both the speaker and interpreter if they share the language. They are not uttered to express primary beliefs held by a speaker but more of as an affirmation that social creators expressed a synthetic truth based on socially observable phenomenon (hence observational beliefs) which are yet again confirmed by a given social event or outcome. At the time one gets to restate it in their new experience, the collective beliefs behind the formulaic utterance are to some degree the speaker's too.

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Hence the interpretation that is accorded by a given speaker to any proverb should be equivalent to that given by the community sharing a given language. At an abstract level, the interpretations that Davidson considers are considered to be public, externalist and amenable to reach massive verbal agreement among speakers of the same language. In considering the empirical justification of the principle of Charity, Pagin (2013) argues that “agreement in holding true” should be a collective reality for a given speech community which entertains the same beliefs (and belief-forming mechanisms) and meanings.

Davidson’s social theory of interpretation is argued for as quoted:

...Given a community of speakers with apparently the same linguistic repertoire, however, the theorist will strive for a single theory of interpretation: this will greatly narrow his practical choice of preliminary theories for each individual speaker. (In a prolonged dialogue, one starts perforce with a socially applicable theory, and refines it as evidence peculiar to the other speaker accumulates.)

What makes a social theory of interpretation possible is that we can construct a plurality of private belief structures: belief is built to take up the slack between sentences held true by individuals and sentences true (or false) by public standards. ...Attributions of belief are as publicly verifiable as interpretations, being based on the same evidence: if we understand what a person says, we know what he believes (Davidson, 1974).

Consider the test proverb so far. In relation to the T-sentence on our test proverb below, we can come up with an accompanying evidential sentence GE.

(25) (T) “*Nda ’indongi ereta morogi ereta moibi*” is true-in-EkeGusii iff The womb is like a pot-pourri, it churns out witches, it churns out thieves when it is uttered at time *t* when it is literally true.

To provide evidence for the T sentence above we have evidence in the form of GE below.

(26) (GE) $(x)(t)(x$ is a speaker of EkeGusii then $(x$ holds true “*Nda ’indongi ereta morogi ereta moibi*” at time *t* and there is a person *y* who is either a thief or witch or both and is proved to:
The womb is like a pot-pourri, it churns out witches, it churns out thieves))

In sum, the theory posits a radical interpreter and thus opens the usage of T-sentences from being mere static renditions of meaning into a dynamic system. The theory thus takes on a mode of “interoperability” (partial though) to some extent that is espoused in emergent Semantics (Cudré-Mauroux, 2008). Emergentist semanticists consider a set of symbols (or expressions) to have some initial Semantics (in a base schema or ontology) which an agent maps to a vocabulary of other agents with which it interoperates. Semantics is the relationship that ensues when a syntactic structure interoperates with a domain (mathematical, social, etc.). Hence, the emergent systems consider Semantics to be “an emergence of a distributed structure, a dynamic process” in which collections of dynamic

agreements between heterogeneous parties ensue (Cudré-Mauroux, 2008:3). The theory can be made more interoperable by integrating more pragmatic aspects as will be considered in section (6) below.

6. Integration of pragmatic aspects into the Davidsonian programme

As we have argued in the foregone discussion (section 3.0), in order to understand the proverb in (1) above, we have to accept the fact that language is compositional and holistic. Considering that Davidson's programme on compositionality and radical interpretation individually would not enable a satisfactory interpretation for a complex proverb as the one in our case - *Nda 'indongi ereta morogi ereta moibi* 'The womb is pot-pourri, it churns out witches it churns out thieves', we propose that there be an incorporation of pragmatic aspects to its analysis. These include implicatures, speech acts and presupposition. The main consideration is how we factor in the pragmatics in a formal form, in our case the T-Convention.

The Davidsonian programme, being truth-based, can be enriched by embracing some of the formalisms developed by those who espouse forms of truth-conditional pragmatics (Recanati, 2010; Pagin & Pelletier, 2007; Del Pinal, 2018, to mention some). Truth-conditional pragmatists posit a set of tools to enable one to achieve pragmatic compositionality. The main mechanism is the construal of a context parameter in an interpretation function. For an expression e :

$$(27) \llbracket e \rrbracket = fe(c)$$

where: fe is the character of e and $fe(c)$ the contextual meaning.

Besides the characters, contextual meaning can arise from empty parameters which are captured by a notion of "free modulation" (Recanati, 2010). The *modulated* meaning for an expression e , $\llbracket e \rrbracket_M^c$ is given as follows:

$$(28) \llbracket e \rrbracket_M^c, = mod(e, c) \llbracket e \rrbracket^c, = mod(e, c) \llbracket e \rrbracket^c$$

The contextual elements can therefore be incorporated into the T-sentence by incorporating some contextual structure as per the pragmatic element to be factored in such as a pragmemes, a speech act, a presupposition and any other.

6.1 Gricean implicatures and T-sentences

Grice provides an account of meaning pegged on the rational behaviour of an agent or radical interpreter (Grice, 1975). Conversational agents are considered to be cooperative. The main problem in deriving implicatures is that the intentions of a speaker are private. Asher (2014) proposes that the notion of cooperation be dropped as it is not necessary in generating implicatures.

In the case "*Nda 'indongi ereta morogi ereta moibi*" the word *ereta* which literally means to bring, implies giving birth to. The words *morogi* 'witch' and *moibi* 'thief' imply a

mixture of characters – both good and bad. Pegging on conversational implicature, the speaker of the proverb under analysis makes inferences that the womb is a mixture. Though, it is not out-rightly put that the womb brings forth good people, the inference here suggests that the womb brings forth both good and bad people since it is a pot-pourri. It is by the exclusion of the cooperative principle that such a sentence is rendered plausible. The sentence is interpretable by the speaker flouting one or more of the maxims. Consider a situation in which the speaker says this to tell the other that “I do not trust you”. The maxim of Quantity is flouted given that there are more senses in the proverb other than “I distrust you, you are a bad person...”

The T-sentence can be improved upon by indicating that “a speaker (x)...implies at time *t*” in order to capture the idea that it is the implied meaning that is required in a given context as given in (29) below.

- (29) $\lambda c(x)(t)$ mod (x is a speaker of EkeGusii then (x holds true “*Nda 'indongi ereta morogi ereta moibi*” implies at time *t* and there is a person *y* who is either a thief or witch or both and is proved to: The womb is like a pot-pourri, it churns out witches, it churns out thieves))^C

6.2 Presuppositions and T-sentences

Presupposition may also be incorporated in the analysis of this proverb. Presupposition here refers to the necessary background information needed to make an utterance say able and to be accepted by the addressee. The consideration of the lexical items should consider the fact that the words should trigger a set of presuppositions that delimits the meaning of a given complex expression. Both the semantic and pragmatic presuppositions have to be engaged to enable a correct interpretation of a construction. As Grundy (2008) argues, both logic and pragmatics have to be integrated in the search for a correct interpretation of a construction. The accommodated beliefs (semantic presuppositions) by the speaker and the addressee have to be considered.

In reference to our proverb of study, *Nda 'indongi ereta morogi ereta moibi*, the interpreter has to bear in mind the fact that the speaker of the proverb makes an assumption about the addressee’s background knowledge on the proverb (Huang, 2007; Grundy, 2008). The speaker here assumes that the addressee has knowledge about the womb’s ability to bring forth good and bad people. Also, the addressee in this case is knowledgeable that “womb” refers to women who have the ability to give birth. Taking this into consideration then, it is assumed that the addressee will be able to render a correct interpretation of the proverb. Also, the conditions required for an utterance to be appropriate (pragmatic presuppositions) have to be considered in making interpretations. In interpreting (30), the interpreter has to consider the meanings of the individual words in the proverb:

- (30) λc mod [*Nda 'indongi ereta morogi ereta moibi*] The womb is pot-pourri it churns a witch, it churns a thief is true iff the presuppositions triggered by λc [*Nda 'indongi ereta morogi ereta*

moibi are true

The individual words have their meanings:

Individual word	Translation into English	Meaning
<i>nda</i>	womb	the female organ in which the young are conceived
<i>ndongi</i>	pot –pourri	a mixture of things
<i>reta</i>	churn	bring forth
<i>morogi</i>	a witch	a person that practices sorcery
<i>moibi</i>	a thief	a person who steals

Both the speaker and the interpreter have to have the same encyclopedic meaning/ understanding of the individual words used in the proverb. However, consideration of the individual words alone is unlikely to provide an interpretation for the proverb. In this case therefore all the words and how they relate to one another in the proverb have to be considered. In addition, the interpreter has to consider the context in which the proverb is given.

6.3 Speech Acts and T-sentences

Proverbs serve an illimitable set of speech Acts in a community. Normally, (among the EkeGusii speakers) the proverb is uttered when cautioning people not to discriminate against delinquent children or members of society who are ill mannered. That is the basic function, but there are several extensions of its usage which we have to push under the rug. In a T- sentence, the speech acts can be factored in by lambda abstracting over the context, (λc^s : where s = Speech Act).

$$(31) \text{ GEN, } \lambda c^s \lambda x \text{ mod } [\exists x: x \rightarrow \text{enda}(e, \text{enga}(e, \text{ndongi})) \rightarrow \text{beget}(e' \leq e \text{ beget}(e', y(m_1))) \vee \text{beget}(e', z(m_2)) = 1 \text{ and } 0 \text{ otherwise. Where } y: \{y \mid y =: m_1 \ \& \ m_1 \geq 1\} \ \& \ \{z \mid z =: m_2 \ \& \ m_2 \geq 1\}$$

The speech act will be determined for instance in relation to whether the illocutionary act is done before or after a given event. For instance it can be used to warn before a given encounter or after the event to indicate to or console the victim that that is how the world is. For a radical interpreter the speech act will be a matter of abstracting over a given context. In some of the literature on compositional pragmatics the notion of a speech act is extended to that of a pragmatic act or pragmemes (Mey, 2001, 2008; Jaszczolt, 2003, 2010). A pragmemes is a combination of illocutionary and perlocutionary force. Hence, in the event of negotiating intersubjective meaning, the radical interpreter should be involved in a dynamic process of meaning assignment that takes a number of pragmemes that feed the compositional Semantics of a given T-sentence.

7. Conclusion

The Davidsonian axiomatic Programme which is here represented as espousing a direct

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compositional Semantics coupled with the notion of events, though the two were developed separately, capture a number of the surface compositional elements of the proverb used as the test case, *Nda 'indongi ereta morogi ereta moibi*. The programme also has an agentive view of how sentences are interpreted as set out in the view of what a radical interpreter does. Hence, in combining the two theoretical posits we have a theory that encompasses the productive and perceptual ends of the communication circle. The Davidsonian system utilizes T-sentences as a formal means of representing the mapping from Syntax to Semantics. This paper reveals some pitfalls of the system of meaning representation involved. We recommend a Chomskyan logical form or the minimalist stipulation of C-I interface calls for indirect compositionality analyses of complex sentences. The compositional aspects of words are executed during the merge process which essentially generates a construction that is gibberish but is reconstructed by the interfaces to yield interpretations.

Most of the interpretations given by native speakers in some of the collections of proverbs are not corroborated in the analysis if we give them a direct compositional analysis of the words contributing to the truth conditions (referential in nature). The Davidsonian programme can be further improved if there is clarity on how the pragmatic aspects such as implicatures, presuppositions and speech acts, non-compositional in nature, that form part of the proverbs, are accommodated. Proverbs are intuitive formulas which function as ways of commenting about the world being the way it is because they, the speakers, have seen it to be that way. Proverbs may be interpreted wrongly considering the fact that contexts of application are relatively in flux, hence all interpretation is a relative approximation of the truth-conditions of complex statements, a matter that requires more methodological considerations than theoretical constructs based on the relations between form (Syntax/Semantics) and content (conceptual combination) without reference to what context can offer.

Abbreviations and symbols

→	Implication Connective (implies that)	A-P	Articulatory-Perceptual Interface
=:	Defined as	AUX	Auxiliary
≤	Preceding	<i>c</i>	Context
≥	Succeeding	C-I	Conceptual-Intentional Interface
∅	Empty/Null Element	CL	Clause
∀	Universal Quantifier (for all ...)	DP	Determiner Phrase
∃	Existential Quantifier (there is/are ...; for at least one/some ...)	<i>e</i>	Variable
λ	Lambda Operator/Abstractor	<i>e</i>	(1) Empty Category; (2) Argumenting variable for <i>enda</i> ‘womb’
<i>a_e</i>	Skolem Term (empty argument)	<i>e</i>	Null Agreement Morpheme
<i>a_i</i>	Skolem (Initial argument)	<i>e</i> '	Entity Evincing Similarity
AgrP	Agreement Phrase	[[<i>e</i>]]	Meaning of an Expression

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<i>f</i>	Function	PL	Plural
<i>fe</i>	Character of a Variable	PP	Propositio
<i>fe(c)</i>	Contextual Meaning of a Variable	PRES	Present Tense
FOC	Focus	PRO	Empty Pronominal
FV	Final Vowel	PTL	Particle
GE	Evidential Sentence	s	Speech Act
GEN	Generic Sentence	S _{AgRP}	Subject Agreement Phrase
I'	Referent for <i>indongi</i> 'womb'	SG	Singular
<i>i</i>	Indices	SK ₃₅	Skolem Function ₃₅
IDENT	Identical	[s, t]	Satisfies
iff	If and Only if	T	Truth
L _{Eke}	EkeGusii Language	TP	Tense Phrase
<i>M</i>	Modulus	<i>t</i>	Time
<i>m</i> ₁ ; <i>m</i> ₂	Meaning of a Proposition	V	Verb
MOD	Modal	<i>v</i>	Variable
<i>mod</i>	Mode of Presentation	<i>v</i>	Light Verb
<i>n</i>	Specified Variable for <i>nda</i> 'womb'	<i>w</i>	A Possible Situation
NC1	Noun Class 1	<i>w</i>	A Possible Situation
NC9	Noun Class 9	" <i>x n</i> "	Characteristics of a Component <i>enda</i> 'womb'
NEG	Negation	x, y, z	Variables
Nom	Nominal		
NP	Noun Phrase		

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