

SPEECH ACT THEORY AND UNIVERSAL GRAMMAR

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Are there universal transcendent features that any natural language must possess in order to provide for its human speakers adequate means of expression and of communication of their conceptual thoughts? As Frege, Austin and Searle pointed out, complete speech acts of the type called illocutionary acts, and not isolated propositions, are the primary units of meaning in the use and comprehension of language. Thus it is in the very performance of illocutionary acts that speakers express and communicate their thoughts. For this reason, speech act theory contributes to the theory of linguistic universals in formulating the necessary and universal laws governing the successful performance and satisfaction of illocutionary acts in language use and comprehension. I will argue that the logical form of illocutionary acts imposes certain formal constraints on the logical structure of a possible natural language as well as on the mind of competent speakers. In particular, certain syntactic, semantic and pragmatic features are universal because they are indispensable. Moreover, in order to perform and understand illocutionary acts, competent speakers and hearers must have certain mental states and abilities which are in general traditionally related to the faculty of reason.

As philosophers and universal grammarians of the seventeenth century already pointed out, the primary functions of language are to enable human speakers to express and communicate with accuracy

and efficiency their conceptual thoughts.¹ Thus one can raise the question: **Are there transcendent features that any natural language must possess in order to be able to fulfil its two basic functions of expression and of communication, and if yes, what is their nature?** According to speech act theory, the primary units of meaning in the use and comprehension of language are complete speech acts of the type called by Austin² *illocutionary acts* and not isolated propositions. Speakers who make meaningful utterances always attempt to perform illocutionary acts such as assertions, questions, orders, declarations and thanks. It is part of what they primarily mean and intend to communicate to their hearers.

Because speakers express and communicate their thoughts in the very performance of illocutionary acts, speech act theory contributes to the theory of linguistic universals in formulating the necessary and universal laws governing the successful performance and satisfaction of illocutionary acts in language use and comprehension. **As I will argue, the logical form of illocutionary acts imposes certain formal constraints on the logical structure of a possible natural language as well as on the mind of competent speakers. In particular, certain syntactic, semantic and pragmatic features are transcendent and universal because they are indispensable.** Indeed a language deprived of such features would not provide its human speakers with adequate means of expression and of communication of their conceptual thoughts. **Moreover, if linguistic competence is the ability to perform and understand the illocutionary acts which are the meaning of utterances, then competent speakers and hearers**

¹ Following Descartes, I distinguish here *conceptual thought* from other types of thought inherent to perception and imagination whose contents are presentations rather than representations of facts. See R. Descartes, *Méditations*, 1641 where Descartes distinguishes in the Sixth Meditation the conception from the imagination of a polygon having one thousand sides. Both propositional attitudes and illocutionary acts are units of conceptual thought.

² Austin (1962a).

must have certain mental states and abilities which are in general traditionally related to the faculty of reason. For example, speakers must be able to refer and predicate and to distinguish truth from falsehood and success from failure. They must also be able to make certain theoretical and practical valid inferences. Otherwise, they would not be fully able to use and understand a language.

According to illocutionary logic³, elementary illocutionary acts are of the form $F(P)$; they consist of an illocutionary *force* F ⁴ and a propositional content P . So corresponding elementary sentences whose logical form is completely analyzed contain an *illocutionary force marker* f in addition to a *clause* expressing a proposition. Common examples of force markers are verb mood and sentential types. Thus declarative sentences serve to make assertions. Imperative sentences serve to give directives and interrogative sentences to ask questions. Performative sentences serve to make declarations. (According to Searle and the present author, performative utterances are declarations whose propositional content is that the speaker performs the speech act named by their performative verb.) And exclamatory sentences serve to express the speaker's attitudes. By virtue of their logical form, illocutionary acts have success and satisfaction conditions. Illocutionary acts are by nature intentional actions that speakers always attempt to perform. As is the case for *human actions* in general, attempts to perform such acts can *succeed* or *fail*. For example, in order to make a successful utterance of the performative sentence "I appoint you chairman of the board" a speaker must refer to the right person and he must have the authority to make such a declaration in the context of utterance. Moreover, illocutionary acts are directed at objects and facts, and, even when they are successful, they can still fail to be satisfied, when the world does not fit their propositional content. Thus successful assertions can be false,

³ Searle & Vanderveken (1985).

⁴ The term of force is due to Frege. See "Thoughts" and "Negation" in Frege (1977).

successful promises can be broken and successful requests can be refused.

The *conditions of success* of an illocutionary act are the conditions that must obtain in a possible context of utterance in order that the speaker succeed in performing that act in that context. The notion of a condition of satisfaction is a generalization of the notion of a truth condition which is necessary to cover all illocutionary forces. Just as an assertion is satisfied when it is *true*, a command is satisfied when it is *obeyed*, a promise is satisfied when it is *kept*, a request is satisfied when it is *granted*, and similarly for all other illocutionary forces. As Searle and I pointed out, one cannot understand the nature of illocutionary acts without understanding their success and satisfaction conditions. **Moreover, the two types of success and satisfaction conditions of elementary illocutionary acts are not reducible to the truth conditions of their propositional contents.**

From a philosophical point of view, speech act theory contributes to universal grammar for various reasons.

Natural languages have a vast vocabulary for specifying illocutionary act types and propositions. But they are ambiguous and their grammatical conventions are complicated so that it is difficult to analyze directly the underlying logical form of attempted illocutionary acts. First, there is no one-to-one correspondence between illocutionary forces and performative verbs or force markers in natural languages. "Illocutionary forces are, so to speak, natural kinds of use of language, but we can no more expect the vernacular expressions to correspond exactly to the natural kinds than we can expect vernacular names of plants and animals to correspond exactly to the natural kinds" (Searle & Vanderveken (1985), p. 179). Thus, some possible illocutionary forces are *not actual* today in English. For example, one can no longer repudiate one's wife and break off one's marriage by uttering words, as one could do in past civilisations in certain ways fixed by custom. Some possible illocutionary forces are actual in English but are not realized syntactically or lexicalized. For example, there is no marker in English for commissive illocutionary forces. In

order to commit himself to carrying out a future action the speaker must speak indirectly ("I will do it") or make a declaration ("I promise to do it"). Notice also that some performative verbs like "tell" and "swear" are ambiguous between different illocutionary points. One can assertively tell that something is the case, just as one can make a directive in telling someone to do something. A second reason for distinguishing carefully between illocutionary forces, on the one hand, and performative verbs and illocutionary force markers, on the other hand, is that **natural languages are not perspicuous**. Many sentences of the same syntactic type (for example, the declarative sentences "He is dead", "Frankly, he is dead", "Alas, he is dead", "Of course, he is dead") express illocutionary acts with different assertive forces. Similarly, performative verbs with a superficially similar syntactic behaviour (for example, "order", "forbid" and "permit") do not have the same logical form. Only the first verb "order" names a directive illocutionary force. For an act of forbidding something is just an order not to do it. Furthermore an act of granting permission is the illocutionary denegation of an act of forbidding.

One should not trust too much the surface structure of ordinary language. As I have argued (see Vanderveken (1991)), it is better to analyze indirectly the deep structure of ordinary sentences *via* their translations in an ideal perspicuous disambiguous formal object language. **I have used for that purpose in the formal semantics of success and satisfaction the ideographic language of a higher-order unified illocutionary and intensional logic⁵ containing a revisited propositional logic where strictly equivalent propositions are distinguished.** One advantage of using an ideographic language in illocutionary logic is to dispose of a theoretical vocabulary thanks to which any expressible illocutionary act can in principle be analyzed in

⁵ See chapter 4, "The Ideal Conceptual Language of General Semantics", in Volume 2 of *Meaning and Speech Acts*. For a richer ideographic language capable of expressing action, historic modalities, indexical and ramified time, see the new formulation of illocutionary logic in my next book on *Discourse*.

a canonical way and be put into relationships with others. Another advantage is that, contrary to what is the case in ordinary language, the grammatical forms of the sentences of the ideographic language reflect clearly on the surface the logical forms of the illocutionary acts that they express. Thus one can exhibit *via* translation the logical form of illocutionary acts that ordinary sentences serve to perform.

All the logical constants and syncategorematic expressions of the ideographic object language of illocutionary logic express **universal features of language** such as identity, success, truth, functional application and abstraction. Because of this, the syntactic rules of formation and abbreviation of that ideal language, the meaning postulates governing its expressions in possible interpretations and the theorems of the corresponding axiomatic system make universal claims about the deep structure of language. **Thanks to the new ideographic language, richer fragments of natural languages containing sentences of all syntactic types (declarative as well as non-declarative sentences) can now be interpreted indirectly in logic.** There is no need to reduce non-declarative to declarative sentences. Moreover one can study the valid forms of practical inferences whose conclusion are non-declarative sentences. As Montague pointed out, by way of translating clauses of ordinary sentences into the ideal object language of intensional logic, formal semantics clarifies the logical form of propositions and proceeds to a better explication of their truth conditions. Similarly, by way of translating force markers and performative verbs into the ideographic object language of illocutionary logic, formal semantics can exhibit the logical form of illocutionary acts and proceeds to a better explication of their success and satisfaction conditions.⁶ According to Cocchiarella, "This enlarged framework is not at odds with Montague's intensional logic, it should be emphasized, but is really a conservative extension of the latter that simply adds a

⁶ Rules of translation into the ideal conceptual language of general semantics are formulated in chapters 4 and 7 of Volume 2 of *Meaning and Speech Acts* (Vanderveken (1991b)).

recursive theory of success and satisfaction to Montague's theory of truth." (Cocchiarella (1997), p 71)

Given the nature of conceptual thought, one can argue that there are in all possible languages *linguistic universals* on the side of illocutionary forces as well on the side of propositions. Expressions which name linguistic universals lend themselves to *radical translation* in the sense of Quine (cf. Quine (1960)). **Any *lingua philosophica* adequate for the expression of thoughts must contain logical constants or syncategorematic expressions representing these universals.** From a theoretical point of view, *material linguistic universals* are basic or primitive elements of thought like predication and illocutionary points which are constitutive of the deep logical structure of language. So the ideographic language of illocutionary logic contains basic expressions for the act of predication and the five assertive, commissive, directive, declaratory and expressive illocutionary points. In order to represent how things are in the world, we must predicate of them properties or relations (cf. Strawson (1974)). We would not be able to express elementary propositions representing states of affairs in a language deprived of predication. Similarly, we would not be able to perform all types of illocutionary acts in a language deprived of the five different illocutionary points. For such a language would not distinguish all the different possible basic ways in which we can relate propositions to the world with the aim to establish a correspondence between words and things from all possible directions of fit.

The notion of a condition of satisfaction is based on the traditional *correspondence theory of truth* for propositions.⁷ Whenever an elementary illocutionary act is satisfied in an actual context of utterance, there is a *success of fit* or *correspondence* between language

⁷ One can find a first formulation of the classical theory of truth by correspondence in Aristotle's *Metaphysics*. See Tarski (1944). See my paper "Semantics for Speech Acts" (Vanderveken (forthcoming c)) for a reformulation of the theory of truth by correspondence adequate for speech act theory.

and the world; the propositional content of the illocutionary act corresponds to an actual state of affairs in the world. However, as Searle and I have pointed out, there is more to the notion of a condition of a satisfaction than the notion of truth-condition. In order that an elementary illocutionary act of the form $F(P)$ be satisfied in a context of utterance it is not enough that its propositional content P be true in that context. The correspondence between language and the world must be established following the proper direction of fit of its illocutionary force F . **There are four possible directions of fit in language use** to which correspond exactly the five assertive, commissive, directive, declaratory and expressive illocutionary points (and the four descriptive, deliberative, declaratory and expressive discursive purposes)⁸:

The words-to-world direction of fit

When the force has the words-to-world direction of fit, the illocutionary act is satisfied if and only if its propositional content fits a state of affairs existing (in general independently) in the world. **Illocutionary acts with the assertive point have the words-to-world direction of fit.** Their point is to represent how things are. Thus, in the case of assertive utterances, the words must correspond to the objects of reference as they stand in the world.

The world-to-words direction of fit

When the force has the world-to-words direction of fit, the illocutionary act is satisfied if and only if the world is transformed to fit the propositional content. **Illocutionary acts with the commissive or directive point have the world-to-words direction of fit.** Their point is to have the world transformed by the future course of action of the speaker (commissives) or of the hearer (directives) in order to match

⁸ See D. Vanderveken, "Illocutionary Logic and Discourse Typology" (Vanderveken (forthcoming b)).

the propositional content of the utterance. In this case, the things in the world have to be changed to correspond to the words uttered in the performance of the illocutionary act.

The double direction of fit

When the force has the double direction of fit, the illocutionary act is satisfied if and only if the world is transformed by an action of the speaker to fit the propositional content by the fact that the speaker represents it as being so transformed. **Illocutionary acts with the declaratory illocutionary point have the double direction of fit.** Their point is to get the world to match the propositional content by saying that the propositional content matches the world. In successful declarations, objects of reference are then changed to correspond to words in the very utterance of these words. As Austin pointed out, in such utterances, we do things with words.

The empty direction of fit

For some illocutionary acts, there is no question of success or failure of fit and their propositional content is in general presupposed to be true. **Such are the illocutionary acts with expressive point. They have the empty direction of fit.** Their point is just to express a mental state of the speaker about the state of affairs represented by the propositional content. Thus, in expressive utterances, speakers do not attempt to establish a correspondence between words and things. They just want to manifest their feelings about the ways in which objects are in the world.

Other transcendent features are *formal linguistic universals*. Unlike material universals, formal universals are not basic or primitive transcendent elements of thought. But they are formally equivalent universal rules of closure of sets of transcendent features. Clear examples of formal linguistic universals are the truth-functional operations on propositions and the few operations on illocutionary forces which consist in adding new components or in increasing and

decreasing the degree of strength. As is well known, a language deprived of truth-functions could not serve the purpose of representing all the different possible complex facts that can exist in the world. Many states of affairs and events which we experience in the world can be represented by expressing elementary propositions which are true in a context if and only if certain objects of reference stand in that context in relations that are predicated of them. But we can also represent more complex facts that exist in the world if certain facts exist and others do not. Truth-functions are needed to express propositions representing such complex facts. Their logic belongs to the universal grammar of linguists and logicians such as Chomsky (cf. Chomsky (1969), (1975)), Quine and Montague⁹. Similarly, on the side of illocutionary forces, the few Boolean and Abelian operations on components enable the speakers of each language to express and use actual forces with all the components which are linguistically significant for the community of these speakers. When a mode of achievement, a propositional content, preparatory or sincerity condition is linguistically significant for a linguistic community, it can always be incorporated in actual illocutionary forces by adding them to primitive forces.¹⁰

According to speech act theory, there is an internal relation between the basic functions and the deep structure of language. Natural languages offer a vast vocabulary and a rich grammar to express forces, propositions and illocutionary acts. The surface structure of their sentences can be misleading. However, speakers apprehend their deep structure in meaning and understanding. And it appears that the logical form of linguistic expressions which express transcendent features of speech acts is exactly the one which is appropriate to their function.

According to Searle and other philosophers of mind, there is *a general principle of expressibility of conceptual thought*. Any conceptual

⁹ See R. Montague, "Universal Grammar" in Montague (1974).

¹⁰ See chapter 4 of Vanderveken (1990b).

thought (let it be a state or an act) that a human being can have in mind is in principle *expressible* in the use of language in the performance of an illocutionary act. Consequently, if there are necessary and universal laws governing the successful performance and satisfaction of speech acts, then illocutionary logic is *transcendental* in the sense of Kant (Kant (1950)) and of the first Wittgenstein (Wittgenstein (1921)). Indeed **its theory of success fixes limits to language use that restrict what can be thought, just as its theory of satisfaction fixes limits to the world that restrict what can exist and be experienced.** From a transcendental point of view, any state of affairs or event that a human being can experience in the world is a fact that he can represent in a conceptual act of thought directed at that fact. Moreover, he could always in principle express that thought in the performance of an illocutionary act representing that fact. Thus, a logic of speech acts that describes adequately the necessary and sufficient conditions for the successful use of language also serves to articulate *a priori forms of conceptual thought*. What makes these success conditions *a priori* is that it is not possible for us ever to have a thought whose expression in a successful speech act would violate them. For they are conditions of possibility of the very determination of speaker meaning and understanding. Of course, as Wittgenstein pointed out in the *Tractatus*, the logic of language only fixes limits to what can be thought *indirectly* by fixing limits to the linguistic expressions of thought in language use. Otherwise, one would have to think what cannot be thought in order to fix such limits. **The limits of thought show themselves in language** in the fact that sentences of certain logical forms are *illocutionarily inconsistent* (in the sense that they express non-performable illocutionary acts) or *analytically unsuccessful* (in the sense that can never be used with success in any possible context of utterance). We can think of impossible thoughts and even describe their logical forms in logic and philosophy. However, we can never entertain impossible thoughts *in the first person*, just as we can never use with success an illocutionarily inconsistent sentence without speaking non-literally. In that view, illocutionary logic is not only a

work in logic and the empirical theory of language. It is also a work in transcendental philosophy.

Now, what are the different kinds of universals that can be studied in speech act theory? And how can we confirm the necessary existence of such universals in all possible natural languages? As I pointed out in *Meaning and Speech Acts*, a first way to discover universals of language use is to study the nature of transcendent features such as meaning, understanding, illocutionary forces, propositions, illocutionary success, truth, satisfaction, consistency, validity and entailment. Such transcendent features, which are constitutive of every possible use and interpretation of a language, are important for the purposes of various cognitive sciences which study them from different points of view. I will now briefly mention some of these universals in language use.

Logical universals of speech act theory

A primary purpose of the philosophical logic of illocutionary acts and propositions is to formulate valid laws about success, truth and satisfaction. Because all the logical constants and syncategorematic expressions of the theoretical vocabulary of illocutionary logic express transcendent features of language, these valid laws are contributions to universal grammar. **In particular, there are a few basic universal laws governing the directions of fit of utterances which both fix limits and impose a logical order to the different possible ways in which we can use language in order to relate propositions to the world in the successful performance of an illocutionary act.** For example, a limit of thought shows itself in the law of the contingent *a posteriori* truth of the propositional content of any satisfied speech act with the world-to-words direction of fit. A speaker who performs an illocutionary act with the world-to-words direction must express a proposition whose truth is dependent on a future action of one of the protagonists of the utterance. Otherwise, his speech act is not satisfiable. It is clear that the world could not be transformed to match the propositional content of an utterance if

that content were necessarily true independently of any action. This is why performative and imperative sentences whose clause expresses a tautology e.g. "I request or do not request you to come" and "Please, come or do not come!" are illocutionarily inconsistent. Speakers know by virtue of linguistic competence that literal utterances of such sentences would be pointless.

There is also a transcendent logical order which is imposed by direction of fit on possible speech acts in all languages. For example, declarations, which have the double direction of fit, are for that reason the strongest type of illocutionary act. Their successful performance is sufficient to make their propositional content true in the world and to achieve success of fit between words and things. Thus any type of illocutionary act can be performed by way of a declaration in a performative utterance. But, no other type of illocutionary act strongly commits the speaker to a declaration. Because declarations are the strongest type of illocutionary act, it is a mistake to consider them as paradigmatic speech acts, just as it is a mistake to consider performative sentences as paradigmatic forms of expression for speech acts. Only declarations have the double direction of fit. For similar reasons, expressives, which have the null direction of fit, are the weakest type of illocutionary act. Any speech act has sincerity conditions. Thus, every successful performance of a speech act is an expression of mental states. Consequently, any type of illocutionary act strongly commits the speaker to an expressive. But the expressive type of speech act does not commit the speaker to any other. Just as it was a mistake for Austin to consider declarations as paradigmatic speech acts, so it is a similar mistake for Bach and Harnish (Bach & Harnish (1979)) and for Cohen and Levesque (Cohen & Levesque (1990)), to consider expressive illocutions as paradigmatic speech acts. There is more to a speech act with a non-empty direction of fit than just expressing sincerity conditions. For example, there is more to an order than the expression of a will. For the speaker must also make an attempt to get the hearer to do

something and he must invoke a position of authority or power over that hearer.

It is well known that the recursive definition of the set of all truth-functions describes transcendent features in the determination of the truth-conditions of propositions. Similarly, the recursive definition of the set of all possible illocutionary forces of utterances also describes transcendent features of the nature of illocutionary forces. As Searle and I have pointed out, there are five primitive illocutionary forces in every possible natural language. Moreover, all other illocutionary forces can be obtained by applying five simple Boolean or Abelian operations on their components. Given the general definition of success, a few universal laws of strong illocutionary commitment are then valid for illocutionary forces in all natural languages. Whenever a new illocutionary force F' is obtained by the application of an operation on a force F , that new force F' is always either stronger or weaker than the argument force F . Thus, any successful performance of an illocutionary act of the form $F(P)$ whose degree of strength is positive is also the performance of a simple illocutionary act of the form $F'(P)$, where F' is the primitive force with the same illocutionary point. For example, one cannot promise, vow or pledge without committing oneself to doing something. Similarly, one cannot testify, predict and maintain without making an assertion.¹¹

Semantic universals of language use

As it is part of the linguistic meaning of every sentence that it expresses a certain illocutionary act in any possible context of use, there is a general ramification of the fundamental semantic notions of analyticity, consistency and entailment as well as a recursive definition of a successful as well as of a satisfied utterance in the formal semantics that I advocate for ordinary language. Thus the semantic

¹¹ See the Chapter 5 of Vanderveken (1990b) and the Chapter 3 of Vanderveken (1991b) for more considerations on the laws of language use.

analysis of the sentential forms of expression for illocutionary acts in natural language can serve to logically distinguish different classes of sentences expressing different kinds of illocutionary acts. For example, **there are universal laws of illocutionary and of truth-conditional inconsistency**. Sentences of certain logical forms (for example, declarative, imperative and performative sentences whose clause express a contradiction) express non-performable and non-satisfiable illocutionary acts in all languages. **Similarly, there are universal semantic laws of illocutionary and truth-conditional entailment**. For example, just as declarations are the strongest type of illocutionary act, performative sentences are the strongest type of sentences. As I said earlier, each performative sentence illocutionarily entails the non-performative sentences corresponding to it. However, only a consistent sentence which is performative can strongly entail another performative sentence. For similar reasons, exclamatory sentences are the weakest type of sentences in each language. Sentences of all syntactic types illocutionary entail the exclamatory sentences corresponding to them. For example, the declarative sentence "Alas, he is dead" illocutionarily entails the exclamatory sentence "How sad that he is dead". But no consistent exclamatory sentence illocutionarily entails a sentence of another type.

Because of illocutionary logic, a formal semantics of success and satisfaction can then state necessary and universal laws of entailment that hold between sentences by virtue of the logical forms of the illocutionary acts which they express. Moreover, it can also formalize the principles of valid theoretical and practical inferences that speakers can make in the use of language.¹² For example, from the premise "Please, give me a glass of red or white wine" one can conclude "Give me a glass of wine". This is a valid practical inference whose conclusion expresses a directive.

¹² See the chapter V of Vanderveken (1990b) for more information on the semantic universals of language use.

Pragmatic universals of performance

It is clear that meaning changes occur in the history of language. We can enrich the expressive capacities of our natural languages for practical as well as for theoretical reasons. Often a recurrent non-literal use of existing words is at the origin of a new meaning. Hence the importance of non-literal meaning and understanding. As I have pointed out¹³, speakers who mean to perform non-literal illocutionary acts exploit and use *conversational maxims*¹⁴ such as the maxims of quality and quantity which are pragmatic universals of language use. Using speech act theory, I have proposed to explicate and generalize these conversational maxims as follows :

The maxim of quality

From a logical point of view, an illocutionary act is of perfect quality if and only if it is entirely *felicitous* that is to say successful, non-defective and satisfied. Thus, the maxim of quality turns out to be a general principle of illocutionary logic: **Let the primary illocutionary act that you mean to perform be felicitous in the context of your utterance!**

The maxim of quantity

Each illocutionary act is a natural kind of use of language which can serve to achieve linguistic purposes in the course of conversations. From a logical point of view, an illocutionary act is of perfect quantity in the context of an utterance if it is *as strong as required* (neither too strong nor too weak) to achieve the current linguistic purposes of the speaker in that context. Given their logical forms, certain speech acts are *stronger* than others, in the sense that they have more conditions of success, of non-defective performance or of satisfaction. For example,

¹³ See Vanderveken (1991a) and (1997).

¹⁴ The term is due to Paul Grice (Grice (1975)).

a supplication to a hearer that he spare the life of all children is stronger than a simple request that he save the life of people. Stronger speech acts serve to achieve stronger linguistic purposes. Thus, a speaker who would like to supplicate the hearer to save the life of all children but who simply requested that he save the life of persons, would perform a speech act too weak to achieve his linguistic purpose.

There is a universal law of respect of conversational maxims in meaning and understanding. Why do speakers and hearers have to respect conversational maxims in their performance and understanding of speech acts? In particular, why isn't possible to violate ostensibly the maxim of quality in a conversation (for example, to say something which is known to be obviously false) without exploiting that maxim (that is to say without meaning something else which is compatible with the background)? In a case of exploitation, there is only an apparent violation of the maxim at the level of the literal speech act. Indeed the primary non-literal speech act of the utterance is not in conflict with the background. **Like Grice and Kasher, I think that the universal respect of conversational maxims is a consequence of the hypothesis that a competent speaker is a rational agent** (cf. Kasher (1982)). This is quite obvious for the two maxims of quality and quantity which concern the very logical form of illocutionary acts. By nature, an illocutionary act is a means of achieving linguistic purposes in conversation. According to practical reason, a rational agent should not use means under conditions where he knows that they will not be effective. Similarly, a rational speaker should not attempt to perform an illocutionary act in a context of utterance where he knows that he will fail, be defective or unsatisfied. Moreover, a rational agent should respect a principle of the effective means in its selection of attempted illocutionary acts. From a logical point of view, there corresponds to each possible linguistic purpose a unique illocutionary act which serves fully and most effectively that purpose. Thus, a speaker who would ostensibly attempt to perform a weaker or stronger illocutionary act in a context where he has that purpose

would not act most effectively to attain his ends. So it is also reasonable to respect the conversational maxim of quantity.

Cognitive universals of language use

Other transcendent features of universal grammar are cognitive. They can be abstracted from the study of mental states and cognitive capacities which are necessary and sufficient for linguistic competence. **Clearly, in order to be able to fully perform and understand illocutionary acts, competent speakers must first be able to express propositions representing facts of the world. In particular, they must be able to refer and predicate and to distinguish truth from falsehood. They must also have beliefs, intentions and desires and be able to achieve basic illocutionary points. Thus, they must distinguish the different directions of fit of utterances as well as success from failure and satisfaction from dissatisfaction. They must also be able to recognize relevant contextual aspects and to make valid practical and theoretical inferences in meaning and in understanding.** It is clear that computers do not have all these mental capacities. By nature, computers, which are concrete Turing machines, are able to perform syntactical operations on words and symbols in carrying out formal programmes. But they cannot perform semantic operations of relating words of language with things in the world. For that reason, they are not able to think just as they cannot fully use and understand language. As Searle pointed out, computers cannot have mental attitudes (Searle (1984)). They can only *simulate* intelligence and understanding in verbal interactions with man. But such a simulation does not constitute any duplication.

Moreover, as Davidson¹⁵ and Searle pointed out, any adequate semantic and pragmatic theory of meaning must take into account the fact that **our natural languages are possible human languages**: they can be learned and understood (quite rapidly) by intelligent beings whose cognitive abilities are restricted. Thus there are also cognitive

¹⁵ See Davidson (1965).

universals of language use. For example, we can only perform a finite number of illocutionary acts in a possible context of utterance and we perform all such speech acts by way of performing a strongest illocutionary act which commits us to all others. **Consequently, there is a universal law of foundation for successful performance in speech act theory.** All illocutionary acts that a speaker succeeds in performing in a context are acts that he performs by way of performing a unique stronger illocutionary act that generates all others in that context. Certain logical features like strong illocutionary commitment and entailment are innate: we know them *a priori* in virtue of linguistic competence (but the corresponding truth conditional notions do not have the same psychological reality). **Consequently, there are universal effective methods of recognition of certain logical features.** Unlike Montague who tended to consider formal semantics and universal grammar as part of mathematics, I think like Chomsky that philosophy and psychology have to play an important role in the development of universal grammar. Even from the formal point of view, we need a very constructive theory of meaning and understanding that accounts for the creative and effective mental abilities of competent speakers as well as their cognitive limitations.

So investigations of linguistic universals in performance are in many ways interdisciplinary. Speech act theory has to use the resources of various sciences dealing with communication and action in order to study these universals. Not only logic and the philosophy of language, of action and of mind are needed but also linguistics, anthropology, cognitive science, psychology and computer science. Consequently, there are various ways to confirm the material and formal adequacy of the universal claims of speech act theory. Some of the claims require an *empirical confirmation* from the observation of linguistic or psychological data. For example, in order to confirm that there are only six different components of illocutionary force, it is most useful to analyse the formal structure of the set of force markers and performatives in many typologically different languages. In order to confirm the minimal rationality of competent speakers in the use of

language, it is also necessary to check empirically by psychological methods the actual reasoning of speakers in their contributions to real conversations. Moreover, various universal claims require a *logical proof*. For example, in order to confirm that the language generated and interpreted by an advocated universal grammar is human, it is necessary to demonstrate the recursivity of its definition of linguistic and speaker meaning as well as the decidability of what is supposed to be known in virtue of linguistic competence. In certain cases, in order to account for the rapidity of the time of comprehension, one must prove by computational methods that the time of decision of the corresponding algorithms has a minimal upper bound. Finally, because speech act theory is concerned with the *a priori* forms of thought, some universal claims require more than an empirical confirmation or a logical proof. They need what Kant used to call a *transcendental deduction*. Thus one must justify in a certain philosophical way the classification of illocutionary points according to which there are exactly five basic ways to use language to relate a propositional content to the world. This is why Searle and I have attempted to provide a transcendental deduction of the five assertive, commissive, directive, declarative and expressive illocutionary points from the consideration of the different possible directions of fit of utterances.

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