Original Research Article

The Nexus between Semantics and Pragmatics

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Abstract

Language (vocal symbols) is a major instrument of communication. Both in theory and practice, fields of language study evolve to capture areas of focus. In this regard, the basic concerns of research in semantics, and the approaches to such concerns, diverge. Semantics and pragmatics commune in the elucidation of the concept of meaning. This study investigates the nexus between semantics and pragmatics, exploring insights from the "literatures" of both fields. Early scholars of language studies investigate the communicative potentials of language, and establish that the use of language in human communication does not only reveal the nature of meaning, but also accounts for speaker-based underpinnings in the negotiation of meaning. Studies in language and linguistics acknowledge the series of connections that abound among fields of knowledge. As a field of language study, semantics is concerned with the study of meaning. On the other hand, pragmatics explains the context-based use and interpretation of verbal and non-verbal elements of communication. Hinging on Ogden and Richards Theory of Meaning, this study concludes that the nexus between semantics and pragmatics is established in discrete aspects which include: reference-making, felicity and truth condition, cross-cultural dimensions of meaning, plurality of meaning, uptake, perlocution, sentential and extra-sentential features of meaning.

Keywords: semantics, pragmatics, meaning, nexus, Ogden and Richards Theory of Meaning.

1. Introduction

The communicative potentials of language in society are brought to the fore, when the representational nature of linguistic codes is understood from a cross-disciplinary purview. Commenting on language, Roger Fowler (1981, p. 19) posits that "language is the chief instrument of socialization, which is the process by which a person is, will-nilly, moulded into conformity with the established systems of beliefs of the society into which S/he happens to be born ..." With the emergence of pragmatics, focus shifts from linguistic competence (mastery of language structure) to communicative competence (performance). Pragmatic communicative competence is essentially about performance skills in the use of language in diverse communicative situations. In this sense, language users are given supremacy over linguistic conventions. to deviate from linguistic conventions; violation of the rules of language is a signification of speaker-meaning. Across domains, human societies rely heavily on language because meanings resident in expressions serve the crucial purpose of effective interpersonal communication, integration and cohesion. In this regard, a linguistic study of the link or nexus between semantics and pragmatics is poised to explain the intrinsic and extrinsic constraints of making expressions "easy to mean" in discourse. Meaning is not just resident in expressions. It extends to capture not just the relationship which an expression has with other expressions in a linguistic stretch, but also how that expression relates with extra-sentential variables to determine meaning. In this study, critical postulations on semantics and pragmatics are explored to give the study theoretical footing, concise and instructive stance on the series of interconnectedness between semantics and pragmatics.

2. Semantics

Semantics is a field of language study. It is the systematic study of meaning in human language. Structurally, expressions are bearers of meanings. John T. Kearns, cited in Savas L. T. (1994, p. 52) submits that "the fundamental semantic feature of a linguistic act is its structure, the proper object of semantic studies. Acts, not expressions, have meanings or

are meaningful, but expressions are the bearers of syntactic features. An expression is a syntactic item. Expressions belong to syntactic categories, like the categories of noun, verb, noun phrases and adjectives. Word order is a syntactic feature. So are agreement features like gender, number and case. Although syntactic and semantic features do not even characterize the same objects, a linguistic act has both a semantic structure and a syntactic character. This character is constituted by the expressions used and their syntactic features." This view corroborates William O' Grady and Archibald (2004, p. 174) who posit that "the four major topics in semantics are: (i) the nature of meaning; (ii) some of the properties of the conceptual system underlying meaning; (iii) the computation of syntactic structure to the interpretation of sentences; and (iv) the role of non-grammatical factors in the understanding of utterances." A well-established field of linguistic research, semantics accounts for the various principles underlying the meanings of expressions. These principles are explained in different theories of meaning in the literature: Meaning Postulate Theory, Componential (Decompositional) Theory of Meaning, Relational Component Theory of Meaning, Generative Semantics Theory of Meaning, Speech Act Theory of Meaning (pragmatic theory), Truth Conditional Theory of Meaning and Contextual Theory of Meaning. Given the functionality of language in society, and the complex, infinite and dynamic nature of meaning, semantics remains on the front-burner in the analysis of how language is used to mean in communicative situations. Gilbert Lazard (2004, pp. 394-395) notes that "language and speech are contrasted as a system and its manifold innumerable actualizations. A language is a system of potentialities. Practically each grammatical or lexical unit has a whole range of potential uses; in the dictionary, more often than not, a word has "several meanings": polysemy is normal and almost universal. On one other hand, utterances take place in particular situations, at specific points of time and space, among a lot of concrete circumstances. All linguistic units are supposed to assume a precise meaning (except in case of intentional or fortuitous ambiguity) and, last but not least, they often have a specific reference."

3. Pragmatics

Before the emergence of pragmatics, emphasis was on obeying linguistic conventions in language use. Pragmatics evolved as a reaction to the hitherto formalist approach to language study. Its origin is linked to the Greek *pragma* which means "deed" or "action". The *Encyclopedia Americana* (1994), defines pragmatics as "the subfield of the study of language that investigates the techniques by which language is processed for communication purposes." Crystal and Varley (1993) assert that "pragmatics is the study of the factors that govern our choice of language (sounds, construction, words) in social interaction, and the effects of our choice upon others. The subject includes the cooperation in our speaking behavior and it thus involves using language to convey politeness, intimacy, playfulness, rudeness, awkwardness and a range of other social attributes." Other scholars have contributed significantly to the task of defining pragmatics, establishing its thrust and scope. For example, Adegbija (1999) lists the scope of pragmatics:

   i)   The message being communicated;
   ii)   The participants involved in the message;
   iii)   The knowledge of the world which they share;
   iv)   The deductions to be made from the text on the basis of the context;
   v)   The impact of the non-verbal aspect of interaction on meaning.

Theoretical concepts in the literature are germane in defining pragmatics. Austin (1962) mentions vital pragmatic concepts:

- participants (users of language in context);
- speech acts (locutionary act which is an utterance with determinate sense and reference; illocutionary act which is the making of a statement, offer, promise, etc. in uttering a sentence by virtue of the conventional force associated with it; and perlocutionary act which is the bringing about of effects on the audience by means of uttering the sentence);
- context (the relevant aspects of the physical or social setting of an utterance or discourse);
- non-verbal communication (extra-linguistic communication);
- inference (the process of making logical conclusions from all that a particular context provides to arrive at what a speaker means);
- presupposition (facts that the participants of discourse take for granted in a particular context of communication); and
- shared knowledge (common background information shared by the participants of discourse).

Contemporary use of the term "pragmatics" is attributed to the philosopher, Charles Morris (1938), who attemped an outline of the general shape of a science of signs (semiotics). Within semiotics, he distinguished three distinct branches of inquiry: syntactics (syntax), semantics and pragmatics. On the whole, pragmatics is the context-dependent use and interpretation of language. It is concerned with verbal and non-verbal elements of communication.

4. Theoretical Framework

Ogden and Richards Theory of Meaning is suitable for this study because it captures the meaning-driven link between semantics and pragmatics from bipartite perspectives: sentential and extra-sentential dimensions of meaning. Leech (1981, p. 1) elaborately presents Ogden and Richards postulations on the concept of meaning:

Perhaps the best known book ever written on semantics, that which C. K. Ogden and I. A. Richards published in 1923, had the very title The Meaning of Meaning, and contained, on pp. 186-7, a list of as many as twenty-two definitions of the words, taking different non-theoretical starting points. Here … is a selection of the meanings given:

- an intrinsic property;
- the other words annexed to a word in the dictionary;
- the connotation of a word;
- the place of anything in a system;
- the practical consequences of a thing in our future experience;
- that to which the user of a symbol actually refers;
- that to which the user of a symbol ought to be referring;
- that to which the user of a symbol believes himself to be referring;
- that to which the interpreter of a symbol

a) refers
b) believes himself to be referring
c) believes the user to be referring.

5. The Nexus between Semantics and Pragmatics
5.1 Reference-making
As in pragmatics, expressions are representative in semantics (reference-making). The referent of an expression used either denotatively (as in semantics) or connotatively (as in pragmatics) is the entity represented or picked from the universe of discourse (our real world) when the expression is uttered. Such a referent can be a person, thing or idea. The sentence below is an example:

5.1(a)
<div align="center">These days, 419 is common among adults.</div>

In terms of conceptual or denotative meaning, "419" is a number. The encoder of the utterance (5.1(a)) demonstrates the pragmatics of cross-geographical/cross-cultural communication; in Nigeria, the expression is a cover-term for various fraudulent practices. In semantics and pragmatics, reference-making concerns literal and non-literal utterances, as in the use of figurative expressions and indirect speech acts. In discourse, phenomena presupposed are referents of shared knowledge to the participants. Thus, presuppositions are crucial in the understanding of logical reference-making in human communication. This point or concern is acknowledged by early language philosophers. According to Frege, cited in Levinson (1983), "concerns with presuppositions originate with debates in philosophy, specifically debates about the nature of reference and referring expressions. Such problems are at the heart of logical theory and arise from consideration of how referring expressions in natural language should be translated into the restricted logical language. The first philosopher in recent time to wrestle with such problems was Frege, the architect of modern logic. For instance, he said: If anything is asserted there is always an obvious presupposition that the simple or compound proper names used have a reference. If one therefore asserts 'Kepler died in misery', there is a presupposition that the name 'Kepler' designates something."

5.2 Felicity Condition and Truth Condition
Truth Conditional Theory explains the linguistic features that underpin the truth-value of propositions in linguistic stretches. The truth or falsity of sentential propositions is essentially the products of word choices and word patterning. Consider the sentence below:

5.2(a):
<div align="center">The Priest proclaimed Mr. Benedict and Mr. Troy as husband and wife before the storm began.</div>

The truth-value of the sentence or utterance (as in when uttered in a given context) is hindered by the expression "Mr." before each name of the couple. From the conventional meaning of Mr., one is made to doubt the truth-value of the utterance; from our world knowledge, a male adult gets married to a female adult, and the reverse is not supposed to be the case. However, in countries where gay marriage is not illegal, 5.2(a) rings true. From the perspective of felicity condition in pragmatics, 5.2(a) is felicitous when it is uttered in the right place with the expected participants: church, priest, couple and congregation. In this sense, truth-conditional semantics views utterances as being meaning-determining and action-determining in terms of truth-condition (semantics) or felicity condition (pragmatics). It is worthy of note that felicity condition transcends the appropriateness of circumstances for the performance of speech acts. It also concerns appropriateness of verbal categories used to convey illocutionary acts in such circumstances, given the fact that illocutionary acts are situational, speaking-driven actions. Searle (1976) proposes that there are just five kinds of actions that one can perform in speaking, by means of the following five types of utterances:

(i) Representative, which commit the speaker to the truth of the expressed proposition (paradigm cases: asserting, concluding, etc.);

(ii) Directives, which are attempts by the speaker to get the addressee to do something (paradigm cases: requesting, questioning);

(iii) Commissives, which commit the speaker to some future course of action (paradigm cases: promising, threatening, offering);

(iv) Expressives, which express a psychological state (paradigm cases: thanking, apologizing, welcoming, congratulating);

(v) Declarations, which effect immediate changes in the institutional state of affairs and which tend to rely on elaborate extra-linguistic institutions (paradigm cases: excommunicating, declaring war, christening, firing from employment).

Felicity condition and truth condition of utterances accentuate the external relations which speech act theorizing involves. Studies on propositional contents of illocutionary acts are instructive in this regard. Savas L. Tsohatzidis (ibid. p. 6) asserts that "given the prominence of the truth-conditional paradigm in recent linguistic and philosophical discussions of the semantics of natural languages, the distinction between accounts of illocutionary acts that are revisionary or non-revisionary with respect to their presumed implications on the proper treatment of propositional contents is probably the most significant distinction to draw when one considers speech act theory from the viewpoint of what might be called its 'external' relations. But there may be equally significant distinctions to make from an 'internal' viewpoint as well – that is, distinctions reflecting fundamental differences in the aims and methods of proposed analyses of how these analyses are situated with respect to the distinction between revisionary and non-revisionary attitudes towards truth-conditional accounts of propositional content."

5.3 Meaning as Cross-cultural Phenomenon

Pragmatics and semantics align with the idea that meaning can be culturally construed. The notion of "pragmatic failure" captures decoders' inability to process the meaning of an utterance, and this can be as a result of cross-cultural differences between the encoder and the decoder. There are expressions that are region-restricted. Such expressions possess "vitality" in such regions because they have relevance. Expressions only have relevance when they are engaged in human communication. Expressions evolve to name societal phenomena, and can only be operational in societies where such phenomena abound. This fact weakens the communicative functionality of speech act categories evolved by classical pragmatic theorists such as Austin (1962), Searle (1969) as well as Bach and Harnish (1979). Savas L. T. (ibid.) notes that "the various inadequacies of speech act theories have called for greater focus on theories which widely capture how language functions according to geographical locations in which it is used. In this way, speech act theory is being currently undermined from the outside by the growth of disciplines concerned with the empirical study of natural language use (as Austin indeed foresaw). There are two major traditions that concern themselves with the details of actual language use in a way pertinent to theories of speech acts. One is the 'ethnography of speaking', which has been concerned with the cross-cultural study of language usage." Acheoah (2011) evolves the term Geoimlicature to refer to expressions and practices which have restricted (regional) meanings. For example, in the Nigerian speech community, the expression "business centre" does not refer to "a commercial shop". It refers to "a business shop where computer services are commercialized". Interestingly, Nigerian expressions are being added to the English dictionary. Other expressions with Nigerian origin and meaning include "danfo", "okada", "mama-put" and "carry-go". Bach and Harnish (ibid.) contend that when an expression (e) is uttered by a member of a Linguistic Community (LC), it is uttered with Linguistic Presumption (LP) and Communicative Presumption (CP) for effective communication – facilitating the inferential process. The implication of cross-cultural perspective of the meanings of expressions in natural languages is obvious in the use of politeness markers, deixis and other components of the grammar of any language.

5.4 Plurality of Meaning

Arguably, pragmatic meaning of words and stretches can be understood from the perspective of the different contexts that impinge on the interpretation of an utterance: pragmatic context, social context, linguistic context nd psychological context; inferences made by the decoder of an utterance are not the same when each of these contextual nuances underpins the inferential process. From a pragmatic point of view, an illocutionary act conveys a pluralistic meaning: "primary illocutionary act" and "secondary illocutionary act". Consider 5.4(a):

I will give you 200 dollars if you pass the exam.

In 5.4(a), the secondary illocutionary act is "promising" (commissive) while the primary illocutionary act is "persuading". As a proof of the plurality of meaning, it is worthy of note that in semantics, meanings are captured with different terms: synonymy, antonymy, polysemy, hyponymy, entailments, paraphrase, etc. The plurality of meaning implies that native speakers of a language competent non-native speakers of a language may not be able to infer what is said when an utterance is uttered in certain contexts. The possible divergence between word meaning and sentence meaning worsens this situation. In some instances, the latter may be prior to the former. In other instances, the former may be prior to the latter.

5.5 Uptake and Perlocution

In communicative situations, utterances generate perlocutionary acts based on how the addressee understands or interpret such utterances (uptake). In promising (as in 4.3(a)) for example, if h (hearer) believes that s (speaker) is simply joking, there will not be any need to work hard towards passing the exam and get the promised money. In the pragmatics and semantics of language use, uptake and perlocutionary acts apply. As a matter of linguistic conventions, certain verbs are usually used in the performance of illocutionary acts. Bach and Harnish (ibid.) list verbs that are used in assertives, commissives, ascriptives, informatives, etc. When an illocutionary act is deployed in a communicative event, the addressee understands the semantics of the verb (uptake) even before being able to process the utterance as having a primary or secondary illocutionary act. Reacting to any utterance (perlocution) therefore depends on how it is understood by the addressee/decoder. Scholars hold the view that linguistic competence is instrumental in the pragmatic use of language (communicative competence). Acheoah (2015) contends that in discourse, the conventions of the Operative Language (the language being used by the participants in an on-going communicative event) determine illocutionary and perlocutionary acts. The relationship between word meaning and sentence meaning can be viewed in terms of how semantics relates to pragmatics. The Meaning as Mental Image Theory contends that the meaning of a word is the image it conjures on the hearer's mind when it is uttered. In this sense, words or expressions generate emotions which translate to reactions (sequels/perlocutions). Austin (ibid. p. 119) rightly notes that "saying something will often, or even normally, produce certain consequential effects upon the feelings, thoughts, or actions of the audience, or of the speaker, or of other persons; and it may be done with the design, intention or purpose of producing them … we shall call the performance of an act of this kind the performance of perlocutionary act or perlocution … It is characteristic of perlocutionary acts that the response achieved or the sequel can be achieved by additional or entirely by non-locutionary means: thus, intimidation may be achieved by waving a stick or pointing a gun."

5.6 Meaning as Sentential and Extra-sentential Elements

Expressions have external relations that "commune" with their conventional (conceptual) meaning in natural communication. However, speakers' choice of words is informed by illocutionary goals. Indeed, illocutionary act is speaker-meaning. Meaning can be understood as sentential or extra-sentential properties of communication when certain utterances or expressions are used therein. The following utterances are examples:

5.6(a):

> He is Maradona.

5.6(b):

> He is a Maradona.

5.6(c):

> The bachelor's wives are everywhere.

The use of article "a" in 5.6(b) communicates speaker-meaning. Although "a" is merely an article in the Operative Language (OL), it can be viewed as performing the function of deixis. Levinson (ibid.) opines that "the single most obvious way in which the relationship between language and context is reflected in the structure of language themselves, is through the phenomenon of deixis. The term is borrowed from the Greek word for pointing or indicating, and has prototypical or focal exemplars … Essentially, deixis concerns the way in which languages encode or grammaticalize features of the context of utterance or speech event, and this also concerns ways in which the interpretation of utterances depends on the analysis of that context of utterance." Maradona was a world-acclaimed soccer star, famous for his outstanding dribbling skills. A pragmatic (connotative) use of the name as in 5.6(b) means "a person who is not straightforward/a subtle person". Therefore, while 5.6(a) is an "informative" (speech act), 5.6(b) is an "ascriptive" (speech act) – giving a quality to the referent. In 5.6(c), word meanings (denotative meanings) of "bachelor" and "wife" (from "wives")) are ignored for pragmatic communication (sender-meaning). Acheoah (2011) captures this communicative dimension with the term "Pragmadeviant" (PD). 5.6(a), 5.6(b) and 5.6(c) reveal that meaning can be conveyed through sentential and extra-sentential elements of communication. While the sentential elements involve linguistic conventions/rules/structure, the extra-sentential elements are the phenomena addressed when expressions are used in utterances (speech act level). When a speaker's utterance conveys a non-literal proposition, discrete inference-strategies are used to infer what is meant. Levinson (ibid. pp. 268-270) submits that "an inference theory is needed to account for which interpretation will be taken in which context since idiom theory suggests that there should be a considerable comprehension problem in its application[1].

6. Conclusion

Semantics explains the structure of language from the perspective of sense (meaning) and reference. In pragmatics, the principle that underlie speaker-meaning (sender-meaning) when the formal properties of language are engaged in discourse, are brought to the fore. The nexus between semantics and pragmatics, as revealed in this study, is not incidental; the links capture to a large extent, the universality of pragmatic and semantic inference. The complexity and dynamics of language implies that it should be analyzed from different fields of knowledge (cross-disciplinary study) 2.

This study reveals the significance of semantic and pragmatic knowledge in human communication, given the fact that sender meaning is paramount in discourse. Patrick Griffiths (2006, p. 7) avers that "sender meaning is the meaning that the speaker or writer intends to convey by means of an utterance. Sender meaning is something that addressees are continually having to make informed guesses about. Addressees can give indications, in their own next utterance, of their interpretation (or by performing other actions …."

Discursively, this study establishes that the nexus between semantics and pragmatics revolves around the concepts of "meaning" and "referring"; in terms of how meaning is construed and approached. Conclusively, the interconnectedness between semantics and pragmatics operates in reference-making, felicity condition, truth condition, cross-cultural perspectives on "meaning", the pluralistic nature of meaning, uptake-sequel phenomenon, sentential and extra-sentential notion of meaning.

Notes

1. Levinson (ibid.) adds that "there are, therefore, a number of distinct inference theories, but they share the following essential properties:

- The literal meaning and the literal force of an utterance is computed by, and available to, participants;
- For an utterance-trigger, i.e. some indication that the literal meaning and/or literal force is conversationally inadequate in the context and must be 'repaired' by some inference;
- There must be specific principles or rules of inference that will derive, from the literal meaning and force and the context, the relevant indirect force;
- There must be pragmatically sensitive linguistic rules or constraints, which will govern the occurrence of, for example, pre-verbal 'please' in both direct and indirect request.

2. Corroborating the interdisciplinary perspective of the study of language, Charles W. Kreidler (1998, pp. 2-3) reports extensively:

Three disciplines are with the systematic study of 'meaning' in itself: psychology, philosophy and linguistics. Their particular interests and approaches are different, yet each borrows from and contributes to the others.

Psychologists are interested in how individual humans learn, how they retain, recall, or lose information; how they classify, make judgements and solve problems – in other words, how the human mind seeks meanings and works with them.

Philosophers of language are concerned with how we know, how any particular fact that we know or accept as true is related to other possible facts – what must be antecedent (a presupposition) to that fact and what is a likely consequence, or entailment of it; what statements are mutually contradictory, which sentences express the same meaning in different words, and which are unrelated …

Linguists want to understand how language works. Just what common knowledge do two people possess when they share a language – English, Swahili, Korean or whatever – that makes it possible for them to give and get information, to express their feelings and their intentions to one another, and to be understood with a fair degree of success?" This explains why in linguistics, the hyphenated disciplines explain language from varied purviews. By examining the nexus between semantics and pragmatics, this study attempts a cross-field investigation of language phenomena. The literature of both fields acknowledges the relationships in spite of the contentious aspects. For example, Leech (1981, p. 319) notes that "semantics is the level of linguistics which has been most affected by pragmatics, but the relation between semantics (in the sense of conceptual semantics) and pragmatics has remained a matter for fundamental disagreement. The central issue is: is it valid to separate pragmatics from semantics at all?" In a similar vein, Leech (1981, p. 178) posits that "linguists of whatever theoretical persuasion have always regarded the complexity of language to be such that it is necessary to set up more than one level of analysis …
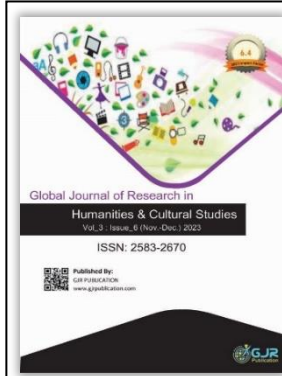
References

1. Acheoah, J. E. (2011). A Pragmatic Analysis of Ola Rotimi's Hopes of the Living Dead and Ayi Kwei Armah's The Beautyful Ones Are Not Yet Born. Ph.D Thesis. Department of Engllish and Literary Studies, Ahmadu Bello University, Zaria.
2. Adegbija, E. F. (Ed.) (1999). The English Language and Literature in English: An Introductory Handbook. Ilorin: University of Ilorin.
3. Austin, J. L. (1962). How to Do Things with Words. Cambridge: Harvard University Press.
4. Crystal, D. & Valey, R. (1993). Introduction to Languages. London: Whurr Publishers. Encyclopedia Americana vol. 22. (1994). (p. 514). New York: Americana Group Ltd.
5. Fowler, R. (1981). Literature as Social Discourse: The Practice of Linguistic Criticism. Bloomington: Indiana UP.
6. Geoffrey, N. L. & Michael, H. S. (1981). Style in Fiction. New York: Longman.
7. Gilbert, L. (2004). On the Status of Linguistics with Particular Regard to Typology. The Linguistic Review, 21, 389-411.

8. Kreidler, C. W. (1998). Introducing English Semantics. London: Routledge.
9. Levinson, S. (1983). Pragmatics. Cambridge: Cambridge University Press.
10. O' Grady, W. (2004). Semantics: The Analysis of Meaning. In W. O' Grady & J. Archibald (Eds.), Contemporary Linguistic Analysis: An Introduction. Canada: Pearson Education.
11. Patrick, G. (2006). An Introduction to English Semantics and Pragmatics. Edinburgh. Edinburgh University Press Ltd.
12. Savas, L. T. (1994). Ways of Doing Things with Words: An Introduction. In L. T. Savas (Ed.), Foundations of Speech Acts Theory: Philosophical and Linguistic Perspectives. London: Routledge.
13. Searle, J. (1969). Speech Acts: An Essay in the Philosophy of Language. New York: Cambridge University Press.
14. Searle, J. (1976). Expression and Meaning. Cambridge: Cambridge University Press.

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