

Linguistics and Behaviour Analysis in the Functional Conceptualization of Verbal Irony

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The aim of this study is to identify the concept of irony as expressed in the 1957 book by B.F. Skinner, *Verbal Behaviour*, and to enlarge it with the definitions of irony contained in the 1961 work by M.H.N. Paiva, *Contribution to a Stylistic Irony*. Skinner's concept of irony was interpreted using behavioural hermeneutics. Skinner's and Paiva's work complement each other; Skinner's concept of irony was merged into Paiva's definition of irony. The result shows that Skinner's irony can be conceptualized as a verbal behaviour under multiple control from stimuli and motivational operations and directed to multiple audiences with different functions. Paiva contributes by differentiating the five types of irony and the atmospheres that can indicate different and important functions of the ridicule that the irony generates. The conclusion is that this attachment contributes to the functional analysis of verbal irony and can point to where, how and why (for what) this behaviour is emitted with respect to the various facets of ridicule.

Key words: Irony, behaviour analysis, verbal behaviour, linguistics.

Lingüística y análisis del comportamiento de la ironía. El objetivo de este estudio es identificar el concepto de ironía como se expresa en el libro 1957 por BF Skinner, *Comportamiento Verbal*, y para aumentarla con las definiciones de la ironía que figuran en el 1961 el trabajo por MHN Paiva, *Contribución a una ironía estilística*. Concepto de la ironía de Skinner fue interpretado usando hermenéutica del comportamiento. El trabajo de Skinner y de Paiva se complementan entre sí; concepto de la ironía de Skinner se fusionó con la definición de Paiva de ironía. El resultado muestra que Skinner's ironía puede ser conceptualizada como una conducta verbal bajo control múltiple de los estímulos y las operaciones de motivación y dirigido a múltiples audiencias con diferentes funciones. Paiva contribuye mediante la diferenciación de los cinco tipos de ironía y las atmósferas que pueden indicar diferentes e importantes funciones de la burla que la ironía genera. La conclusión es que este apego contribuye al análisis funcional de la ironía verbal y puede señalar dónde, cómo y por qué (por qué) este comportamiento se emite en relación con las diversas facetas de la burla.

Palabras clave: Ironía, análisis del comportamiento, comportamiento verbal, lingüística.

In general, apart of Behaviour Analysis, language has been analysed as an “instrument” of communication, where the speaker's verbal behaviour exists independently (Skinner, 1957). This same analysis has been applied to the properties of language (for example, metaphorical) that are transformed into “used instruments” (“the metaphor”) to express ideas, thoughts and communication objectives. The same occurs with the ironic verbal property: verbal irony is “used” by the speaker.

Despite the emphasis on the supposed instrumental property of irony by most linguists, some have acknowledged that irony is also a manner in which a speaker behaves. In other words, irony becomes the speaker's behaviour when the speaker: 1) says the opposite of what he or she means (a popular definition of irony), 2) says something different than what he or she means (this is the first definition that has been identified as distinguishing itself from the popular definition of irony, as just saying something "different" instead of the opposite), 3) includes censorship with false praise and praise that stimulates censorship (a definition exposed by the philosopher Quintiliano, 35–96 CE, and very evident in the literature) and 4) mocks or teases (by definition, anything that looks like mockery or teasing, independent of the rhetorical structure) (Knox, 1961).

Knox (1961), for example, defined irony in terms of the speaker's behaviour (rather than emphasise it as an “instrument”), approximating the linguistic approach to behaviour analysis. Kreuz (1996) affirms that when people talk to each other, in spite of always “using” the figurative language, they behave in this manner to improve listener comprehension. This relationship with a listener is always evident in the linguists' approach: the ironist (speaker) acts in a context to which he opposes, criticising or discussing the topic without directly provoking to the listener. This may occur implicitly or explicitly, without a guarantee that the listener will be able to understand the irony. According to the linguistics approach, when this recognition happens, the irony can be confused with criticism and humour, however, *“it is good to note that irony, laughter and criticism do not necessarily correspond. The ironies are criticisms and can, in some cases, even cause laughter, but not all criticism or laughter has a connection with irony”* (Seixas, 2006, p.19). The connection, or lack thereof, depends on other variables in the context and audience, which is a key point for the study of irony and for behavioural analysts.

Seixas (2006) states that the recognition (comprehension) of irony by the listener cannot be guaranteed and that the *“allocation of ironic senses is based not only on the level of enunciation, i.e., what is said, but also on the situational and discursive environment in which the interlocutors and utterances relate”* (p. 20). This environmental explanation is important to analyse the functions of the ironic verbalisations. The ability to explain and analyse the environment (the context of the stimuli, which includes the audience) was the most precious legacy that Skinner (1957) left. The comprehension (by the listener) of the verbal behavior must be considered in the study of verbal irony as a part of this environment. Humour analysis has been used by behaviour analysts (Hübner,

Miguel & Michael, 2005) but there isn't a study that analyse the production and comprehension of verbal irony in this area.

Therefore, the objective of this paper is to analyse the concept of irony in Skinner's Verbal Behaviour (1957) and complement this concept with the main definitions of irony in a classic on this theme, Paiva's Contribution to a Stylistic Irony (1961). This study is to show that Verbal Behaviour Analysis can contribute to study irony and can be complemented by the linguistics explanations.

Studies about Irony

Currently, there is a large number of studies of irony (e.g., Zalla, Amsellem, Chaste, Ervas, Leboyer e Champagne-Lavau, 2014; Cameron, Hedman, Didkowsky, Tapanya e Cameron, 2013; Dennis, Simic, Agostino, Taylor, Bigler, Rubin, Vannatta, Gerhardt, Stancin e Yates, 2013; Reyes, Rosso e Buscaldi, 2012; Raymond e Gibbs, 2012; Pexman, 2008; Wilson, 2006; Ivanko, Pexman e Olineck, 2004; Gibbs, 1986, 1994, 2000, 2007; Hancock, 2004; Link e Kreuz, 2002; Rockwell, 2000; Kreuz, Kassler, Coppenrath e McLain 1999; Hutcheon, 1992; Kreuz e Roberts, 1994; Grice, 1989, 1996, 1998; Glucksberg e Keysar, 1990; Jorgensen, 1996; Giora, Fein e Schwartz 1998; Roty, 1989; Gerrig e Gibbs, 1988; Hutchens, 1960), and they all return to the content of the classic book by Hutchens (1960). In general, these studies explore knowledge areas around verbal irony, outside Behaviour Analysis.

Travaglia (1990) affirm that irony is an important element of humour. The third author (Carmelino, 2008) also analysed the explicit and implicit elements in the "opinionated statements" by President Lula before and after the 2006 election, concluding that the ironic and comic effects of these statements lose their effects "*as soon as they move away from the reader's memory*" (p.47). In the field of journalism, Seixas (2006) also analysed irony in a newspaper and pointed some clues about the "use" of irony by journalists in their professional performances; this study analysed the reasons for the "use" of irony in the newspaper and its principal role in printed media. Reyes, Rosso and Buscaldi (2012) showed in an experiment that the relation between irony and humour is very common for those who use social media as Twitter. The analysis showed that the humour is more suitable than irony; considering the topic "ambiguity", humour achieves ratios which always exceed 70% of accuracy, whereas irony hardly achieves ratios higher than 60%. In contrast, when considering the whole set of features, humour reaches up to 93% of accuracy, whereas irony markedly improves its score, reaching up to 90%. This may explain the complexity of understanding the verbal irony. Brait (1996) published a book about irony studied from the perspective of discourse analysis (classic, French) and said that irony can be explained by a philosophical or metaphysical principle. Philosophical, because irony constitute a way for humans to live; metaphysical, because

the explanation of irony should be in something beyond the physical or material life. In other words, irony could be explained only by inferences.

Despite the explicitness of the popular definition of irony, which suggests that is not necessary to create theories, scholars in the fields of Linguistics and Psychology have been involved in an effort to create theories about irony, because it can be misunderstood by listeners. Interpersonal situations in formal and informal contexts show that irony (in coincidences, erroneous predictions, and hypocrisies) is usually misunderstood (Gibbs, 2007). As an approach to analysing these misunderstanding, linguistic theories talk about “figures of speech”, “communication”, “knowledge”, sharing between talkers and listeners, ironic “clues” and “intentions”; psychosocial theories talk about “social attributes” involving irony. In behaviour analysis it comes to how people behave and which reinforces the ironic verbal behaviour of them. Raymond and Gibbs (2012) presented that ironic acts may not be as “deliberate” in their creation and use as is often believed, especially in the sense that ironic meanings arise from completely conscious states of mind.

In general, the focus of linguistic studies on irony has been the comprehension of ironic language “used” by the speaker. *“Since a verbal environment is composed of listeners, it is understandable that linguists emphasize the listener”* (Skinner, 1986, p.115). Kreuz and Roberts (1994) confirmed that the research about figures of speech in linguistics generally focuses on the comprehension and not the production of these figures of speech.

Many linguists assume that figures of speech have a fundamental role in the satisfactory explanation of communication, especially in regards to the role of listener in comprehension (e.g., Pexman, 2008; Kreuz, 1996). Communication can be unsuccessful when ironic sentences are misinterpreted by listeners. Linguistics has studied the elements that help with the comprehension of these figures, including irony.

Linguists have identified “knowledge” as important in the irony comprehension theory (Kreuz, Kassler, Coopernrath & McLain, 1999). The notion of knowledge as a possession is implicit in linguistics, when it is affirmed that a misunderstanding is often related to a lack of shared information that the speaker and the listener “have”. It means that the listener and the speaker must “have” at least some type of shared knowledge in their personal beliefs or their experiences. Some “intimacy” between the speaker and the listener is essential to obtain a perfectly understood comprehension of irony. Provided that the listener notices the incompatibility between speaker and context, he would be able to understand the ironic game “used” by the speaker. Their intimacy would improve this ability. Gerrig and Gibbs (1988) postulated that figurative language can be “used” to establish intimacy between the speaker and one or some listeners (and rule out others). It means that the irony can occur in the interactions between people who do not know each other; the objective could be, for example, to allow the speaker to say something without

being noticed. On the contrary, between friends, the goal could be to gain attention with humour or sarcasm. From the point of view of the listener, the irony discrimination also depends of some properties of the ironic behaviour. Kreuz, Kassler, Coopernath and McLain (1999) talk about essential elements that help the comprehension of the ironic sentence. They are called “clues” (gestures, tone of voice and face movements), studied by the pragmatics, that facilitate listener comprehension. When some of these clues are missing, the listener's ability to comprehend verbal irony is defaulted. According to these authors, people who tend to exaggeratedly “use” some formal properties of words indicate irony, depending on a context with physical and social stimuli. (For example, on a rainy day with a storm, when saying “Wow! What a won-der-ful morning today!” the noise properties of syllabication in won-der-ful indicate an overstatement; this meaning does not come from the word itself).

In this way, behaviour analysts can study linguistics; it is necessary to identify these formal details in speech and essential to analyse the audience context (called control by the listener in Skinner, 1957) of the speaker's behaviour. The dynamic of this interaction was illustrated by Kreuz, Kassler, Coppenrath and McLain (1999) when they described these details in context, stating that the words were spoken in a different tones of voice so that only the intended listener would understand the irony or were accompanied by gestures or face movements to magnify the effects of irony for one listener and not another. There are noise, motor and vocal properties that can work as clues. Before this description, Kreuz (1996) suggested that the adverbs and adjectives in ironic sentences are typically verbal clues, because they generally amplify the intentional value of irony with their inflexion (like the intensity of “never” in “I will NEVER be able to pay you for your help!”).

The functions of these properties were described by linguists, in general, in terms of “intentions” or “behaviours” of irony. Linda Hutcheon's theoretical analysis (1992) suggests that these functions transition between the minimum and the maximum affective modification of the listener, having two minimal functions (emphatic and decorative) and two maximum functions related (social inclusive and exclusive). In this sense, Hutcheon (1992) has a simple premise: *“that different attitudes generate different reasons for seeing (interpreting) irony or using (encoding) it, and that the lack of distinction between these different functions is one of the confusion and disagreement about the appropriateness and even the value of the trope”* (p. 220).

Using this framework, Kreuz and Roberts (1994) analysed the intentions of 158 students of Memphis State University that “used” (using the authors terms) figures of speech in their talks. With irony, specifically, the results showed the primary intention was to express humour (65%) and to demonstrate negative emotions (95%). They observed that the figurative terms are generally misinterpreted; however, if they were “used” correctly, they can dramatically improve comprehension (when compared with literal

terms). Irony (just like metaphor and euphemism) can be “used” by speaker to express more than one intention showing nuances. According to the authors, for example, irony would be sarcastic when the speaker's intention was to express something negative or humorous.

The studies and the theories of irony from social psychologists indicate that some social attributes, for example, the genre, can influence the production control or irony comprehension. Fussell and Kreuz (1998) argued that verbal comprehension is based in psycholinguistic processes and social interaction factors, marked by different types of these attributes. Ivanko, Pexman and Olineck (2004) studied the variability in the production, interpretation and processing of ironic sentences from some of these attributes. According to the authors, evidence exists that the speaker can differentiate the way that he “uses” the irony, according to his “tendency”, what the behaviour analysts call reinforcement history, and that variable indicators explain those differences, for example, the occupation and the gender of speaker.

Thus, a psychosocial process underlies this difference, because, according to Ivanko et al. (2004), some people who “use” irony more often in their speech and others are more sensible to irony comprehension because they have been ironic more frequently. However, a more basic process, the social conditioning of gender roles, can explain the differences in “use” of irony between men and women. Gibbs (2000) identifies, in his studies about gender, that men, unlike women, “use” sarcastic irony more frequently in conversations between friends. Jorgensen (1996) examined the effects of male and female gender on the perceptual-emotional aspects of irony and discovered that men are more likely to perceive humour in sarcastic irony than women; however, the women related that they feel more sensitive to and angry about this type of verbalisation than men. Zalla, Amsellem, Chaste, et al. (2014) presented a study that investigate the effect of occupational stereotype on irony detection in adults with High Functioning Autism or Asperger Syndrome (HFA/AS). The results showed that participants with HFA/AS exhibited no difficulties understanding irony confirming relatively preserved abilities to perform pragmatic reasoning tasks.

Hancock (2004) said that listeners respond “positively” or “negatively” (in behavioural terms, composed of a contingency of positive, negative reinforcement, or punishment/extinction), and the speaker's ironic sentences provided evidence of the listener's comprehension or incomprehension. The positive consequences (a simple smile or positive nod) indicate that the listener understood the irony correctly. The negative consequences are the opposite: the listener responds with a different answer than the ironic speaker intended. (This response can be a simple frown.) With these consequences, irony can help to improve communication functions such as the “expression” of a negative behaviour or the “use” of humour.

Of course, there are costs if the ironic phrase is misunderstood. Beyond the momentary imbalance in the relationship between speaker and listener, the bigger cost is the failure of communication. To understand these costs, an empirical study by Hancock (2004) analysed the speech of forty students that did not know each other. The students were separated into two groups and oriented so that they spoke to each other face-to-face and in a type of online chat. The conversation topics were programmed and available in lists made by researchers (one of the topics was “famous style”). The author identified that the participants tended to comprehend irony less when some variables were missing, in both face-to-face conversations and discussions mediated by computers. The social dimension seems to be an important variable, because the subjects tended to “use” more ironic sentences in conversations mediated by computers; as a possible explanation, the speakers may have felt more comfortable using irony in a computer-mediated discussion with people they did not know. However, the irony was better understood in face-to-face conversations. The author states that previous conversations provide more context to the speaker and the listener, which improves the comprehension of irony.

METHOD

This study is conceptual. The term “conceptual research” originated with psychoanalysts (Dreher, 2008) with the objective of evaluating investigative processes with the “use” of concepts that were “used” by them in their works and during their professional careers to validate the deployment of these concepts in their research. By studying a concept, the conceptual researchers are in fact directly manipulating empirical verbal data that do not have meaning in and of themselves (in the word, the concept), but this meaning ignores the connections between the researcher and the scientific community he belongs to. In this article, this source was reviewed in behaviour-analytics terms, especially using behaviour hermeneutics (Dougher, 1993; Borloti, Iglesias, Dalvi & Silva, 2008).

According to Teixeira, Júnior and Souza (2006), a “*concept*” (like irony, for example) can be defined as a class of stimuli “in which it is possible to observe processes of generalisation and discrimination intra and interclasses” (p.26) and in which both the verbal and nonverbal stimuli can be abstracted. In this conceptual study, verbal visual-written stimuli in Verbal Behaviour, as emitted by Skinner, were stimuli classes that evoked a generalisation of the irony “concept” in authors’ verbal behaviour. It means that concepts, in this case, the concept of “irony”, emerged from the verbal behaviour of the interested readers of the work. The verbal behaviour strategy responsible for the emergence of the concept of irony registered in Verbal Behaviour was called behavioural hermeneutics (Dougher, 1993; Borloti et. al, 2008).

Using the behavioural interpretation of concepts in verbal stimuli sets, we highlight an ironic concept in Skinner's work, i.e., our verbal behaviour under control of the verbal stimuli classes that make up the author's text. Therefore, we cannot affirm that we highlight the concept of irony in Skinner's work. We believe that the text is a stimulus produced and read, either at the same time or in different historical moments; therefore, we affirm that the conceptual research is: 1) empirical, because it describes the shape and the function of how we develops/creates a concept, under the control of the way the work's author supposedly develops some concept in a textual context of interest (of the authors and ourselves as readers-researchers); 2) historical, because it shows how our verbal repertoire is changed in different ways due to the influence of temporal changes in works by the same author; and 3) analytical-functional, because it describes the variables that control the emission of a "concept" in our verbal repertory. The second aspect is presented in research with more than one historical source by the same author (this is not the case in this study, but it can be seen in Borloti, 2003). The last aspect is that what we traditionally call the "use" of a concept; however, in this study, we use the expression "emission of verbal behaviour", necessarily, to reinforce contingencies involving the concept of a class of stimuli that emerged as part of our interpretation and comprehension as reader-researchers.

Summarising, the class of stimuli highlighted by a work that was a part of the conceptual research was the product of the verbal behaviour of the work's author, whose main objective is to shape our verbal behaviour as reader-researchers so we could compel ourselves to work from a coherent "concept" of the authors work (Skinner, 1957). To submit ourselves to this control, we put ourselves against (we visualised) the sentence-arguments as a register of Skinner's writing involving verbal stimuli as irony and sarcasm in the way to observe them directly (This method was not be applied to Paiva, 1961, because the principal objective of the work is directly present the definitions of irony in Linguistics). As a result of this observation, we (readers-researchers) started to issue new types of discriminative verbal repertoires to which we had to respond verbally; it means that we describe the behaviour of "creating a concept of the irony concept" in Skinner's work. Therefore, in this study, a sentence is understood as a grouping of answers, in this case, written by Skinner, that act as verbal-visual discriminative stimuli in control of the "orientation" of the formation concept of our behaviour (Place, 1998; Borloti, 2003). In general, the sentence also has an argumentative function: *"the proposition is a complex verbal response that comprises tacts or intraverbals modified by particular autoclitics"* (Terrell & Johnson, 1989, p. 36).

Based on this explanation, we will describe the methodological course that we, as readers-researchers, follow according to the principles of hermeneutic conceptual research (Dougher, 1993; Borloti et. al, 2008): 1) we read Verbal Behaviour many times as Skinner's verbal behaviour registry and search the occurrence of the

sentences-arguments involving the verbal stimuli irony and the textual elements, antecedents and posteriors functionally related to them (including other related words, such as sarcasm); 2) found examples that could confirm the regularity of these functional relations (generalisation/discrimination); 3) describe the control of the behaviour that produced the previous step, refining the discrimination and generalisation on which the concept formation in our verbal repertoire depends; 4) lastly, we describe why we understand the concept this way.

We selected Skinner's and Paiva's works for our conceptual research based on the relevance of their authors. The first, Skinner (1957), is characterised as a boundary, marking the advance of the behaviour analysts in relation to the language study, using the methods of pragmatism and contextualism. The second, Paiva (1961), was a pioneer in the study of the stylistics of verbal irony, defining types of verbal irony in an objective way, and has become a classic in the study of irony in linguistics.

Contribution to Irony Stylistics

Paiva's preoccupation with definitions made it easy to discriminate the concepts of interest in this study, according to linguistics. The work begins by defining the types of irony, and then defines irony atmospheres (which are the tones "used" by the speaker "*to express an ironic idea*", p.30). After that the study goes beyond language studies to define the transpositions (the different "uses" of irony), the dissonances of logic orders (the paradoxes, absurdity, and evidence, between other characteristics of irony), the value of neologisms (the opposition to the common sense and the creativity and innovation present in irony), the utterance, characterisation, expression forms, lexical enrichment and irony phonic values. The second part of the book discusses the processes of linguistic formation that are the origins of ironic words and, last, the facets of irony defined in the first part.

Irony types and atmosphere according to Paiva (1961)

First, it is important to point how the generic term irony is defined in Paiva (1961). According to her, the irony is "*simultaneously a spirit attitude and a characteristic process of expression*" (p.3); it is yet, "*(...) the rhetorical figure that consists of attributing to words the opposite sense of what they normally express*" (p.3). However, despite of the generic definition of the term, the author reveals that defining verbal irony with precision is very difficult and that different types and atmosphere of irony exist. She defines five types of irony as follows.

Pure irony is when what is said is the opposite of what is intended. It is the simplest conception of irony, denoting the "*dissociation between two realities*" (p.9): the one that is literally spoken and the one is spoken "between the lines." (When saying "Cute, huh!" to somebody that made a mistake, the reality "between the lines" is the critical

error.) Generally, there is an intention to ridicule the listener in the situation or the person involved in it.

Satirical irony occurs when the ridicule is intended to be comic. According to the author this *"embodies particular type and makes it ridiculous"* (p.13). The qualities became defects, and the defects became even more ridiculed. A simple example is a fragment of a Mário de Andrade's poem: "Beautiful girl well treated, three centuries of family, dumb as a door: a love!"

Dysphemistic irony is ridicule by contempt. In other words, the ironic speaker intends to show his superiority and, accompanied by this feeling, uses laughter as a spontaneous way to engender feelings of insecurity. An example of this type of irony *"consists of denying people the character of the extraordinary, unique and unrepeatable; it considers banal people as worthy of contempt"* (Paiva, 1961, p.18). For example, consider the use of diminutives to refer to a prince of some country: "Look! The little prince is going to marry a mortal!" In this example, the word "mortal" refers ironically to common person that is not royalty.

Restrictive irony is the ridicule to restriction, in other words, that *"pleasure in a reduction of the narrowing increasing amplitudes"* (p. 22-23), when the speaker, generally, "uses" themes such as the good, the big or the intense to refer to something or someone. As a way to ridicule his subject, Mendes de Carvalho, a Brazilian poet in one of his poems, reduces the superstructures and the socioeconomic bases of his country to the decimal scale writing: "Country decimal at all, rightly or wrongly, ten meters to our lives and ten planks to the coffin".

Finally, contour irony is ridicule by indifference; the irony responds to superiority with indifference. An example is referring to a leader this way: "Here comes the crowned, let us bow down".

According to Paiva (1961) the comprehension of this type of irony *"depends many times of the tone with which it is said"* (p.3), so that the effect to be produced in the listener by the ridicule is satisfactory.

In addition, there are five types of irony atmospheres (called "tone" by Paiva): 1) naive tone: that consists of saying something scathing with a harsh tone. (Generally, people who "use" this type of ironic tone are considered cynical); 2) rhetorical tone: which is emphatic and consists of giving the appearance of intense speech to banal; for example: a student responding to his teacher about why his notes in school are so bad: "I'm not dumb. It's because my brain can only retain useless information!"; 3) sacred tone: metaphors that are of a religious origin that have entered the current language field, such as saying that reading this article is a "blessing"; 4) scientific tone: that is the contrast between the fictitious importance of an object or a situation and its real importance. For example, consider the following conversation between Calvin and his friend Haroldo: Calvin: "it's unbelievable that so many people in the world are dying of hunger! And it

happens even in developed countries like ours! There are people being killed by hunger!” Haroldo says, touching his belly: “I really know what you are talking about!” Calvin says, frustrated: “No, you don’t!”; 5) familiar tone: present in serious talk, but said with familiarity; the speaker dispenses with ceremony and through fellowship and closeness to the listener, creates an environment of willingness and fraternisation of smiles (Paiva, 1961). For example, consider a joke between family members about some cousin that became pregnant earlier than expected.

These ironic atmospheres shows that the irony defined as “*the contrary to what something means is the most commonly used and adopted in daily and academic environments. However, as mentioned, there is another way to understand irony which is not covered by this explanation*” (Paiva, 1961, p.107). The greatest legacy of Paiva’s work was the extension of the common definition of irony.

Language according to Skinner (1957)

With a tradition of experimentally analysing behaviour, Skinner has demonstrated that it is possible to study verbal behaviour with the same base that is used to study non-verbal behaviour. The impact of the author's book occurred slowly, due to a misunderstanding of the interpretation (Chomsky, 1959) and a sophisticated and difficult approach (Hubner, Michael & Michael, 2005), which opposed the cognitive and/or mental frame of the previous thirty years of the study of language, leading up to the present day. In linguistics, this impact took almost three decades to emerge. Andresen (1991) in his article Skinner and Chomsky or 30 Years Later: The Return of The Repressed defends behaviourism as a peculiar form of language study and claims that the book Verbal Behaviour was a precursor to the area of linguistics called pragmatics. According to the linguist (Andresen, 1991), if we learned nothing else in the thirty years that followed the publication of the Skinner’s book, we definitely could learn the importance of variables as the context (of the control by environmental stimuli) and the audience in the explanation of verbal behaviour.

What was interesting about Skinner (1957) was that he rightly focus on the issue of verbal behaviour as something live and interactive to examine, which generates visual and hearing products. Verbal behaviour is operant behaviour reinforced through the mediation of the behaviour of other people (specially trained as mediators listeners), whose practices may be transcribed and represented as the lexicon of language.

Skinner describes verbal functions from a functional perspective-experimental, in which the verbal operant behavioural analysis is a unit of the language. The verbal operant is the functional relationship between verbal responses and variables controlling background (motivational and discriminatory stimuli) and consequences (stimuli amplifiers) to these answers. The verbal response is the dependent

variable in a functional analysis; it is a particular instance, and the operant is a class of answers (the independent variable); several operants form the speaker's verbal repertoire.

The mand is a verbal operant in which the response is reinforced by a characteristic consequence and is always under the functional control of relevant aversive or deprivation conditions. The antecedent variable that controls the mand is motivational (for example, say "water" when deprived of water and before a listener that can provide water as specific reinforcement). The command can be issued as a pure form, as in the previous example, as well as in smoothed mands (avoidance of the listener punishment) or extended: superstitious (under control of accidental reinforcement) and magic (under control of reinforcement that is unlikely or impossible).

The tact is controlled by a non-verbal antecedent stimuli, which can be partial/complete or concrete/abstract (a property). Control that emerges from a pure form of tact (such as saying "chair" against the object that is so called, in front of a listener who agrees with and reinforces what is right or acceptable to say arbitrarily) remain until they become an extended form (generic, metaphoric, metonymical and solecism).

The ecoic, intraverbal, textual, and transcriptive operants are controlled by verbal antecedent stimuli. The differences between them is that some (and not others) have formal correspondence (textual, ecoic and transcriptive) or thematic (intraverbal) between the antecedent verbal stimuli and verbal response (For example, consider "beer." Hearing someone say "beer" is an ecoic; saying "beer" hearing "fridge" is an intraverbal; writing "beer" while reading "BEER" is a transcriptive; and saying "beer" while reading BEER is a textual).

The consequential variables of verbal stimuli are the specific (only for orders) or generalised (for all others) operant amplifiers. According to Skinner (1957) the generalised reinforcement is what ensures the success of formal or informal speech. This can be explained by the fact that the reinforcement (arbitrary) applied to educational learning is essential to the culture's survival, for example, when educational learning gives its name to the objects, or when a speaker correctly repeats what he hears or reads.

Regarding the audience, Skinner (1957) defines it as an essential part of the situation in which the verbal behaviour occurs, namely the verbal episode. It can be represented by two or more persons, objects, or places, such as the speaker, with the role of listener "yourself", because in a given situation the speaker can react as a listener that automatically reinforces itself. The audience is nothing more than discriminative stimuli whose presence characteristically reinforces the speaker's behaviour. In this sense, different types of audiences can control different types of verbal responses (An example of this is the appropriate manner of speech— what types of words can be spoken in a formal environment, such as in a jury, in contrast with an informal atmosphere, such as the room of a friend's house).

According to Skinner (1957), it is very unlikely that there is an issue with verbal behaviour in a particular environment; there is an audience for this purpose (When apparently there is no audience, for example, when you pray to God or talk with elves, this is a story of learning with listeners). This situation can also occur in the presence of a listener that does not reinforce the verbal behaviour in an appropriate manner, preventing this type of behaviour from remaining. In this type of hearing, the author is named as a negative audience, because it does not properly reinforce verbal behaviour and, in other cases, punishes it. In this case, the consequence of a negative audience can be repression of the repertoire of the speaker, to the point where he ceases to behave verbally in the presence of that audience or avoid contact with her.

The multiple control definition presented by Skinner (1957) demonstrates very well that a single response can be controlled by more than one audience or more than one type of source control and that several response types can be controlled by a single audience or source of control. This type of relationship characterises the verbal mergers often present in puns, jokes and many verbal creations that may have (or not) an effect otherwise informed by the popular definition of irony. This can be observed in an impure tact or disguised mand that enables merging both controls ("water" said under control of sexual excitement and next to a listener that could "refresh" this excitement). These mergers can occur when multiple sources of stimulation work together, softening or intensifying the role of verbal operants.

Mergers, as listed above, can clarify the controls of verbal irony (and they are related to transpositions in ironies described by Paiva, 1961); a clear example is when a speaker issues an appropriate tact once the name given to an object or person fits perfectly in accordance with their characteristic properties (the very tall is nicknamed "post" or the mother-in-law "rattlesnake" has the name Naja, an Indian snake). The verbal relation, in this case, is a fusion of a metaphorical tact and a touch of a property of the stimuli (person or object named). The multiple audiences may also be characterised by this type of merger because it is controlled by more than one type of audience (as when speaking to a known and an unknown listener at the same time; or with an approving listener and with another who disapproves of what the speaker says). When two or more controls for operant distinct (tact, mand, etc.) audience controls fuse, this is also a multiple audience. For example, the listener's profession increases the probability of the evocation of an specific general repertoire, usually tacts evoked by some listener (in a conversation between psychologists, one of them says "behaviour" before some action); motivational variables or operants by the listener increase the probability of mand's evocation in that same repertoire (in that same conversation, a psychologist discusses "behaviour," wanting the other to clarify this concept).

Secondary Verbal Relations

The second order of operants are called autoclitics and are verbal units dependent on (and competing with) the first order of operants. Their function is the modification of the effectiveness of primary verbal behaviour, i.e., modifying the listener's action on the environment to which it relates this behaviour. The dependence on the first order operants is why the second verbal operants took the name of autoclitics from Skinner. This means that the speaker has their own behaviour under control, and that is what controls the production of additional verbal responses (Borloti, Fonseca, Charpinel and Lira, 2009). Thus, the autoclitic process will fairly evidently increase the performance of the speaker and can be the key to the production of irony. The speaker, as characterised by Skinner (1957), is someone who directs, organises, evaluates, selects and produces the primary and secondary verbal operants. According to Catania (1980), only the autoclitics require the discrimination of other verbal behaviours of the speaker (the primary verb or operants base) with a function to modify the effects of these on the listener in a "purposeful" attitude.

Borloti and Hubner's (2010) explains the role types (and sub-types) of autoclitics that facilitate the understanding of this verbal operant class. The descriptive autoclitic function is *"to describe for the listener the basic operant properties or conditions issued by the speaker"* (p. 22). All descriptive subtypes are under the control of basic operant properties. Type 1 describes the type of basic operant that accompanies the autoclitic to the listener; type 2 describes the state of strength (weak, strong) of the issuance of the basic operant that accompanies the autoclitic; type 3 describes relationships between the basic operant and another or the conditions for its issue; type 4 describes the speaker's emotional or motivational condition to produce the basic operant; type 5 qualifies or cancels the basic operant that the autoclitic came with (autoclitics usually come with a disclaimer such as: no, never, neither, etc.); type 6 describes that what is to be said should produce the same effect as (or is subordinately related to) what was just said, informing the listener that what is being said is said by the speaker, that it is an anticipation of the listener's behaviour, or that is accepted by the listener and by people in general.

The function of a qualified autoclitic is to modify the intensity or the direction of the listener's behaviour as to the basic operant that the autoclitic accompanies, denying or affirming the operant. It is under control of the properties related to the primary operant's qualities or from the circumstances that control themselves. The manipulative autoclitic is under the proper control of the aversive tendency properties or the listener's direction of behaviour. It instructs the listener to arrange and relate their reactions to the basic operant in a way judged appropriate by speaker. The quantifier autoclitic is under the proper control of the properties related to the basic operant quantities and the circumstances that control each other. The relational autoclitic is under the control of the related properties between basic operants and increases the probability that the listener

will behave in a particular way with the descriptions of the relations between basic operants. The compositional autoclitic is under proper control of combinations between the basic operants and instructs the listener to compose a verbal behaviour with specific properties given by the combination of the basic operants.

From this analysis, we can affirm that the functional analysis of language is different from the structural analysis, because the latter is focused on the descriptions of grammatical rules in the “use” of the words (Richelle, 1976). Otherwise, the functional analyses of language treat verbal behaviour and everything that is related to it, such as an operant that is a part of interaction and modification. The “beer” example above demonstrates that the same response can have different operant types and make it necessary to question the grammatical notion of the word as a speaker’s behaviour analysis unit and the notion of this word’s “use”, to ask for water and also to give a name to a specific liquid. In contrast, Skinner (1957) differentiates between functions in a verbal form that is emitted by a person and those that have relationships with the involved contingencies. So, a speaker that learned to say “water” to drink it needs to learn, separately, to say “water” to nominate it. There is no “acquired” word to be “used” in different occasions; that is a learned word because it is reinforced in a specific occasion (Sundberg and Michael, 2001). The behaviour analysis describes and experimentally demonstrates how a child learns to emit a word under the control of different (unrelated) variables responsible for the “desire’s expression”, having presented the “need” to nominate an object (Sundberg & Michael, 2001; Dahás, Goulart & Souza, 2008).

As the language signals has many operant functions with the same form, Skinner (1957) also questioned the affirmation that “the same thing” can be said in different languages because the functional relation involved can make the form of the response irrelevant. The autistic studies (Sundberg & Michael, 2001) have shown that learning a tact does not include learning the same form with another function. (The child that names “water” does not necessarily say “water” when she is thirsty.) What is evident from the verbal behaviour experimental analysis is that the different verbal operants have independent functional controls (Sundberg & Michael, 2001; Goulart & Assis, 2002).

Another important point for the objective of this article is the distinction that Skinner made between the behaviours of the speaker and the listener. The Skinner functional approach does not treat this question with traditional language studies terms such as messages expression and reception; he talks about emission and comprehension responses. That is because the language involves all the living parts of verbal behaviour discussed above. Sundberg and Michael (2001) remembered that these terms –expression and reception– “*are merely different manifestations of the same underlying processes*” (p. 704). The appropriate reaction to the verbal stimuli heard or read (that more directly comprehended by the senses, according to Skinner, 1957, p. 277) and verbal actions such as those received by the listener or the speaker could be alleged to be different

"uses of words". It means that the speaker simply behaves verbally according to his history and culture, which models his verbal behaviour during his lifetime; because of this, the behaviour analysts do not see sense in asking where would a verbal "appliance" be when the speaker is not talking (Skinner, 1957).

The concept of irony in Skinner

The functional definitions seen above are important for the researcher who is studying the aspects and contents of the practical scientific, juridical, religious discourse, or any other type of discourse. In the Skinner's scientific discourse, the study of the concept of irony begins from the emission of sentences-argument records contained in the Verbal Behaviour.

Ten sentences-arguments containing records of interest to behaviours emissions were found in this conceptual study using the word irony. The first record is in page 232, in the chapter where Skinner talks about "Multiple causation". The author said: "*Several types of irony exemplify this kind of multiple audience. Socrates encourages an innocent newcomer with a response which has one effect upon the newcomer (synonymous with We are anxious to hear what you have to say) but a very different effect upon the group (synonymous with Show us how poorly informed you are)*" (p.232).

The concept of multiple audiences is important to the formation of the radical behaviourist concept of irony in this citation: it is when the same group (or a single operant) is controlled by more than one audience at the same time. Skinner refers to irony as an example of a product of multiple audiences (veterans and freshman) that control Socratic discourse. Socrates' ironic phase is comprehended only by the listeners that have already participated in his seminars for a long time, while the freshman understands his phrase completely differently from the others. This also can be a clear example of debauchery, but the author does not use a tact like this in the behaviour properties above. We conclude that Skinner does not define irony on this page. However, he transcribes an example of a verbal behaviour that is under control of multiple audiences, which can be described as ironic, and asks the reader to discriminate irony's conceptual element: the controlled variable multiple audience.

Also on page 232, there is another instance of the word irony as example of a behaviour controlled by multiple audiences, which reinforces the discrimination of this element in Skinner's conceptualisation of irony. When the speaker emits the irony in contexts where ambience and audience are unknown, the probability that the irony won't be comprehended is larger than if the ambience and the audience were familiar (this is shared by linguistics, e.g., Fussel & Kreuz, 1998; Gerrig & Gibbs, 1988). A clear example is when Skinner quotes a scholarly speaker who, before an audience of academic teachers, receives a book from an intellectual that he does not like and says: "I shall lose no time in reading the book you have so kindly sent me". At least two audiences can be identified in

this example: the first one, who believes that the book's author is admired by the speaker (and thus comprehends the phrase as "I will read your book as soon as possible") and the second one, who knows the speaker criticises the book's author (and will comprehend the phrase as "I will never read your book").

Exemplifying the multiple audience, Skinner's (1957) text again corroborates the discrimination of this element of the analytic behavioural concept of irony. He writes: *"In dramatic irony, the dramatist puts into the mouth of a character a remark which has one supposed effect upon the characters on the stage and a very different effect upon the spectators. When Macbeth reassures himself of his invincibility by repeating the prediction that he will be unharmed so long as Birnam Wood does not come to Dunsinane, he has a very different effect upon the audience, to whom the expression is no longer synonymous with the impossible. The artistic achievement in dramatic irony requires that the spectator respond to some extent as a member of both audiences"* (p. 232).

So that the spectator can comprehend the irony, one has to be part of both audiences: character and spectator. In confirmation of this principle, the first author did not immediately comprehend the irony above, because she was not familiar with the tragedy written by William Shakespeare, cited by Skinner. As soon as she knew that in the end of the tragedy, the supposedly impossible event occurred, the first author of this article understood that what the character said before was not so impossible. Thus, she became member of both audiences necessary to comprehend the irony.

On page 233, the word mockery seems to reinforce Skinner's concept of irony with the multiple audience concept: *"In one form of mockery, the speaker's behaviour appears to be strongly under the control of one audience but is so extravagant or outrageous to a second audience that the control exerted by the first is seen to be spurious. Let us say that a critic is to review a new play by the wife of the editor of his paper. What he says is in part determined by the play he sees, but its special effect upon his employer is not irrelevant. By resorting to fulsome praise, he may satisfy the latter contingency, yet salvage his reputation as a critic with his colleagues and with part of his public who, detecting the extremity of his review, will draw another conclusion about his reaction to the play"* (p.233).

The property of multiple audiences is essential in irony's function in the form of mockery, as is the concept in this example above. The critic can emit superlative adjectives towards the boss that convey the opposite of his true satisfaction with what his wife wrote. On the other hand, to friends and lectors, the compliment of the boss's wife's text is an implicit criticism, a mockery or debauchery. Those who are more familiar with his verbal behaviour will understand the irony that, for the journal's editor, was emitted as a huge and lovely irony.

Completing the topic of multiple audiences, Skinner's concept of irony (1957), by this type of multiple control, is very evident when he states that *"Fable, satire, and*

allegory resemble the behaviour of the speaker who talks to someone 'through' a second listener" (p.234). Hence, according to the author, satire, fable and allegory are types of irony. The speaker's responses under the control of consequences for a first audience will produce different consequences in a second audience.

Satires are the extension of tact (metaphors and metonymies) appropriated only by one of these audiences. The author explains this function when the behaviour of a writer is under the control of two audiences simultaneously: the adult and child audiences. From the practical point of view, the part of the satire directed to the child as the audience acts like an additional guarantee against punishment, but the two audiences are important to the satiric effect. The writer does not have written only to the second audience, and an innocent member of this audience will not "get that". The reader that appreciates the satire must be member of these two audiences (p. 233).

The allegories –also formed by many metaphorical or metonymical consecutive tacts that, by allusion, tact a different context stimuli from that one that they seem to tact– differ from satires in the aversive control point placed by the audience. While one of the two audiences (the negative audience) of the satire can punish the satirical behaviour (even with misunderstanding and bad comprehension), the allegory do not involve punishment by any of the audiences involved because "*the strategy of the allegory is to induce the second audience to respond with appropriate behaviour to the first*" (Skinner, 1957, p. 233).

Under the same topic, on the page 239, Skinner points to other multiple sources of power in the control of irony, especially that irony with a comedic effect. When he writes the section "Multiple Causation in Literature", he affirms that: "*Some of the best examples of multiple sources of strength are puns and other forms of wit. The effect upon the listener or reader (see the following chapter) may be amusing or delightful, particularly in a period in which punning is fashionable, or it may share the sober profundity of dramatic irony*" (p. 239).

Regarding that the sources of power that the author refers to are the control of environmental variables intensities (antecedent stimuli and motivational operations) in which the speaker behaves ironically. What Skinner says about puns can be paraphrased to show the importance of the strength of the controller variable in a deeply creative irony: "*The difference between good and bad puns seems to be just the difference in the relevance of the variables. In a "far-fetched" pun one source of strength would ordinarily have no effect. However, if behaviour due to multiple sources is specially reinforced if the speaker is applauded for punning, for example the feeble source gets its chance*" (p. 240).

Therefore, we can abstract another element of Skinner's concept of irony: multiple causation by antecedent multiple stimuli and motivational variables can control

the production of good and bad irony, dependent on the fact that the listener comprehends the effect of these stimuli with a different strength in the control of irony. The reinforcement consequences provided by the listener can maintain even a bad ironic repertoire (because is under control of weak or irrelevant sources).

In the “Tricks of Strength” section on page 281, this is another sentence-argument that, more specifically, seems to be an attempt by the author to define irony. Subsequently, Skinner treat irony as one of five “tricks of strength” of a speaker that change the strength of listener's behaviour other than the comprehension of what was said, and includes some examples. The irony allows the listener to produce an answer (in general, but not exclusively, contrary to what was said).

In irony or sarcasm, for example, a statement is made which is obviously untrue or the opposite of a true statement: a troublesome difficulty leads to “*A pretty fix and a personal injury to Very kind of you, I must say*” (p. 281).

Although he does not directly define irony, we can discriminate a concept of irony in Skinner in which the nonverbal stimulation is an important variable in the control of the ironic behaviour. This behaviour makes the listener understand that in a context of determined nonverbal stimuli, what the speaker says must be under the control of this context that compels him to say the opposite. Thus, the affirmation sounds to the listener (or speaker) “obviously false” or “opposite to the truth”, generating the effect of a ridiculous variation (ridicule, mockery, comedy, derision, bickering, etc.). The word sarcasm was used again on the page 154, indicating the property of the ironic behaviour that makes it sarcastic due to a reinforced consequence (in general, the ridicule) that can be aversive to the listener: “*Sarcasm is called sarcasm just because it is biting. The scientist may publish an experimental result a little more quickly if it upsets the theory of a rival. All of this is likely to occur under circumstances in which any injury inflicted upon the listener can be shown to be reinforcing. (Why such an event is reinforcing lies beyond the field of verbal behaviour itself)*” (p. 154).

Skinner affirms that the sarcasm is something inopportune, boring, and scathing that causes discomfort. Therefore, from the concept of sarcastic irony we can infer a behaviour that is positively reinforced by someone (that can be the listener as well). The scientist publishes his results rapidly not because this brings benefits to the scientific community, but primarily to excel with respect to his rival. The reason why this behaviour becomes reinforced for the scientist is beyond sarcasm; it is, for example, in the history of the relationship to his rival.

Attaching Skinner and Paiva Concepts

From Skinner's conceptualisation and Paiva's definitions of irony, we understand that both authors share a conceptualisation of irony that partially includes its universal meaning, in other words, the opposite of what was really said, that can be

functionally called pure irony. In relation to the types of irony, Skinner, in a few pages, only wrote about pure irony (aiming to say the contrary), dramatic irony (irony emitted specially in the dramatic arts and literary products) and a few verbal phenomena that could be types or subtle forms of irony (satire, fable, allegory, sarcasm, debauchery, etc.). Paiva does not define dramatic irony directly, although she makes reference to it in her book. However, she describes the ridicule inherent in different types of irony, which can be useful to the behaviour analysts in the studies of nuances in the ironic verbal behaviour.

It seems that Skinner was interested in ensuring the lector's verbal behaviour was under the control of certain conditions, with the irony properties as a method to abstract the concept of verbal irony. In this way, the verbal irony can be functionally conceptualised as verbal behaviour under multiple controls –multiple audience and stimuli (especially nonverbal) and motivational operations under these multiple stimuli and audiences– with a function to let the listener produce an answer (generally, the contrary to what was said). The nuances of the consequences of ridicule from the audiences will allow the classification of functional subtypes of irony: sarcasm, satire, allegory, cynicism, etc. The audience that is ridiculed (with or without humour) or the involved situation may or may not consequences under other audiences.

The context of the irony control, according to the types and atmospheres defined by Paiva (1961), is extremely important to a functional behaviour analysis. The same quoted above must be considered in studies with behaviour analysis. As was shown by Messa (2011), when mixing them with what Skinner called verbal operant of second order (autoclitics), the function of these autoclitics is to maximise the effects of the primary operant upon the listeners. These operant, accompanied by the atmospheres of irony, characterise the common attribute of an ironic phrase, the ridicule (what is popularly known as “the way somebody said something”), and allow the researcher to deepen his explanations of the irony comprehension questions by the listener and its production by the speaker (although the speaker and listener can be the same person).

When the definitions of irony presented by Paiva are submitted to the functional analysis by Skinner, the function of the ridicule is more evident. Concerning satire, Skinner shows a special emotional effect: avoiding the punishment by the intensification of humour. In dysphemistic irony, it is understood that Skinner explains this behaviour as having the function of avoiding the contemptuous consequences by the tact emission from one of the involved audiences. Restrictive irony, to Skinner, has the function of avoiding the consequence of exaggeration in the emission of tact related to one of the audiences. Finally, contour irony, to Skinner, has the function of avoiding the consequence of the indifference tact from one of the audiences. The production of this type of verbal repertoire with ridicule is explained by environmental variables responsible for their functions, given primarily by their subtle consequences from at least one of the involved audiences.

The listener's comprehension of this repertoire can be inferred in three ways (Skinner, 1957, p. 277-280): the listener 1) behaves non verbally in an appropriate way to the stimuli that controls irony production (for example, throws away an object with a property that has been tact as useful by the ironist); 2) verbally repeats the stated irony; 3) describes the variables that could be responsible for producing irony itself. The conclusion that can be drawn from these three types of irony comprehension is that only together they are able to show that the listener's behaviour indicates complete comprehension of the irony. According to Skinner, the third way indicates a larger depth of comprehension.

In this context, all of these explanations can be highly regarded to study irony production and comprehension in many ways. For example, this attachment (Skinner and Paiva) will be the base of a study by Messa that will analyse the irony production by professionals (screenwriters) with the objective to investigate the motivation by the speaker to produce a text containing irony. Another kind of analysis that has been made is the comprehension of irony by adults and adolescents with the objective to investigate the difference of comprehension in both ages and what kind of emotional consequences irony can produce above these two types of audience. In this way, Cameron, Hedman, Didkowsky, Tapanya and Cameron (2013, p. 189) explore the types of verbal irony employed by resilient youth in spontaneous conversation and examines how they use this irony to navigate potentially challenging psychosocial terrain. The adolescents in this study spontaneously used many types of irony to mute criticism and avoid embarrassment. Those, who were thriving under adverse circumstances, used irony in a positive way to facilitate affiliation with their friends and family.

Concluding, the Analysis of Verbal Behaviour and Linguistics can contribute to study in an amplified way not only what irony means but also why people “use” it and what impact it can bring into people's lives.

CONCLUSION

Many studies of irony have been conducted in recent years. However, there has been no reference to Behaviour Analysis in them. Despite of this, the work of behaviour analysts on the subject should consider these many productions in other knowledge areas.

This article helped conceptualise verbal irony according to the behavioural analytic perspective: verbal behaviour under multiple controls: multiple audience, stimuli (especially non-verbal) and motivational operations from these stimuli and multiple audiences with the function of letting the listener produce a response (in general contrary to what was said and almost always with ridiculous appointment). The tone can be seen as one of the irony characteristics that relate to the focus with which the speaker conveys their speech to the listener. In other words, it demonstrates the function by which the

speaker produces the irony: mockery, disparagement, intimidation, and ridicule in various forms.

Ridicule is a commonly reinforced consequence of irony, and the property of these consequences defines the types and atmospheres of irony, as outlined by Paiva. The listener mediation of that ridicule plays a crucial role in each type of irony. After understanding the irony, the listener must mediate their understanding according to the stimulus context of control and may transition between their function as a listener and another audience function. This transposition only occurs for controls of multiple audiences acting on both speaker and listener. When the behaviour of the listener tells the ironic speaker "I understand your irony", the irony is modifying the listener's behaviour, as it also comes under the control of the peculiar strength of an ironic response in relation to the multiple sources of its control. Thus, "I understand" reports that "my behaviour is also under control of the variables that control the speaker's behaviour" and therefore "I could have said the same thing if I also wanted to produce the same consequences".

The functional analysis of irony in various speeches should be made in the light of the behaviour analysis and analysed contextually by Behavioural Discourse Analysis (described by Borloti et al., 2008, 2011, and applied by Messa, by focusing on irony in legal discourse) to begin the difficult task of thumb describing what Skinner and Paiva started, both in producing and understanding verbal irony.

Skinner's formation of the irony concept in the verbal repertoire of researchers were under the control of the rules that define the operation and are controlled by the consequences of having Skinner in the repertoire for understanding the author's text. The regularities of self-observation of the controls of understanding emerged as a verbal class, which includes Skinner's concept of verbal irony, from possible operations: tact (for example, multiple audience), intraverbal (for example, the quote from Shakespeare) and autoclitic components of the data taken from Skinner's text (for example, the quote about sarcasm). As a consequence of multiple controls, the concept description is also under the control of the motivation study's conditions and themes and the effects of this study on your readers.

In any case, ironically, the functional analysis can point to the analysis of irony in the same manner as the cognitivist analysis when one cognitive process includes factors such as mergers, verbal products, and/or multiple controls. According to Seixas (2006, p. 65-66), the cognitivist studies "are interested in explaining the construction process as cognition, which implies the consideration of not only the language mechanisms but also the participation of the context." In part, precisely analysing the context is what behaviour analysts are interested in; on the contrary, they do not give as much emphasis to what cognitivists call "cognitive or mental processes" because the whole process (cognitive?) of irony "uses" is seen as under the control of behaviour and environmental aspects and, therefore, capable of being empirically analysed.

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