

# APPROACHING THE SCIENTIFIC METHOD IN LITERARY STUDIES: ON THE NOTIONS OF FRAMEWORK AND METHOD (AND THEIR APPLICATION TO KURT VONNEGUT'S *SLAUGHTERHOUSE-FIVE*)<sup>1</sup>

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## 1. Introduction

One of the main problems that academics in the Humanities may experience is the low esteem in which the quality of our work is sometimes held, not only by our students but by colleagues in other disciplinary domains and also by the academic and political institutions that provide the 'scientific' domains with funding to the detriment of research and teaching innovation in the Humanities. We are often told that this is so because we do not show sufficient scientific rigor, meaning by that our discipline-specific lack of application of the so called 'scientific method', a procedure that, since the times of the Enlightenment has imposed a method of academic analysis characterized by the deployment of a systematic, well-developed number of strategies from which scholars should not depart when validating the hypotheses derived from observation of facts. The effects of such low evaluation often impinges negatively on our budget and, more importantly, on our visibility in the academic world. Thus, 'method' is a key issue in the scholar's work. But, as rightly argued by Gross (1990: 85), the difference between the humanities and the more 'scientific' fields is that experimental approaches in the sciences domain are inductive (i.e. "a series of laboratory or field events leading to a general statement about natural kinds"), while approaches in the Humanities are deductive; the student or reader is "presented with a series of deductions whose conclusions imply confirming observations" (1990: 85). Whether we choose one type or the

other, applying a method is a basic key for carrying out the analysis of the facts or corpus under exploration and its presentation in the classroom.

In experimental research, scholars are expected to develop a logical structure of analysis where the working hypothesis, based on the literature review, is presented at the beginning of the research proposal, together with an explicit statement of the method for carrying out the analysis. Once the analysis has been completed, researchers highlight the main findings, discuss their work in relation to previous research, and support their conclusions on the basis of both the results provided by the application of the method and the interpretation of the results according to the underpinning theoretical framework. Such evidence can either validate the initial hypothesis or deny its validity. Unresolved issues and suggestions for future research tend to be explicitly stated as limitations in the work (obviously because of the provisional quality of scientific facts). As a result, middle ground is not acceptable for the results and is, therefore, rejected.<sup>2</sup>

However, the field of Literary Studies falls under Becher and Trowler's label of 'soft pure science' (as is also the case of history or anthropology, for instance) because of their particular ethos, defined as "reiterative, holistic, concerned with particulars [...] personal, value-laden" (2001: 36). Accordingly, it is hard, if not impossible, for scholars in the field to apply the scientific method in their teaching and publications following all the premises indicated above because the facts explored are frequently of a more elusive nature and they cannot be mathematically measured or tested. On the contrary, the facts under exploration are built upon a network of ideological implications, a characteristic that might lead novice scholars of Literary Studies to reach what only qualifies as liminal, hybrid or inconclusive views and results. Initial hypotheses may result only in further hypotheses or provisional results open to the questioning and revision of other peers in the field. In this respect, it is worth noticing John Swales' contention (2004: 207-40) that in the science fields, researchers tend to use the so-called CARS (Create a Research Space) model, which explains the competitive nature of the field. However, work in the humanities tend to adhere to the OARO (Open a Research Option) model. Hardcore scientists notwithstanding, Swales argues that opening a research option also helps to make advances in the field in that it contributes to a better understanding of the complex nature of the things we see. However, while in agreement with Swales' views, the OARO option can be misleading. This rhetorical model—deductive by nature, as stated above— involves the following: a) it offers a line of inquiry, b) it discusses current problems, or c) it expresses interest in an emergent topic. These possibilities may merely lead researchers and teachers in the field to description and divulgation of the obvious, without considering the application of a method and a framework.

Paradoxically, the enduring attraction in Literary Studies of hypothetical and middle-ground results has also been sustained in the last fifty years by the advancement of scientific research in the field of physics, which has offered strong support to the notion of postmodern ‘uncertainty’ (Nadeau 1981: 17-64; Solomon 1988: 15). Scholars in literary theory or in historiography, for example, have been persistently stressing the uncertainty of existence and the problematization of human life, social options, and moral consequences of literary or historical phenomena. That is to say, they have been doing just the opposite of what is expected of a hard-science researcher. Consequently, our work has not been taken seriously enough by many academics in other scholarly areas and often not by our own students. Possibly, in our field we may not expect to come to definitive views on the human condition but at least we should consider the need to study and teach our corpus following a logical structure of analysis that may enable us to reach a sustainable, even if only partial understanding of the corpus and topics we analyze.

In the more specific case of English and American Studies, at least as they are now understood in many non-English speaking European countries,<sup>3</sup> we have to further differentiate the work being done by two different groups of academics (Becher and Trowler 2001: 14). On the one hand, there is the field of English Linguistics (applied linguistics, linguistics and language acquisition, computational linguistics, lexicography, pragmatics, etc.); while on the other lie the fields of Literary and Cultural Studies (including American, British, Post-colonial, Film, Gender, Queer Theory, etc.). Scholars belonging to the first group are shifting their place to become members of the community of soft sciences; nowadays some if not many of them may question their classification in the field of the Humanities because of the experimental quality of their research.<sup>4</sup> Meanwhile, academics dedicated to the teaching and study of culture and literature may still be considered to carry out a type of research that is “not scientific enough” because, as is common belief, they do not explicitly apply a well-knit methodical approach of the type that may bring about convincing, even though debatable, well-argued lines and results for their teaching and research. Through lack of awareness or insufficient emphasis on methodology the job of some novice academics often merely involves describing plots, listing writers who are becoming famous here or there or supporting arguments as obvious in our political context as the need for equal rights for everybody. The lack of analytical rigor of such arguments may eventually lead to inconsistent teaching approaches and to rejection from publishers or funding authorities because they tend to neglect the principle that in the field of Literary Studies any research model should also be based on a rigorous framework and on the use of a clear methodology. Descriptions and digressions are not sufficient *per se* unless they are supported by a well-knit argumentation based on evidential facts

(quoted examples, use of plausible sources, etc.) and on the interpretation of those facts using a sustained theoretical framework and an appropriate methodology.

What can be understood as a subjective approach to the object of study is perhaps still too common in teaching and publication in the Humanities. What seems to be most striking in this matter is that even for novice academics in the field of Literary Studies it would probably not be too difficult to adapt their work to the demands existing in other sciences. Scholars in the field, then, still have to reach results by importing and adapting, when necessary, the rigor and methodology of the hard sciences (Peer, Hakemulder and Zyngier 2008; cf. Heiman 2013: 107-08).

The specific aim in the rest of this essay is to explore some ways to clarify the meaning of the notions of ‘Theoretical Framework’ and ‘Method of Analysis’ for the field of Literary Studies, as these two concepts often seem to be confused or even ignored in the classroom and in research proposals. In clarifying these yet unresolved issues for the field, this paper sets out to contribute to improving teaching strategies as well as increasing rates of approval for research projects and other academic proposals. Later, the essay presents an example of the working of these two notions applied to Vonnegut’s well-known novel *Slaughterhouse-Five*.

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## 2. Theoretical Framework and Method

Broadly speaking, we may tentatively define the framework of a contribution in any scientific field as the number of theoretical assumptions or approaches from which the scope and subject of one’s study can be defined and the data can be interpreted (see note 2). However, in the shifting sands of literary analysis the issue is more difficult to tackle. If, as contended earlier, the facts explored in literature studies are frequently of an elusive nature and they cannot be mathematically measured or tested, what sort of frame should we use? As also indicated above, our objects of study—i.e. the texts or concepts that constitute our corpus—are always built upon a network of ideological implications. Therefore, a theoretical framework in our field represents the ideological assumptions from which somebody contemplates and evaluates certain given aspects of life and history (the corpus), assumptions that are established by a number of theoretical works written by the founding parents of the framework or theory and later revised by other academics. Of course, such a definition necessarily demands a preliminary clarification within the scope of our field: the use of a framework affects at least two agents, the scholar and the creative author object of the analysis, and both agents do not necessarily have to share the same framework. Furthermore, nowadays writers of creative literature are frequently familiar with critical theory and apply it to their works. Therefore, the first issue academics should become

aware of is the need to avoid confusing their own theoretical framework with that of the author they study. Accordingly, then, two types of activities should be differentiated even if both can be found in the same piece of research: the first would be to apply a particular framework to the understanding of the target work. The second would try to unveil the frame—and, therefore, the ideological implications—within which the creative author understands and represents life in his/her work.

At this juncture, we can identify a number of theoretical frameworks currently used in Literary Studies. Above all of them still stand the globalized political perspectives known as Capitalism and Marxism, which Lyotard famously associated with his notion of *métarécits* (master narratives) in his influential essay on the postmodern condition (1979). Since the turn of the 19th century, other more restricted frameworks have come to the fore from which both creative authors and academics have approached their interpretations of life: Modernism, Structuralism or Feminism are among the most relevant ones, together with a broader spectrum of intellectual frames that have been amply developed since the 1960s, such as a new wave of Feminism, as well as Queer Studies, Post-colonial Studies, Psychoanalytical Criticism in different versions (Freudian, Lacanian, Post-Lacanian Feminist), Myth Criticism, Eco-Criticism, Studies in Masculinity, Identity Matters, Chaos Theory, and, more recently, other (post-)poststructuralist ideological positions such as the Turn to Ethics or Trauma Studies. Obviously, borders between them are not clear-cut due, as already stated, to the specific ethos of the field. In Literary Studies, theoretical frameworks can be combined or complement one another, and so lead to multidisciplinary approaches to literature and culture. The possibility of a ‘Post-Lacanian Feminism’ has been already mentioned, for instance. Frameworks, even if they are self-contained, may merge with other frameworks in order to provide more integrative lines of enquiry or more accurate interpretations of the corpus under analysis. However, even when that happens, multidisciplinary frames of reference should be clearly indicated in the classroom, as well as in every academic paper or proposal, as these are the foundations giving critical support to our views.

The different theoretical frameworks that have been cited so far in this paper involve a perspective or world-view from which either creative authors or scholars, or both, contemplate the world and, more specifically in the case of criticism, the data under examination. It is from this world-view that academics also draw personal conclusions. This indicates that the framework is a basic concept for understanding the type of final observations we may reach and teach our students but it also supports the view that there might be a plurality of answers to the same problem whether it be in real life or in literature. Answers are always deeply

associated with the scholar's—or the creative author's— initial framework; if the framework changes, the tenor of the results also changes. In this sense, then, there is not just one possible and categorical answer to every question raised in literature or in culture but myriad lines of enquiry. However, in adhering to this 'Open a Research Option Model' we should not forget that the results should be consistent with the referential framework the scholar uses. Obviously, one does not expect a feminist critic to teach and analyze a certain text and conclude that men are naturally wiser and smarter than women. From there, it follows that the tenor of the scholar's results also supports the frame she or he is using.

Academics aware of the frame from which they are going to interpret the data must also opt for a given analytical tool, or method. A method is not the same as a theoretical framework, even if the choice of the one may lead to the implementation of the other. The method can be defined as the specific set of strategies or analytical tools that scholars deploy to carry out their textual—and ideologically framed—analysis. Of course, in the field of Literary Studies a method is also found in the works of the author the scholar selects for conducting their study: different authors use different methods to accomplish their intended aims, and the evaluation of such authorial strategies may also constitute the subject of teaching and research. In class or in a critical work it is important to define the scholar's analytical method but also to reveal and analyze, if necessary, the method authors under scrutiny have used to write their work. Scholars should clearly state their own methods of analysis and differentiate them from the methods used by the authors they study.

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To illustrate the distinction and application of the concepts of theoretical framework and method we may resort to notions pertaining to psychoanalytical criticism. Psychoanalysis is a method devised by Sigmund Freud more than one hundred years ago to cure mental diseases. Why is it, then, that there was an earlier mention in this paper of 'psychoanalytical criticism' as a referential framework? The reason is that psychoanalytical criticism provides a perspective of a human being whose actions are deeply related to unconscious factors that she or he—student or reader— needs to discover in order to mitigate the effects of mental problems or distress. However, the number of strategies used by actual psychoanalysts to enable those unconscious forces to be retrieved and repossessed by individual consciousness is what constitutes the specific psychoanalytical method: it can be classic Freudian, including the couch and the interpretation of symbols, or it can follow more updated therapies, such as group sessions. Similarly, within the field of Literary Studies, scholars who work from a psychoanalytical frame may resort to different methods for their analyses, for example, to narratology or deconstruction.

However, once again, boundaries between the concepts of framework and method

are not strict and clear-cut. The field of Literary Studies offers abundant cases of 'interference' between frames, methods, and even areas of research. On the one hand, methods are necessarily motivated by theoretical frames and by the corpus under analysis. Scholars can use narrative analysis when teaching contemporary fiction, for example, but they cannot use narrative analysis in an experiment on gravitational forces or in an attempt to reach a substantial understanding of symbolist poetry. Furthermore, the situation becomes more complex when we deal with neighboring fields of study. A certain method for analyzing written fiction may also be used to carry out research in Film Studies, for example. Let us imagine a critic in the process of analyzing *Psycho*, by Alfred Hitchcock: possibly she will have to resort to theoretical frames related both to a psychoanalytical understanding of the human being and also to the fact that the object of her study is confined in a cinematic frame, while at the same time she may draw on strategies for her analysis taken from a specific psychoanalytical method, such as the interpretation of symbols, as well as from the analytical method of narratology. Both frames and methods may coexist in the same study, a situation that may become further complicated depending on whether the scholar's aim is to convince her students that Hitchcock's film belongs to a given framework, or that the director used a particular method to present the plot, or that she is testing her own beliefs in the psychoanalytical frame, for instance. Interference is, then, a notion that scholars should also keep in mind every time they analyze a literary work in the classroom or prepare their research.

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Some brief considerations about different critical methods used in Literary Studies for the last few decades may give an indication of the difficulties facing academics when attempting to clarify the complexity of our field. Throughout the 20th century the strategies of analysis used by the New Critics were, for many years, commonly used in North American literary criticism. These strategies were based on the analytical method defined as 'close reading'. Meanwhile, in Europe methods of analysis based on the framework provided by structuralist linguistics were applied to non-linguistic areas of knowledge such as anthropology and literary criticism. In myth-criticism, the well-known method of identifying the existence of alleged universal motifs or *mythemes* in a given literary work is an example. The method came into effect in the 1960s as a result of the interference from the works of influential anthropologists, psychoanalysts, and scholars such as James Frazer, Carl Jung, Vladimir Propp, Mircea Eliade, and Joseph Campbell. More recently, other methods of analysis started to displace or were generated from the frames of structuralism, post-structuralism or phenomenology, such as narratology and deconstruction. These are methods that pay considerable attention to the text as a linguistic artifact and that have developed their own precise and sophisticated terminology and strategies. In this sense, we can say that they *look* very scientific indeed.

### 3. The Case of Trauma Studies and Kurt Vonnegut's *Slaughterhouse-Five*

In order to illustrate the need to differentiate framework from method so as to increase teaching efficiency and critical awareness, but also to prove the inherent difficulties that interference brings into the field of Literary Studies, the following pages offer a summary of the steps taken by the author to structure his research and teach Kurt Vonnegut's renowned novel *Slaughterhouse-Five* to students of a Master of Arts in English Studies.

#### 3.1 The Scholar's Frame and Method: Trauma Studies and Narratology

Following the need to clarify for students the importance Vonnegut's novel has for a better understanding of the postmodern ethos, the first class—out of four two-hour sessions— starts with a short presentation of the academic framework and aims to be reached in the unit—an essential part of teaching for the multiple goals it proposes.<sup>5</sup> As reported in this presentation, the primary didactic aim should be to evaluate Vonnegut's novel as proof that postmodernist experimental fiction, even when it is used in a trauma narrative, is not necessarily a type of literary representation only motivated by the psychological effects allegedly present in a writer's traumatized mind. In any case, the presentation already informs students that the analysis will be strongly supported by the framework provided by Trauma Studies. Narratology is also explicitly presented as the method of analysis. Obviously, bibliographical references are also necessary to provide the writer's critical view, to corroborate initial considerations about the data under analysis, and to offer a clear line of enquiry into the topic. Accordingly, teaching also relies on previous studies of Vonnegut's novel by critics who may have used different theoretical frames as well as on other more recent criticism that also evaluates his book from the frame of Trauma Studies.

This framework has become very popular in recent years among Literary Studies scholars, to the point that some already affirm the existence of a trauma paradigm (Luckhurst 2008: 5), and *Slaughterhouse-Five* offers an excellent model for explaining the framework to students of this level. The framework had its turning point when the first definition of the Post-traumatic Stress Disorder or PTSD was incorporated in the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.), published by the American Psychiatric Association in 1980. This represented the official recognition in the United States of a mental disease that Hermann Oppenheim had investigated as 'traumatic neurosis' as early as 1890 but that still lacked official recognition, which meant of course that it also lacked all the administrative and judicial implications that recognition entailed. Psychological trauma is diagnosed when a number of symptoms associated with it are



recognizable. Such symptoms, defined as Post-Traumatic Stress Disorder (PTSD), are usually characterized by states of anxiety, silence, repetition, nightmares, ghostly presences, or states of panic, among others.

Students are informed that psychological trauma is motivated by an event or experience so overwhelming that the victim cannot assimilate it on a conscious level. Its description resists language or any other form of logical conscious representation. As Joseph Flanagan states (2002: 388), the victim “is unable to recall the traumatic experience not because she has repressed its memory but because the very neurobiological processes that are responsible for encoding experiences into consciousness are damaged by the event”. The traumatic event may be suffered by one or more individuals but there are also collective or historical traumas, such as the Holocaust, wars, ship or airplane accidents, or natural catastrophes. Some critics also argue the existence of a structural trauma resulting from the realization of the intrinsic mortality of the human condition, a type of trauma that would be manifested by frequent states of anxiety and melancholia (LaCapra 2001: 76-85; Caruth 1995: 4-6).

Students with a certain background may also realize that ideologically the understanding of life that comes from the framework provided by Trauma Studies can be summarized in the classic motto *homo homini lupus*: man is wolf to man, a notion that also brings the framework closer to the recurrent presence of naturalism in American fiction. However, what underlies Trauma Studies research is mainly its alleged therapeutic capacity to recognize, evaluate, and provide some help in a variety of situations that originated in traumatic experiences that have not yet been fully assimilated by the victims. One of the key-notions here is the ability of textual representation to act as a pain-reliever. If PTSD occurs because the victim has not been able to assimilate the traumatic experience yet, then writing down the fragmented recollections one may have from such an experience may set in motion a process of working through the symptoms and eventually it may stimulate the release of the unconscious obstacles that are causing the trauma to continue. While on this matter, the teacher should stress the fact that Trauma Studies deals with (literary) writing not only as mental therapy but also as a means of political and humanitarian denunciation, frequently centering the analysis on the role of the witness as writer, on the capacities of the victim to write, and on the limits existing between victim and perpetrator, to mention a few of the focuses. It is a framework that strongly relies on the power of narrative and invites, therefore, a method of narrative analysis.

Some of the main founders of Trauma Studies had for years been critics and theory experts, often trained in the Yale School of Criticism, and they had been consistently centering their research on the analysis of the manifestation of PTSD in memoirs

and testimonies written by real trauma victims. Criticism from this perspective foregrounds the importance that non-realist or experimental narrative strategies allegedly have in trauma reports. The victim cannot fully articulate the traumatic experience and therefore its representation in narrative form is frequently accompanied by the existence of gaps, repetitions, lack of chronological order and other 'non-realist' ways of representation that are understood as textual symptoms of the victim's posttraumatic stress disorder.

In the past few years scholars also interested in the analysis of fiction started to evaluate the implications that Trauma Studies has also for the field of creative literature (Whitehead 2004: 6-8). From this perspective, some research has centered on biographical attempts to conclude whether such and such a writer suffers or has suffered from PTSD, which would explain the use in her or his novels of experimental strategies such as the above-mentioned use of gaps, repetitions, or anachronisms, blanks in the page, etc. It is within this particular understanding of the framework that, in the case of Vonnegut's novel, the first specific critical aim in class is to clarify the role of non-realist devices by stressing that PTSD is *not* necessarily the only source for narrative experimentation.

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In order to accomplish such an aim, narratology is selected as the critical method of enquiry. This well-known textual method for narrative analysis starts with the recognition of the existence of two different ontological levels in any narrative text, the story and the discourse or narrating process; and it also attaches great importance to the different elements for the construction of the narrative world: the type of narrator, the focalization or point of view (also recognizable in various forms), and the use of space and temporality (see Genette 1980).

### 3.2 Frames and Methods in the Analysis of *Slaughterhouse-Five*

The following issues were addressed in the presentation of the topic, to be further developed in the course of the different sessions:

- 1) The initial assumption is that a narratological analysis—a first indication of the teacher's method— frequently points to an erosion of the limits between the narrator's report of the factual or believable and his or her use of literary invention and experimentation in the type of fiction written by authors who are both literary creators and victims or witnesses of actual traumatic experiences.
- 2) In order to support the initial contention, the teaching approach should then focus on Vonnegut's novel *Slaughterhouse-Five* (1969) as the grounds where traumatic experiences also coexist with the writer's personal framework, an authorial perspective that abandons traditional realist premises and methodically resorts to experimentation to identify a profound cultural and ideological shift.

That is to say, students are made aware that the writer's framework and method are distinct from the frame and method deployed in class by the teacher.

- 3) Both trauma studies and an understanding of reality filtered by contemporary post-Newtonian physics and postmodernism are found to share a number of experimental devices that result in the enduring ethical effect that has accompanied Vonnegut's famous novel since its publication in 1969.

Once the aims of the unit dedicated to *Slaughterhouse-Five* have been presented to students, bibliographic indications are given by enumerating relevant critics in Trauma Studies who have set the main bases of the framework; well-known scholars such as Cathy Caruth, Shoshana Felman, Dori Laub, and Dominick LaCapra. Then, the teaching approach narrows down towards greater specificity. This is done by indicating that the existence of disrupted stories in many of the narratives analyzed by these trauma theorists point to strategies related to the representation of disordered time, silence, ghostly episodes, repetitions, and a general erosion of logical narrative order. The predominance of strategies that traditional criticism had systematically labeled as 'experimental' is so notable in western narratives of trauma that one of the teaching aims has also become the re-evaluation of their use from the angle of creative literature and its criticism. Arguments have been put forward to the effect that literary criticism should clarify whether the presence of experimentation in fictional narrative texts where traumatic events are reported responds exclusively to the need to deal with traumatic conditions or whether there may be other reasons for this. This has the effect of foregrounding the ultimate impossibility in narrative of fully separating the report of the factual from the report of invented or subjective events and personages, as poststructuralist critics contended for many years. Subsequently, the well-known case of Kurt Vonnegut's novel *Slaughterhouse-Five* is offered as a case in point, an impressive example of the capacity of creative fiction to move present-day readers and cope with the horrors of a war that started more than seventy years ago and had as a direct witness the writer himself.

Gradually, it is explained to the students that the analysis of some techniques deployed by Vonnegut in his novel throw light on the use of narrative experimentation with the aim of reproducing the effects of trauma and also of functioning as a literary source to further a scientific understanding of reality: Vonnegut writes his famous novel 'framed' in a postmodern perspective that, 'drawing from' from scientific premises, stresses the ultimate incapacity of the human being to know reality. The novelist 'methodically' presents such a postmodern frame by resorting to a number of metafictional techniques and strategies—or, in traditional terms, by resorting to 'experimental' devices. Furthermore, metafictional experimentation seems to question even the book's own validity as a truthful report of the narrated

events, therefore looping back upon the idea of the impossibility for any report to ever represent reality in truthful terms. Further debate on the issue should lead to a relevant question for a critical analysis of the novel: Why does *Slaughterhouse-Five* still have such an impressive ethical effect on its readers if it seems to highlight its own ‘fictional’ condition? To answer the question, the teacher has to scrutinize two issues attentively: first, the history and quality of the experimental devices used by Vonnegut and other contemporary writers in their fiction; and secondly, the use of experimental devices in *Slaughterhouse-Five* in the author’s working through his own traumatic experiences. By stressing the second issue, the figure of Vonnegut is also localized as a victim of trauma. In other words, teaching should propose an evaluation of Vonnegut’s double framework —the postmodern ethos, mediated by scientific perspectives, from which he writes his fictional story— that includes an analysis of the method he uses to support this frame (metafiction and other experimental devices). However, the instructor should also clarify his/her teaching frame (Trauma Studies) and method (narratology) as distinct from the ones deployed by the novelist.

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Having set these preliminaries, students are offered a summary of the ways in which in recent times art and culture have departed from the considerations imposed by classic realism. The link existing between war and experimental art is added to the fact that the stressing of the experimental in contemporary art is also thanks to new scientific notions about our understanding of reality. After following up the links between art, war, science and experimentation, emphasis is given to the notion that late modernist and postmodernist writers carried out a sustained use of the experimental in fiction as a literary correlate of the pervasive (and poststructuralist) concept that the human being is trapped in a semiotic web, the world as text, from which it is impossible to escape. Although the notion that people cannot have direct access to reality is not a new one —let us remember Plato’s well-known myth of the cavern— it needs to be pointed out that its popularity in contemporary fiction and critical theory has been so evident that relevant theorists of postmodernism, such as Patricia Waugh (1984), Linda Hutcheon (1988), and Brian Stonehill (1988), stressed the point that experimental strategies are frequently the result of metafictional practices related to the understanding of life as the prison-house of language. On the other hand, criticism on postmodernist literature has not responded sufficiently to the two other issues that have been previously referred to as important sources for explaining the use of experimental or neo-realist techniques in contemporary fiction: namely, the impact of post-Newtonian scientific views and the effects of traumatic experiences, such as war. For their part, influential trauma theorists seem to have forgotten that experimentation may also be the result of an ideological scientific shift in the current perception of reality.

The remainder of this paper offers a description of the different steps taken to teach students the methods Vonnegut followed to construct his experimental story from a postmodern framework that frequently mixes with post-Newtonian science. Then, the critical perspective of Trauma Studies is taken into consideration, in order to provide students with one more reason that explains the existence of experimental strategies in the novel.

Thus, the analysis is substantiated by highlighting the presence of two frames: Vonnegut's mixed framework (new physics, postmodernism) and the teacher's own (trauma studies). Both perspectives converge to clarify the use of experimental devices in the novel. Additionally, narratology provides the necessary technical tools to understand Vonnegut's own frame (an interference of Post-Newtonian views and the postmodern ethos) and also to clarify the writer's use of experimental and metafictional strategies (i.e. his own method of presenting his framework on life and reality).

The use of narratology reveals that the novel is strikingly metafictional, that is to say, it deploys devices that guide readers to think about the pervasive importance language has in our understanding of life. The notion that language seems to mediate everything explains why Vonnegut designed a novel sharply divided into two parts by his narrator: Chapter One and the rest of the book. In Chapter One the writer's persona introduces himself as narrator, a figure that, despite his human condition, from Chapter Two onwards will prove to be omniscient and become the voice that traditional criticism denominates the 'third-person narrator' —that is to say, a heterodiegetic narrator in Genette's terminology (1980: 228-45). In Chapter One, though, the narrator is still a 'first person' or homodiegetic voice, which allows Vonnegut to introduce his own persona and his intention as a writer: none other than to write a book about the fire-bombing of the German city of Dresden in February 1945, in whose Slaughterhouse number 5 he was kept imprisoned after having been captured by the Germans at the battle of the Bulge. The condition of being trapped in the slaughterhouse together with other prisoners of war meant for him and his companions escape from the certain death that befell thousands of people, mostly civilians, during the Allied bombardments of the city. In Chapter One narrator Vonnegut insists on his long-lasting incapacity to write about the massacre he witnessed in Dresden, a condition of narrative blockage that is already of interest to any scholar teaching from the premises of Trauma Studies. In order to release what qualifies, given these premises, as the unconscious repressed forces that disturb the writer-as-witness since the massacre, he visits his war buddy O'Hare and has an interesting conversation with O'Hare's wife from which he emerges ready to write the story that is reported in Chapter Two

in the novel. The first chapter in the book is, then, a story about the paths the author took to write the story of the massacre, a clear metafictional device that the teacher should link to other strategies in the book that systematically question any realist representation of the events. So, for instance, the narrator refers to his own presence in the story with expressions such as “Somebody behind [Billy Pilgrim] in the boxcar said, ‘Oz’. That was I. That was me” (Vonnegut 1989: 100). Or he addresses the reader directly with a “Listen!” Apparently, what the author’s narrative persona wishes his readers to know is the story of Billy Pilgrim, the fictional protagonist of the book from Chapter Two onwards. In Billy’s story, where many references to post-Newtonian physics can be found, lies proof that Vonnegut is using a complementary framework to interpret the traumatic events he experienced. The narratological analysis discloses that from Chapter Two onwards, Billy Pilgrim’s story is reported in a very fragmented manner: the episodes are brief and they are not presented in chronological order. Apparent disorder in time and frequent jumps from one place to another become the norm. The reason for that is given at the end of Chapter One and repeated at the beginning of Chapter Two: Billy Pilgrim is unstuck in time. That is to say, he cannot fix his position in time or in space; he jumps from present to past to future without warning; and he travels apparently at random from America to Germany and then to another planet called Tralfamadore. However, Billy’s condition is not a mere narrative game nor is Vonnegut’s aim to write a fantasy-ridden story. The stylistic presentation of events in the narrative is also disorderly, that is to say, experimental: it does not follow the rules of realism. Billy’s condition is presented as openly fantastic or unbelievable. However, this condition has a possible explanation that readers can find within the text itself provided they are familiarized with the frame of reality offered by post-Newtonian physics. In his travels Billy sometimes goes to planet Tralfamadore, as mentioned above, and there he meets extraterrestrial beings who are characterized by their ability to perceive life in the fourth dimension. That is, for the Tralfamadoreans there is no difference between past, present and future, a condition that offers the reader a first hint of Vonnegut’s roots in Einstein’s physics. The novel becomes a metaphor of some of the implications of Relativity Theory, namely the notion that space and time are not absolute, separate categories, and that our apprehension of reality is not the only valid one: knowledge is always subject to the observers’ experienced conditions and to their instruments for evaluating reality. In other words, in *Slaughterhouse-Five* the writer is also playing with a notion that represented a significant change of framework in 20th-century physics. In line with post-Newtonian physics, different species experience life in different ways, and truth and falsehood cannot be absolute opposites anymore. Following this

revolutionary understanding of the Universe, Vonnegut also experiments with his protagonist and provides him with the condition of the quantum particle. Billy's leaps in time and space, reflected in the peculiar bouncing narrative structure in which his story is presented, are also the metaphor of a scientific claim that has become quite popular even in the field of literary theory: Heisenberg's Uncertainty Principle.

In the field of quantum mechanics, the theories of Max Born and Werner Heisenberg peaked in the year 1927 with the latter's proclamation of the famous Indeterminacy or Uncertainty Principle, which states that pairs of quantities (i.e. the position and momentum of a particle) are incompatible for measurement and cannot have precise values simultaneously. The physicist can choose to measure either quantity, and obtain a result to any desired degree of precision, but the more precisely one quantity is measured, the less precise the other quantity becomes (Nadeau 1981: 52-3). In plain terms, this means that the electron or quantum particle has a very jumpy nature and does not abide by Newtonian laws. What is perhaps more important in Heisenberg's formulation is its anti-categorical nature. The particle is and is not at a given time, it stands and does not stand at a given place, always depending on the ways used by the observer to measure it (Davies and Gribbin 1991: 201-03). Scientific relativity brings forth ontological relativity, which is metaphorized in Vonnegut's book by means of an experimental presentation of the characters and the events in the story: in the writer's personal interpretation the postmodern prison-house of language also becomes the post-Newtonian relativity of all knowledge; that is to say, from his perspective as author, Vonnegut combines in the novel two different but, at times, complementary frameworks from which to interpret the world.

Protagonist Billy Pilgrim may behave metaphorically like an electron, but at the time he wrote his famous novel, the writer obviously did not know about Trauma Studies because this framework had not been developed yet. However, many of the symptoms that characterize PTSD are recognizable not only in Billy's but also in the narrator's character. In support of this contention, the teacher may include quotes from the work of relevant critics such as Susanne Veas-Gulani (2003) and Alberto Cacicedo (2005), who have already evaluated *Slaughterhouse-Five* within the framework of Trauma Studies and argued that both narrator and protagonist suffer from PTSD. From this critical framework, we might also infer that the invention of Tralfamadore (which already appears in Vonnegut's earlier novel *The Sirens of Titan*, 1959) is related to the author's traumatized condition and to the role of literature as a therapeutic strategy to soothe the pains of posttraumatic stress. The extraterrestrial world of Tralfamadore provides, also from this

perspective, an escape route for the author to avoid facing his daily life as a veteran who had witnessed a devastating firebombing where his own Forces destroyed a beautiful city, killed thousands of civilians, and almost killed him and many other prisoners of war. Within the story, the reader is offered further data by Billy's daughter, the traumatic implications of which can explain the protagonist's strange behavior: she says that her father only started to think of Tralfamadore after having survived an airplane crash in 1969—a second traumatic experience that would accelerate the psychic consequences of his war trauma. Actually, it is only when Billy is in hospital recovering from the accident that he becomes a fan of sci-fi writer Kilgore Trout. One of the stories Billy reads while in hospital is remarkably similar to the experiences he reports about being kidnapped by Tralfamadoreans and put in a zoo with a sexy woman (Vonnegut 1989: 90). Science-fiction, the narrator confirms, helps Billy to construct a new life for himself (1989: 70), openly pointing to the capacity of literature to create a new reality but also, as trauma theorists eventually confirmed, pointing to narrative as a therapeutic way to alleviate posttraumatic pain.

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In the analysis of the opening chapter in the novel, Trauma Studies also helps students to mark Vonnegut's persona as a traumatized being. In a symptomatic way, the narrator presents his own role as witness to the Dresden massacre and his belief in the irrationality of all wars by 'repeating' certain tags and phrases. Within the frame of Trauma Studies, verbal repetitions—that textually introduce further experimental devices in the novel—are interpreted as a manifestation of the narrator's process of *acting out* the traumatic experiences he had to undergo (see Goldberg 2000: 2). His two most remarkable symptomatic tags of "so it goes" and "poo-tee-wee?", his calling himself Yon Yonson, or his insistent comment that his own odor is of "mustard gas and roses" have been interpreted by trauma critics (Cacicedo 2005: 360-61; Veas-Gulani 2003: 178) as correlates of Vonnegut's obsessive repetition or reenactment of the most traumatic events that befell him in the war. Readers who are familiar with other novels by Vonnegut may realize the recurrence of certain motifs and situations. Within the framework of Trauma Studies this can be interpreted also as an indication that down through the years Kurt Vonnegut was insistently repeating those motifs in an attempt to get rid of the traumatic distress that had been haunting him since the Dresden massacre. Additionally, it should be pointed out that in *Slaughterhouse-Five* only two or three pages are actually dedicated to describing the Dresden firebombing itself: after so many years trying to write a book about the massacre, Vonnegut could only write a few pages about it, in this way confirming that he had not been able to get rid of his creative blockage completely.



#### 4. Concluding Remarks

In cases such as *Slaughterhouse-Five* experimental strategies may respond to the use of different, interfering frameworks on the part of the writer but they can also be analyzed by the scholar as symptoms of a traumatized condition. In any case, frameworks and methods have to be clearly indicated in both our teaching and research even when a tested method such as narratology may lead us to the discovery of an extraordinary framework in which one is and is not at one and the same time. Hopefully, the views provided in this paper may contribute to a better understanding of the concepts and applications of framework and method in the field and also, borrowing John Swales' words (2004: 243), to assisting teachers and scholars "to gain competence and confidence" in our academic endeavors.

#### Notes

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<sup>1</sup>. The writing of this article has been funded by the Spanish Ministry of Education (FFI2012-32719) and the Aragonese Regional Government (H05).

<sup>2</sup>. Compare with Wolfs' definition of the scientific method (2009: I & II) as "the process by which scientists, collectively and over time, endeavor to construct an accurate (that is, reliable, consistent and non-arbitrary) representation of the world". Traditionally, the scientific method is expected to follow four steps: "1. Observation and description of a phenomenon or group of phenomena. 2. Formulation of a hypothesis to explain the phenomena. In physics, the hypothesis often takes the form of a causal mechanism or a mathematical relation. 3. Use of the hypothesis to predict the existence of other phenomena, or to predict quantitatively the results of new observations. 4. Performance of experimental tests of the predictions by several independent experimenters and properly performed experiments"

<sup>3</sup>. In them, English departments frequently cover English Language and Linguistics, as well as Literary, Film and Cultural Studies.

<sup>4</sup>. UNESCO has relocated Linguistics as a discipline on its own (# 57), being related also to other social sciences like Anthropology or Law, while Literary and Cultural Studies still belong to the area of the Arts and the Humanities (# 62).

<sup>5</sup>. Which, for teaching, could be compared to the importance the abstract has for a research article. According to Huckin (2001: 93), "Abstracts have at least four distinct uses. First, they serve as stand-alone mini-texts, giving readers a quick summary of a study topic, methodology, and findings. Second, they serve as screening devices enabling the reader to decide whether to read the article as a whole. Third, for those readers who do opt to read the article as a whole, abstracts serve as previews, creating an interpretive frame that can guide reading. Finally, abstracts serve as aids to indexing by professional indexers for large database services"

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