

Extra Causers and how they Create Conflict between Religion and Science in Dan Brown's Angels and Demons, including Pedagogical Implications

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Abstract

This study investigates extra causers, their types, and their application in *Angels and Demons*, a novel by Dan Brown. This study also attempts to establish the function of extra causers in constructing a mysterious conflict between religion and science throughout the various stages of the novel. The study was conducted using a descriptive qualitative method with a qualitative analysis derived from a combination of Miles and Huberman's and Spradley's qualitative analysis (domain, taxonomic, and componential analyses) and finding cultural values. The results show that there are four different types of extra causers in all stages of the novel, with there being 412 occurrences in total. They exist both with and without prime agents, as well as in both the active and passive voice. The various types of extra causer constructions include initiators (126), inducers (89), attributors (131), and assigners (66). In addition, they are found throughout the novel's stages, including the orientation (19), complication (306), evaluation (42), and resolution (45). The results indicate how extra causers contribute to developing the mystery of the conflict between religion and science throughout the novel's stages. The results also reflect that when modeling a text like a detective novel for students, extra causers should be delicately introduced in the orientation, complication, evaluation, and resolution. Pedagogically, the stages of the novel and the way they create conflicts between the values of religion and science indicate that modeling a novel in a genre-based model of language teaching provides critical insights for social teaching values.

Keywords: *extra causers, function, mystery of conflict, novel stages, genre model.*

Introduction

A novel is a literary work that usually takes the form of a long narrative following fictional characters, settings, and events related to daily life. Novels can fall into more than 25 different genres, such as crime, thriller, or fantasy, to name but a few (Bork, 2016; Martin, 2012). A novel in the crime genre usually involves a mystery. These are developed through a clue-puzzle structure that complicates and extends the mystery throughout the novel (Effron, 2010). The

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mystery not only unfolds in the pages of the novel but also makes the reader want to learn the resolution. In this way, the mystery is spread over the entire novel until the reader finds closure at the end of the text (Martin, 2012). When a mystery is investigated, often by a detective, it will have hidden elements that are revealed through clues. The investigator therefore speculates about the mystery through propositions about possible cause-and-effect relations (Efron, 2010; Martin, 2012). Thus, the reader is also led to experience and unravel the mystery through these cause-and-effect relations. Sometimes these relations are realized as consequences of complex clauses (Martin & Rose, 2007; Santosa, 2011), while in other cases, they are represented through *extra causer* clause construction (Martin et al., 2010). Mystery in crime and detective novels characterize all the stages of the stories, but it is managed in such a way that it rises and falls throughout the orientation, complication, evaluation, and resolution (Martin, 2012). This means that cause-and-effect relations are present throughout the novel.

An extra causer is a peculiar construction of transitivity that presents the prime or ultimate agent of events in the experiential meanings of clauses. This type of construction is also called an ergative system, because it makes the actor become a medium of a process. Extra causer constructions usually employ causative verbs, such as *have, let, get, make, call, name*, and so on. A number of these verbs—such as *have, let, get* and *make*—can also be combined with other verbs to perform events (Martin et al., 2010; Halliday & Matthiessen, 2014). Other verbs—such as *call, name* and *pronounce*—may be use alone to realize events. There are four types of extra causer in English, namely initiator, inducer, attributor, and assigner. They are constructed from different processes ranging from material, mental, behavioral, attributive, and indicative of relational processes (Martin et al., 2010).

Angels and Demons, which was published in 2000, is a best-selling mystery novel by Dan Brown. The novel introduces the protagonist Robert Langdon, who is a college professor specializing in “symbology” (Calabrese & Rossi, 2015). He is forced to solve enigmas and decipher the puzzle as he investigates the murder of Leonardo Vetra, a Roman Catholic priest and scientist who has created “antimatter,” which has applications as an alternative energy source but could also become a weapon of mass destruction in the hands of the Illuminati, a secret and supposedly extinct society (Jacob & Laxman, 2018). In this novel, the mystery involves a conflict between the Vatican and the Illuminati, which has been stigmatized for centuries (Moritz, 2009), and this is delicately blended in the various stages of the novel.

To date, no previous studies have looked at detective novels from the perspective of how extra causers are used to contribute to the development of mystery. Most research into detective novels has dealt with how the mystery and detection are structured in the different stages of the novel (Efron, 2010) or how readers are forced to wait to learn the outcome (Martin, 2012). Murti et al. (2018) mention the presence of extra causers but fail to address their role in developing the different stages of the novel.

Research questions

Drawing from the perspectives of extra causers and the pedagogical implications for the *Angels and Demons* novel, the following three research questions were developed to guide the research process:

- 1) What are the types of extra causers, both with and without prime agents, in passive and active voice?
- 2) What are the functions of extra causers in developing the different stages of the novel to construct a mystery of conflict between religion and science?
- 3) What are the pedagogical implications for detective novels from the perspective of extra causers?

Literature Review

Text and Novel

A novel is a literary work that describes events, characters, and settings. Novels may have different types of stories with various themes (Bork, 2016), but they are usually packaged as a narrative that typically comprises four stages: orientation, complication, evaluation, and resolution. It is generally accepted that a narrative is more of a process for presenting fictional events rather than ordering events to influence an audience. The presentation also exploits the use of language (Tan, 2011), so a novel is also a verbal social process that employs language to achieve its aim. In other words, a novel employs text to realize its social goal. As a text, a novel is an instantiation of a register, which is a configuration of the meanings of simultaneously integrated aspects of field, tenor, and mode (Hasan, 2014). This configuration limits the use of language features, including the use of certain types of phonology or graphology, lexico grammar, and discourse semantics, including text structure (Martin et al., 2010; Santosa, 2011; Taboada, 2011; Hasan 2014; LeCompte-Van Poucke, 2016), which is itself a realization of

generic structure potential (GSP) (Matthiessen, 2015a, 2015b; Matthiessen & Khasiyaf, 2014). This contextual configuration (or register), is therefore a resource pool of meanings for analyzing the type and role of language as a social process (Bowcher, 2018). Therefore, a crime or detective novel has a particular register that presents mystery and investigation through cause-and-effect relations in clause complexes and extra causers.

Genre is defined as a staged goal-oriented social process, a type of recurring culture (Martin & Rose, 2007; Martin et al., 2010; Martin, 2014) that constructs a recognized pattern that is used to respond and act within a culture (Liddicoat, 2009). The stages may contain phases of logically connected clauses that lead to the goal (Santosa, 2011). Two different types of genres relate to the genericity of their goals: micro-genres with more generic goals and macro-genres with less generic goals. Micro-genres can in turn be divided into two kinds of genres: factual and fictional. The factual genres include descriptions, reports, recounts, procedures, explanations, expositions, discussions, and exploration (ibid). The fictional genres, meanwhile, can be further classified into recount, anecdote, exemplum, and narrative. The differences between the four types of fictional genre are based on the types of events being presented and how they are enacted, interpreted, and resolved. A recount, for example, begins with an orientation and continues with a record of events. An anecdote, meanwhile, begins with orientation and continues onto crisis and reaction. Next, an exemplum starts with the orientation and continues onto an incident and its interpretation. Finally, a narrative, which is the basis of novels, starts with orientation and continues onto complication, evaluation, and resolution (Martin, 1992).

Pedagogically, this concept of language introduces a genre-based model of language teaching, something that Lim (2018) calls a systemic functional approach to language teaching. It implies that the aspects of what, as well as how, language is constructed in social literacy should be experienced through a teaching–learning process (Parker, 2019; Rose, 2018). Therefore, this genre-based model of language teaching generates four stages of teaching–learning processes: building knowledge of the field (BKOF), modelling, joint construction of the text, and independent construction of the text (Rose, 2014). The stages of teaching vary according to the text type, the genre, and the register (Matthiessen, 2015a, 2015b; Kartika-Ningsih & Rose, 2018). A discussion of what extra causers are and how they can create conflict between religion and science will contribute to teaching students about detective novels.

In general, detective novels, which are often called crime novels, have the typical stages of a narrative, namely orientation, complication, evaluation, and resolution. The difference lies in how a detective novel incorporates clues and puzzles that are spread throughout the different stages of the novel, causing the reader to engage in the investigation and solve the puzzles or greater mystery while reading the novel (Effron, 2010; Martin, 2012). Mysteries result from greed, corruption, jealousy, or in sanity that may have persisted for centuries (Robinson & Haney, 2000). The course of events, or happenings, in this genre resembles a development of complications. It begins with a murder followed by suspicion and possibly a false arrest before finally ending with a resolution (Erdmann, 2009). The mystery moves from stage to stage and culminates at the end with the closure of the novel. Thus, throughout the different stages of the novel, the reader is presented with mysteries that are usually resolved when the reader finishes the novel (Segal, 2010). The puzzles or mysteries often result from deeds that transgress order or law, so they require investigate onto solve them. These unlawful deeds are often accompanied by mayhem, disgust, or horror, since detective fiction often exploits murder as the vehicle for the enigma. Within the disgust and horror, however, the detective character manages to find clues. These are all things that give a detective novel its flavor of mystery and investigation (Pittard, 2016).

When a transgression of order occurs, it results in a murder, often accompanied by mayhem and horror. The criminal and the detective then create speculations about the mystery and investigation in the form of causes and effects. In language, causes and effects are often realized in clause complexes, but in some cases, they are represented in an ergative type of clause known as “extra causers” (Martin et al., 2010; Santosa, 2011).

In this novel, the mystery results from a conflict between the Vatican and the Illuminati, an ancient, supposedly extinct, secret society of anti-religious scientists. This underpins Brown’s idea of a conspiracy theory in this novel (Jacob & Laxman, 2018). However, this conflict has been stigmatized in European society, resulting in the taking of life (Moritz, 2009). The mystery of the conflict, as the result of a conspiracy theory, is realized in the form of extra causers and unfolded in a narrative genre. The use of extra causers in the types and functions of the narrative genre represent a type of language use, or register and genre (Rose, 2018), and it implies the introduction of a genre-based approach when scaffolding detective novels (Lim, 2018). This way, the author definitely emphasizes how pedagogical implications are served through the

entire staging of the novel. These pedagogical implications can be described through the conflict between religion and science, the particular characteristics of *Angels and Demons*, and the role of a mystery novel in teaching literature.

Extra Causers

An extra causer is a type of prime agent from an ergative perspective. It causes an actor to act, a sensor to sense something, a carrier to carry some attribute, or a token to become associated with something else. An extra causer presents the prime agent as the cause of an event through transitivity (Martin et al., 2010; Halliday & Matthiessen, 2014). For example, in the following clause, through transitivity, “the boat” is the actor, while “is sailing” is the material process and “to the river” is the circumstance, in this case a location or place.

The boat	Is sailing	to the river
Actor	Material Process	Circumstance: location: place

However, from an extra causer perspective, “the boat” is the medium, “is sailing” is the process, and “to the river” is the circumstance. The prime agent in this construction is absent, because it has been hidden for a specific reason.

Medium Voice

The boat	is sailing	to the river
Medium	Process	Circumstance

Therefore, this construction is referred to as a medium voice. However, when a prime agent is present, it is called an effective voice (Halliday & Matthiessen, 2014), and in the works of Martin et al. (2010), this agent is referred to as an “extra causer.”

Effective Voice

The man	Made	the boat	Sail	to the river
Agent	Pro-	Medium	-cess	Circumstance

Apart of the effective voice perspective is the extra causer. From this perspective, the agent is the extra causer.

The man	Made	the boat	Sail	To the river
Extra Causer	Pro-	Actor	-cess	Circumstance

From the effective voice perspective, there are four types of extra causers. This classification is based on the types of the prime agents and the types of processes being executed by the medium. An extra causer can be an initiator, inducer, attributor, or assigner, with each type depicting a

certain kind of process. For example, an initiator is the prime agent for a material process, an inducer is the prime agent for a mental or behavioral process, an attributor is the prime agent for an attributive relational process, and an assigner is the prime agent for an identifying relational process (Martin et al., 2010; Halliday & Matthiessen, 2014). The presence of an extra causer is characterized by accompanying causative verbs, such as *let, have, make, get*, and so on.

Table 1.*Types of extra causer constructions*

You	will help	Us	do	This
Initiator	Process-	Actor	-Material	Goal
	Other verbs: make, let, get (something) do			
These programs	Let	Parents	Understand	their responsibilities
Inducer	Process-	Sensor	-Mental	Phenomenon
	Other verbs: persuade, convince, assure, satisfy			
His experience	Makes	Him	(be)	the best judge
Assigner	Process-	Token	-identifying	Value
	Other verbs: elect, name, vote, call, make			
The new school	has made	him	(be)	more rebellious
Attributor	Process-	Carrier	-attributive	Attribute
	Other verbs: keep, leave, drive			

(Martin, 2010)

Methods

This research took the form of stylistic research that applied a descriptive and qualitative method. It made use of a Systemic Functional Linguistics (SFL) approach to collect data in the form of extra causer constructions. This research aimed to describe how mystery and investigation were portrayed throughout different stages of the *Angels and Demons* novel. It used total sampling by collecting all types of extra causers in Dan Brown's novel that were used to depict mystery and investigation.

The data were analyzed based on a combination of a modified version of Miles and Huberman's and Spradley's stages of qualitative analyses—namely domain, taxonomic, and componential analyses—and finding cultural values (Santosa, 2017). In the domain stage, the extra causers were collected and classified into the stages of orientation, complication, evaluation, and resolution. For each stage, the extra causers were then classified based on the presence or absence of prime agents and according to the use of passive or active voice. In the taxonomic analysis, the extra causers in each stage were analyzed to establish whether their functions were in accord with the functions of each stage. In the componential stage, the categories from the domain and taxonomic stages were combined in a componential matrix to find patterns that

revealed how each stage was portrayed through extra causers that realize mystery and investigation. Finally, these patterns were returned to their original contexts, and the chosen approach method and underlying theory were used to establish how the extra causers helped contribute to the development of mystery and investigation in the novel. The patterns and the extra causers that create conflict between religion and science would be potential materials for modeling a text in a genre-based model of language teaching.

Findings and Discussion

In this section, the findings are described and discussed according to the research questions, namely to find the extra causer constructs and their variants and establish the functions of these constructs in developing the different stages of the novel.

Types and roles of extra causers

The data reveals four types of extra causer constructs in the novel: initiator, inducer, attributor, and assigner. Not all these types are found in both the active and passive voice and both with and without an agent, however. Table 2 presents the classification and presence of extra causers in the novel.

Table 2.

Classification and presence of extra causers in the novel

Types of extra causers	Presence of agent	Type of voice		Number of Occurrences
		Active	Passive	
Initiator	Agent	90	-	126
	Agentless	36	-	
Inducer	Agents	59		89
	Agentless	29	1	
Attributor	Agent	124	-	131
	Agentless	7	-	
Assigner	Agent	47	1	66
	Agentless	-	18	
Total number of extra causers				412

As mentioned in the literature review, extra causers are prime agents that make the medium do something. Martin et al. (2010) and Halliday and Matthiessen (2014) name each type of extra causer depending on the types of processes in the transitivity system. An initiator is the prime agent in a material process, while an inducer is the prime agent of a mental or behavioral process, an attributor is the prime agent of an attributive relational process, and an assigner is the prime agent of an identifying relational process. Table 2 shows that there are 412 extra causers in

the novel in total. The attributor is the most commonly used type of extra causer in the novel, followed by initiator, inducer, and assigner, with each performing its own particular function.

Initiator

An initiator is used in a material process. It can appear to be both doing and encouraging material processes. It is accompanied by an actor in an ongoing process and by an actor and a goal in performing a material process, such as in clauses 1 and 3. However, it appears without a goal when encouraging a material process, such as in clause 2. Table 2 indicates how initiators occur both with and without an agent but are not present in the passive voice. For example:

1. He led Langdon across the tarmac toward the plane

He	Led	Langdon	across	the tarmac	toward the plane
Initiator	Pro-	Actor	-cess	Range	Cir: Loc: Place

2. We must let them go.

We	must let	them	Go	For the good for the whole
Initiator	Process	Actor	Material process	Cir: Cause: Reason

3. I need you to take us to your lab.

I	need	you	to take	Us	To your lab
Initiator	Pro-	Actor	-cess	Goal	Cir: Loc: Place

The process for using an initiator usually involves a combination with a causative and material process. For example, *led* is combined with *across* in clause 1, *let* appears with *go* in clause 2, and *need* is used with *take* in clause 3. In general, the function of the initiator is to depict the cause and effect in some material processor do something that occurs in a series of events in crime and investigation.

Inducer

The inducer is present in mental and behavioral processes, so it is accompanied by a sensor and a phenomenon, a behavior and a phenomenon, or a behavior and verbiage. This is because an inducer can also occur in both mental behavioral and verbal behavioral processes. Unlike with the findings of Murti et al. (2018), examples 2 and 3 do not belong to the category of inducer with a mental process but rather resemble an inducer with mental behavioral and verbal behavioral processes. This is because the constituents of the processes of *acclimatize* and *talk*

match the characteristics of a behavioral process. First, it can be constructed into a continuous form or “present in present,” so it can work with the pro-verb “do.” Finally, it cannot be followed by a meta-phenomenon (Martin et al., 2010). For example:

1. Langdon made him understand what he was about to say
 Langdon made him Understand what he was about to say.
 Inducer Process Sensor Process Phenomenon

2. It helps people acclimatize to the new faith.
 It helps people Acclimatize to the new faith
 Inducer Process Behavior Mental behavioral Phenomenon

3. Couldn't you make him talk?
 Couldn't you make him Talk
 Pro- Inducer -cess Behavior Verbal behavioral process

Inducers occur in both the presence and absence of an agent, but there is only a single occurrence in the passive voice. Inducers convey the extra causers' persuasions to the sensor or behavior in order to perform the process.

Attributor

An attributor is found in an attributive relational process. Its presence is accompanied by a carrier and attribute. Some attributive relational verbs can stand alone, such as in examples 2 and 3 below with the verbs *earned* and *viewed*, while others are combined attributive relational verbs, such as *make...look*, *make...feel*, *make...become*, and so on.

1. It makes me look clever.
 It Makes me Look clever
 Attributor Process Carrier Attributive R P Attribute

2. Recreation with an infectious fanaticism that had earned him a fraternal acceptance among his students
 Recreation with an had earned Him a fraternal acceptance
 infectious fanaticism among his students
 that
 Attributor Process Carrier Attribute

3. Langdon's friends had always viewed him as a bit of an enigma
 Langdon's friends had always viewed him as a bit of an enigma
 Attributor Attributive R P Carrier Attribute

The function of an attributor is to label or characterize the carrier, which can be a person or thing. In example 3, “Langdon’s friends” play the role of attributor, because they assign the label “as a bit of an enigma” to “him,” who then becomes the carrier of this label.

Assigner

An assigner can be found in an identifying relational process. The participants that follow the process are the value and token. This process associates a value with the token, which again can be a person or thing.

1. I will make your cardinals media luminaries

I	will make	your cardinals	Media luminaries
Assigner	Process	Token	Value

2. They called it their Luciferian Doctrine.

They	called	It	their Luciferian Doctrine
Assigner	Process	Token	Value

3. Sometimes he called her Maria Benedetta — the Blessed Mary.

Sometimes	He	called	Her	Maria Benedetta — the Blessed Mary
	Assigner	Process	Token	Value

Extra causers without an agent

The data also reveals extra causer constructions in the active voice without an agent. These usually begin with a causative process—such as *let*, *get*, *make*, *call*, *help*, *keep* and *allow*—and they are realized in an imperative clause of the English mood system to serve as a proposal (Martin et al., 2010; Halliday & Matthiessen, 2014).

1. Get a fixed cell read.

Get	A fixed cell	read
Process	Actor	Material process

2. Help me find the next marker.

Help	Me	Find	the next marker
Process	Behaver	Mental Behavioral P	Phenomenon

3. Call it whatever you like

Call	it	whatever you like
Identifying relational P	Token	Value

4. Keep your eyes open

Keep	your eyes	open
Process	Actor	Material process

In addition, agentless, active extra causers can also be realized in a noun clause with a WH construction that is also translated in the same construction. For example:

5. How to make the people believe again.

How	to make	the people	believe	again
Circumstance	Process	Sensor	Mental P	Circumstance

However, the verbs are frequently combined with others to perform more specific processes. The use of *get...read*, *help...find*, *keep...open*, *make...believe* in examples 1, 2, 4, and 5 above show such combinations.

Extra causers in the passive voice

Finally, extra causer constructions in the passive voice are also found in the novel, although not all types of extra causers occur in the passive voice, only inducers and assigners. Usually, the prime agent is omitted. Examples 1, 2, 3, and 4 below show the absence of a prime agent in extra causer constructions using the passive voice.

1. It is called the Trinacria.

It	is called	the Trinacria
Token	Process	Value

2. Scientific facts <<he held to be true but>> was not allowed to share.

Scientific facts	was not allowed to share	
<<...>>		
Phenomenon	Process	Mental Behavioural process

3. ... already seven different cardinals had been named.

already seven different cardinals	had been named
Token	Identifying R P

4. It is called "Acclamation by Adoration."

It	Is called	acclamation by adoration
Token	Identifying R P	Value

These passive extra causers also indicate that the writer finds it unnecessary to introduce the prime agent, since it is already clear from the context.

Pedagogically, the types of extra causers, both with and without prime agents and in both passive and active voices, implies what should also be incorporated into material development when teaching about detective novels (Rose, 2014; Matthiessen, 2015a, 2015b).

There now follows a discussion of the function or role of extra causers in contributing to the development of mystery and investigation throughout the different stages of the novel.

Function of extra causers in developing different stages of the novel

In this section, the function of extra causer constructions in developing the text structure in the novel is described and discussed according to four stages: orientation, complication, evaluation, and resolution. The discussion focuses on how they help to develop the mystery and investigation throughout the different stages of the novel.

Table 3.

The distribution of extra causers over the different stages of the novel

Stages	Distribution of extra causers over the novel				Total
	Initiator	Inducer	Attributor	Assigner	
Orientation	8	4	5	2	19
Complication	81	63	106	56	306
Evaluation	22	10	7	3	42
Resolution	15	12	13	5	45
Total	126	89	131	66	412

As Table 3 suggests, the number of extra causers in the source language varies substantially between the different stages of the novel. In the orientation, there are 19 occurrences of extra causers, but this increases dramatically to 306 in the complication. This increase seems to support the function at this stage, which presents many problems that contribute to the climax of the story. It is therefore logical that this stage employs extra causers more frequently. Following this stage, the number of extra causers decreases sharply to 42 in the evaluation. This accords with the function of this stage, which is to illustrate how problems are recognized and evaluated in the story, which requires fewer extra causers. Finally, in the resolution, the number of extra causers continues at roughly the same level with 45 occurrences. This is because the function of this stage is to unravel the mystery and solve the problems that arose in the complication, which again requires fewer extra causers than the complication stage. Nevertheless, despite the uneven spread, the presence of extra causers contributes to developing the mystery and investigation throughout the novel (Pittard, 2016).

The following section discusses the role of extra causers in developing the mystery and investigation a teach stage.

Extra causers in the orientation

The orientation introduces the setting and the characters in the novel (Martin, 1992). The extra causers that appear in this stage also depict the function of a cause-effect relation. For example:

1. Langdon’s friends had always viewed him as a bit of an enigma — a man caught between centuries.

Langdon’s friends	had always	him	as a bit of an enigma — a man
	viewed		caught between centuries
Assigner	Process	Token	Value

In this example, Langdon’s character is described from the point of view of his friends. Instead of using verbal projection in a clause complex to describe Langdon’s character, the writer uses an assigner construction to associate Langdon’s character with a constituent value, namely that he is “a bit of an enigma — a man caught between centuries.” A mystery lies within this value, because an enigma refers to a mysterious or inexplicable person or thing. In the latter part, when Langdon is described as “a man caught between centuries,” he is depicted as a man who somehow straddles both the 20th and 21st centuries, meaning that he adheres to both old and new norms and values and adding to his character’s mystery.

2. He relished recreation with an infectious fanaticism that had earned him a fraternal acceptance among his students.

He	relished	recreation with an	Had	him	a fraternal acceptance
		infectious fanaticism that	earned		among his students
Sensor	Mental P	Attributor	Phenomenon	Process	Carrier
				Carrier	Attribute

In example 2, Langdon is described using an attributor construction to present his character as carrying an attribute, namely as someone who is seen as a father figure by his students. The attribute “fraternal acceptance” is due to his character being described as having “an infectious fanaticism,” which may imply an excessive intolerance of opposing views transmitted from an older generation. Again, in this case, the writer succeeds in positioning the attributor of “recreation with an infectious fanaticism” as the prime agent to bring about the attribute “a fraternal acceptance among his students” in the description.

3. It was vaguely reminiscent of the space shuttle except that the top had been shaved off, leaving it perfectly flat.

... leaving it perfectly flat
Process Carrier Attribute

In this example, the writer describes a setting in which Langdon has to fly an aircraft, one he is actually afraid of flying. The aircraft is portrayed as a space shuttle without a top, so it is perfectly flat. “It” refers to the aircraft as the carrier, while the constituent “perfectly flat” is used as the attribute.

From examples 1, 2, and 3, it can be seen that although the orientation is normally used to introduce characters, settings, and events, the writer succeeds in presenting these in a mysterious manner. In this way, elements of mystery are introduced into this crime novel right from the beginning (Efron, 2010; Segal, 2010; Martin, 2012).

Extra causers in the complication

The complication starts to describe the problems as they happen, and they are introduced and developed continually with the mounting action, culminating in the climax (Martin, 1992). Extra causers are also used to describe the mystery and investigation at this stage of the novel. For example:

1. Now she had returned home. But home to what? CERN, her world since she was twelve, seemed suddenly foreign. Her father, the man who had made it magical, was gone.

The man who Made it magical
Attributor Process Carrier Attribute

In this example, the writer attempts to introduce a mounting conflict between religion and science by illustrating the effect that the murder of Vittoria Vetra’s father, Leonardo Vetra, has had on her. His murder results in her adopting a contradictory perception of CERN, a place where her father had raised her but with which she was no longer familiar, because her father’s death had made CERN no longer magical. This rising mystery is portrayed in an attributor construction.

2. Then he would beam with fatherly pride as he explained to them how it had been one of Vittoria’s ideas that had helped him make the project a reality... that his daughter had been integral in his breakthrough.

One of Vittoria's idea that	Had helped	him	Make	the project	a reality
Attributor 1	Process	Attributor 2	Process	Carrier	Attribute

In this double extra causer, attributors 1 and 2 are used to add to the increasing mystery by revealing that it was not Leonardo Vetra but rather Vittoria that contributed the ideas that helped her father realize his project at CERN. In this clause, the presence of a double extra causer with two attributors is a rare form of extra causer construction, and it is used here to project the mysteriousness of CERN.

3. The caller laughed. "I fear the prolific nature of your religion will make that a trying task. Have you not counted lately? There are over four hundred Catholic churches in Rome. Cathedrals, chapels, tabernacles, abbeys, monasteries, convents, parochial schools..."

...the prolific nature of your religion	will make	that	a trying task.
Attributor	Process	Carrier	Attribute

When threatening to blow up Catholic churches in Rome, the criminal attempts to make Olivetti, a cardinal, understand that he is not bluffing. The criminal truthfully points out that the cardinal's attempt to guard every church in Rome will be a futile attempt with no effect on the bombing. The writer presents this idea in an attributor construction, with the attempt to guard every church, represented as the carrier "that," being associated with the attribute "a trying task."

4. "Play into their hands?" Olivetti said. "Believe me, removing all protection from Vatican City in order to stake out hundreds of churches is what the Illuminati hope we will do...wasting precious time and manpower when we should be searching... or worse yet, leaving the Vatican Bank totally unprotected. Not to mention the remaining cardinals."

Removing all ... to stake...churches...,	leaving	the Vatican Bank	Totally unprotected
Attributor	Process	Carrier	Attribute

Another function of an extra causer is to introduce a critical situation. In this case, the Vatican Bank will be totally unprotected should the attributor "removing all protection from Vatican City" be performed. The use of this extra causer also forms part of the discussion about the possibilities that may occur if the threat is executed, so the extra causer is also being used to increase the tension in the mystery (Erdmann, 2009; Segal, 2010).

Extra causers in the evaluation

The evaluation describes how the problems in the story are observed and analyzed by the characters, so they understand the situation before deciding what action to take (Martin, 1992). Extra causers are also used to evaluate and solve the problems at this stage of the novel. For example:

1. A commotion in the doorway behind them caused everyone to turn. Chinita Macri’s large frame lurched through the entry. Her camera was shouldered, and the glowing red light on top revealed that it was still transmitting. Glick was running behind her, microphone in hand, yelling for her to slow down. Langdon could not believe these two. This is not the time!

A commotion in the doorway behind them	caused	everyone	To turn
Initiator	Process	Actor	Material P

The commotion came from Macri and Glick, the journalists who want to report the news in the Basilica. It makes everyone in the Basilica turn toward them, including Langdon. Langdon then remarks that the time is not right.

2. It seemed unthinkable. And how had Kohler managed all this treachery within the Vatican walls? Rocher was Kohler’s inside man, Vittoria told herself. Rocher was an Illuminatus. No doubt Captain Rocher had keys to everything —the Pope’s chambers, Il Passetto, the Necropolis, St. Peter’s tomb, all of it. He could have placed the antimatter on St. Peter’s tomb — a highly restricted locale — and then commanded his guards not to waste time searching the Vatican’s restricted areas. Rocher knew nobody would ever find the canister.

He	Commanded	his guards	not to waste	the	Vatican’s
<<...>>			time searching	restricted	areas
Inducer	Process	Behaver	Mental B P	Phenomenon	

In the context of the story, Vittoria knows that Captain Rocher is Kohler’s inside man and has keys to every secret place or chamber. This means he can place the antimatter in a highly restricted area, specifically St. Peter’s tomb, and then command his guards to carry out an immediate search of the Vatican’s restricted areas. However, Vittoria knows that this is just a ruse so that no one will get the antimatter.

3. Vittoria wishes her father were there to give her faith. He once explained divine communication to her in scientific terms, and made her believe. She still remembers the day

she saw him praying and asked him, “Father, why do you bother to pray? God cannot answer you.”

And	He	had made	her	believe
Conjunction	Inducer	Process	Sensor	Mental P

This extra causer appears when Vittoria remembers that her father once attempted to convince her to believe in God, but she still retained her skeptical views.

- Leonardo Vetra had looked up from his meditations with a paternal smile. “My daughter the skeptic. So, you don’t believe God speaks to man? Let me put it in your language.” He took a model of the human brain down from a shelf and set it in front of her. “As you probably know, Vittoria, human beings normally use a very small percentage of their brain power. However, if you put them in emotionally charged situations — like physical trauma, extreme joy or fear, deep meditation — all of a sudden, their neurons start firing like crazy, resulting in massively enhanced mental clarity.”

Let	me	put	It	In your language
Process	Behavior	Verbal B P	Verbiage	Circumstance

Vittoria is skeptical about anything related to God. Unlike her father, Vittoria’s convictions are definite. Her father is certain that science and religion are related to each other, but this is not the case with Vittoria. In addition, she does not believe that humans are able to interact with God. Therefore, this extra causer appears when Vittoria’s father tries to explain the communication between humanity and God in a way that makes more sense to her.

Extra causers in the resolution

A resolution tells about an execution that the characters have analyzed in the previous stage. Here, extra causers help depict their actions in solving the problems at this stage of the novel. For example:

- “I confronted His Holiness,” Mortati said. “And he confessed. He explained the entire story and asked only that I let my heart guide my decision as to whether or not to reveal his secret.” “And your heart told you to bury the information?” “He was the runaway favorite for the papacy. People loved him. The scandal would have hurt the church deeply.”

I	Let	my heart	Guide	My decision
Inducer	Process	Behavior	Mental B P	phenomenon

Your heart	Told	You	to bury	The
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				information
Initiator	Process	Actor	Material P	Goal

Mortati had discovered the Pope’s secret relationship with a woman, and he had asked the Pope about it directly until he finally confessed. The extra causer here is used by the Pope to ask Mortati to follow his heart when deciding whether to reveal the secret. He then duly follows his heart and decides not to disclose the secret. The other extra causer is used by Carmeleagno to question Mortati’s decision to keep the secret. It is impossible for Mortati to tell the truth, because people love the Pope so much, and it would be very dangerous were the public to learn this secret.

2. Slowly, sadly, Mortati let the tale unfold.

Slowly	Sadly	Mortati	Let	the tale	Unfold
Cir	Cir	Inducer	Process	phenomenon	Verbal B P

Very carefully, Mortati tells Carmeleagno the secret from the beginning, so that later on, he will understand why Mortati had kept the secret all that time. Mortati’s aim is to convince Carmeleagno that His Holiness has not broken his sacred vow of celibacy. The role of the extra causer in this stage is to express Mortati’s intention.

3. Mortati now had tears in his eyes. “Carlo, this is why His Holiness has always had an affection for the sciences. He felt he owed a debt to science. Science let him experience the joys of fatherhood without breaking his vow of celibacy. His Holiness told me he had no regrets except one — that his advancing stature in the church prohibited him from being with the woman he loved and seeing his infant grow up.”

Science	let	Him	experience	the joys of fatherhood
Inducer	Process	Behavior	Mental B P	Phenomenon

The extra causer here is used to express His Holiness’s gratitude toward science, which has helped him conceive an infant from his relationship with a woman without violating his vow of celibacy (i.e., not having physical sex). Science had given him a child through artificial insemination, enabling the Pope to experience the bliss of biological fatherhood without breaking his covenant with God.

It can be seen here how the exemplary extra causers above also contribute to the construction of the conflict and the broadening of the resolution, so the reader will be curious enough to read on to the end of the story (Segal, 2010). The examples also confirm that extra causers follow

through on the functions of the narrative stages. The number of extra causers rises and falls according to the function of each narrative stage. This also implies material developments in the types of extra causers being employed and how they build conflict between religion and science (Rose, 2014).

Pedagogical Implications of the Detective Novel from the Perspective of Extra Causers

The pedagogical implications of the *Angels and Demons* novel are associated with values of ethics and morality where amoral framework should act as a reference to guide science. From the text, we can identify two instances where values are perceived, indicating that the moral values of this novel are sensitive. In essence, the moral and ethical values are defined in this novel, thus emphasizing the role of “angels and demons” and subsequently the conflict between science and religion (Book Review, 2019). The following quote involves a dialogue between Camerlogno and a BBC journalist during an interview:

“Who is this God science? Who is the God who offers his people power but no moral framework to tell you how to use that power? What kind of God gives a child fire but does not warn the child of its dangers? The language of science comes with no signposts about good and bad. Science textbooks tell us how to create a nuclear reaction, and yet they contain no chapter asking us if it is a good or a bad idea.” (Dan Brown, 2000, p. 341).

The above quote definitely conveys the moral of this novel concerning religion and science. Religion and science are both tools of humanity. People use these ideas, processes, and tools to achieve their goals. However, religion and science do not act on their own volition. Religion acts as a moral framework. It is a shared, ritualized belief or idea among individuals to answer questions concerning humanity’s existence. Science, meanwhile, is a tool to objectively observe and study the world we live in. It is neither good nor evil. The focus is on the scientist when ethical and moral questions are addressed. The results or products of science are not inherently good or bad, and a certain piece of scientific technology is also neither bad nor good. Individuals instill ethical and moral values in our children and our students. Teaching values helps them when they face dilemmas, so they can make the right choices, specifically ethical and moral choices. In short, it is not religion or science that is good or evil but rather the choices and motivations of those individuals utilizing them (Book Review, 2019).

Other values relate to the use of Dan Brown's *Angels and Demons* novel as a tool for teaching literature. Evidence shows that when teaching literature, a technical analysis of a novel can be applied to the construction of extra causers and the staging process. In an analysis of a mystery novel, extra causers can be robustly constructed through an initiator, inducer, attributor, and assigner. In addition, extra causers may also be frequently defined in the stages of orientation, complication, evaluation, and resolution. Evidence also shows that the moral values of a novel can be central to the teaching of literature. We frequently find that sensitive issues—such as religion, terror, and murder—can be valuable. Our findings show that issues centered around religion, murder, ethics, and terror can effectively encourage readers to continue reading. In other words, the pedagogical implications of this novel can be applied to technically explore how we can analyze a mystery novel through extra causers. For teaching goals, the focus for this novel could be an analysis of moral values, which in turn relate to religious issues, science, terror, and murder. The intentions of the author manifest through such values, and the teacher should indicate to students how values and warnings are attached to notions of good or evil.

Conclusion and Implications

In summary, the extra causers in Dan Brown's *Angels and Demons* mystery novel were identified based on their construction and presence in stages throughout the entire novel, revealing 412 occurrences. In general, the four types of extra causers used include initiators, inducers, attributors, and assigners. The inducers in this novel are not only constructed in a mental process but also in verbal and mental behavioral processes. In addition, extra causers appear in all stages of the novel (i.e., orientation, complication, evaluation, and resolution).

Angels and Demons is much like other crime and detective novels. It commences with an orientation, continues with a complication and evaluation, and ends with a resolution. Specifically, this novel presents a mysterious conflict between religion and science throughout its different stages. The distribution of extra causers varies, however, to help develop the mystery of the conflict. The mystery begins to unfold in the orientation already while describing the characters and setting. The mystery of the conflict between religion and science is subsequently increasingly developed throughout the complication and evaluation. It then increases further and broadens out in the resolution before

“unexpectedly” being resolved. In this way, the readers are led to experience and resolve the conflict between religion and science in the novel. In terms of pedagogical implications, this finding suggests that the conflict between religion and science is a fertile issue. Contradictory values in religion and science are matched with each other, and readers are expected to see how a certain value should apply. In general, moral and ethical values are identified to see the author’s mission in writing the novel. In the area of teaching literature, our findings reveal the use of various extra causers, how they are developed over the stages of the novel, and how the moral values are applied, and these are significant results of this investigation.

Pedagogically speaking, the findings imply that extra causers, the way in which they develop the stages of the novel, and the way they construct a conflict between religion and science should be incorporated into a genre-based model of language teaching. Indeed, extra causers and their roles in creating mysterious conflicts should be introduced, practiced, and utilized when writing and modelling detective novels, both in the joint and independent construction of text. Future research is recommended that will go beyond the genre and linguistic aspects of the novel, so the social and pedagogical values, specifically those intended by the author, can be explored.

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