

## Pathos as a Communicative Strategy for Online Knowledge Dissemination: The Case of TED Talks

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### ABSTRACT

*This paper investigates the importance of pathos in TED (Technology, Entertainment, Design) talks, which are popularising speeches aiming at Knowledge Dissemination. Drawing upon Dlugan's (2013) theories on the enhancement of pathos as a communicative strategy, this work analyses how pathos is established in this relatively new form of popularisation that breaches the typical 'scientist-mediator-audiences' triangularisation, bringing scientists directly into contact with their audiences. In particular, the study will focus on an exemplary TED talk held by Dr Jill Bolte Taylor, 'My Stroke of Insight', a fascinating TED talk that recounts the speaker's first-person experience of a major stroke, and which has been one of the most watched TED talks so far, with over 12 million views. The study shows how pathos techniques are used by TED speakers to establish on-the-spot connection with their live and online audiences by appealing to emotions and values. The work further suggests that the success of these talks depends on how these speakers are listened to, remembered, and perceived as credible promoters of knowledge dissemination, but also on how they contribute to audiences' approach to science not as something distant and separate, but as a heritage belonging to both professionals and laypersons.*

*Keywords: pathos; rhetoric; linguistic and communicative strategies; knowledge dissemination; TED talks*

### WHAT ARE TED TALKS?

This paper aims at examining the importance of *pathos* in TED talks (Technology, Entertainment, Design), which are popularising speeches aiming at knowledge dissemination. Research on popularising texts has been usually based on a 'canonical view' of popularisation, according to which there is a clear-cut distinction between scientific and popularised texts (Grundmann and Cavaillé 2000). Nevertheless, it must be said that this is quite a reductive perspective and that recently the scientific/popularised discourse dichotomy has been questioned by re-considering popularisations not as a form of 'vulgarisation', or 'translation', but rather as recontextualisation of scientific content (Calsamiglia 2003, p. 141). This is particularly evident in the sphere of scientific communication through the new media, as in the case of TED, a non-profit organisation devoted to the dissemination of *Ideas worth Spreading*, which started out in 1984 as a conference for the diffusion of technology, entertainment and design (hence TED), but in 2006 it started hosting videos of the conference talks on its website, eventually becoming a new spoken web-based genre<sup>1</sup>. These talks cover several purposes, as they promote knowledge dissemination in several fields such as Arts and Design, Business, Education and Culture, Politics and Global issues, and Science and technology, while they engage and entertain their audiences by showing how they are truly involved in the dissemination of the results of their research and they explain how they can have a personal impact on everyday life. Though there are several genres of knowledge communication that have recently captured discourse analysts' interest, this work would like to focus on TED talks because they differ from other forms of popularisation. Its videos are provided with transcriptions, translations, a blog, and a comment area, giving rise to a phenomenon of genre and modality mixture. Caliendo (2012, p. 101) gives a very useful insight into why TED could be considered as a 'new hybrid genre':

[TED talks] discursive hybridity stems from the fact that they are similar to newspaper articles in that they prioritise results rather than methods (Bamford 2012). Not dissimilarly from university lecturers, TED talks are “planned speech events” (Salvi 2012, p. 75) during which speakers often employ multimedia resources such as visuals, music or filmed extracts. Like conference presentations, TED talks have a limited time slot, which cannot exceed eighteen minutes. Unlike other spoken dissemination genres such as public lectures, TED presenters display a certain degree of informality and colloquialism in their delivery. implicit acknowledgment of role symmetry, which translates into a wider use of deictic elements, second person pronouns, inclusive ‘we’, first person narrative, personal asides and humour.

TED constitutes an innovation within this innovation, as it breaks the typical ‘expert-mediator-audiences’ triangularisation, bringing experts directly into contact with their audiences. In this perspective, it is very interesting to study the process of interaction between its specialists and laypersons, as these experts have to find a way to be understood, respected, and remembered by their (live and online audiences) in a limited amount of time (maximum eighteen minutes). For this reason, appeals to *pathos*, which is one of the most persuasive rhetoric techniques, is a fundamental aspect of TED talks, because the speaker needs to establish an on-the-spot connection with their audiences, to be trusted and to communicate ideas in the most efficient manner. Appeals to emotions establish a connection with their audiences, which feel a sense of similarity with the speaker; in other words, emotions let the audiences perceive the speaker as someone who is ‘just like them’, opening many more pathways than words alone could do. Appeals to *pathos* help the audiences remember a speech, acting as ‘emotional glue’ that makes us remember what has an emotional importance for us. In Trevarthen’s (1992, p. 26) words:

Human emotions are interactive in that our emotions when perceived by another can change that person’s feelings and motives. Emotions of pleasure and excitement provide the emotional glue to maintain interaction.

As already noticed in other studies (Caliendo and Bongo 2012, Caliendo and Compagnone 2013, Scotto di Carlo 2014 a and b), TED talks reveal a particular emphasis on evaluation and on appeals to *pathos* in general. As for other forms of popularisation (see Shinn and Whitley 1985), *pathos* seems to be one of the main elements that differentiate these talks from canonical scientific presentations. In fact, in the latter, the frequent use of hedges such as ‘suggests’, ‘propose’, ‘report’, ‘argue’, ‘claim’, and the almost total absence of evaluative and emotive adjectives is due to the speakers’ will of trying to be as objective as possible, limiting emotive and over certain expressions (Hyland 2004). Conversely, TED talks tend to replace all hedges by explicitly expressing opinions and emotions linked to the topic of the speeches. They are supposedly rich in elements indicating the speakers’ affective response and position while trying to engage the audience through an informal and emotive tone.

Thus, *pathos* is crucial in knowledge dissemination, especially in TED talks, as it appeals to the live and online audiences’ sense of identity, self-interest, and emotions, to capture their interest, with the ultimate aim of spreading its ‘ideas’. The following sections will attempt to illustrate the various aspects of *pathos* and the strategies employed to enhance its effects in the popularising field of TED talks

## PATHOS AND PERSUASION

In his *On Rhetoric*, Aristotle explains how *ethos*, *pathos*, and *logos* can be used to persuade an audience during a speech. In the case of *ethos*, persuasion is achieved through the speaker’s personal character when the language is so spoken as to make the audience think

him credible. It may also be achieved through the speech itself when we have proved a truth or an apparent truth by means of the persuasive arguments (*Logos*). Persuasion may be enhanced through *pathos*, which is related to the speaker's ability to evoke a favourable emotion in the audience and strategically connect these emotions to the purpose of the speech. Aristotle identified seven sets of opposite emotions that can be roused: anger and calmness, friendship and enmity, fear and confidence, shame and shamelessness, kindness and unkindness, pity and indignation, and envy and emulation. These emotions, sided by stylistic and non-verbal communication skills, allow speakers to persuade their audience beyond the content of the speech. Also St. Augustine of Hippo addressed the issue of *pathos* in his *On Christian Doctrine* (397 AD), on the rhetorical art of preaching and teaching. Augustine's intent was to suggest how to teach the truth from the Scriptures paying particular attention to the emotional impact that words had on the believers. Though he does not explicitly refer to *pathos*, his advice resembles Aristotle's lessons, as can be seen in the following excerpt (trans. 1958, p.176):

[...] just as he is delighted if you speak sweetly, so is he persuaded if he loves what you promise, fears what you threaten, hates what you condemn, embraces what you commend, sorrows at what you maintain to be sorrowful, takes pity on those whom you place before him in speaking as being pitiful, those who you, moving fear, warn are to be avoided; and is moved by whatever else may be done through grand eloquence toward moving the minds of listeners [...]

Augustine's observations reveal another important aspect of *pathos*, that is to say that it requires the creation of a common sense of identity with the audience, so that it participates in the speaker's feelings, as the very etymology of the word '*pathos*' suggests. Only the sense of feeling the same emotions can deeply persuade the listener. This obviously involves a deep understanding of the importance of the audience's reaction, as suggested by Renaissance rhetoricians such as Geoffrey of Vinsauf, who in *The New Poetics* suggested analysing the audience, looking at the speech from their point of view (1971, p. 73): "do not have regard to your own powers, but rather his with whom you speak. Give a weight to your words that is suited to his shoulders, and speak words proper to your matter". Therefore, only an appeal to what concerns the inner feelings of the audience makes them identify with the speaker and thus feel the same emotions that the speaker feels (Hezaveh and Yaapar 2014).

In fact, in *A Rhetoric of Motives*, Burke argues that the achievement of the ultimate aim of persuading an audience towards the intention of the speech is possible only through an act of identification. "You persuade a man only insofar as you can talk his language by speech, gesture, tonality, order, image, attitude, idea, identifying your ways with his" (Burke 1969, p. 55). In this perspective, the primary aim of rhetoric is not to win an argument but to make establish what Burke also calls 'con-substantiation', which is a sense of identity between non-unitable existents. More recently, Jowett and O'Donnell have provided a model of persuasion in their *Propaganda and Persuasion*. They define persuasion as (1999, p. 31):

a complex, continuing, interactive process in which a sender and a receiver are linked by symbols, verbal and nonverbal, through which the persuader attempts to influence the persuadee to adopt a change in a given attitude or behavior because the persuadee has had perceptions enlarged or changed.

By establishing an emotional connection, audiences will not only more likely understand the speaker's perspective, but they will also more likely be persuaded to accept the claims. As the TED talk communication expert Dlugan (2010, para. 21) summarises:

If you utilize pathos well, your audience will feel the same emotions that you do. Your audience will feel the pain, the joy, the hope, and the fear of the characters in your stories. They will no longer be passive listeners. They will be motivated to act.

As a speaker, the overall goal is to create a shared emotional experience with the audiences, by being aware of the full range of emotions, deciding which emotion to evoke, and determining how these emotions can be steered. Naturally, speakers have to follow an in-depth training period to learn how to enhance their mastery of communicative skills. In particular, TED talkers are helped in this delicate task by specialists such as Dlugan, who proposes several strategies to improve a speaker's use of *pathos*. The following sections will examine the strategies used by TED speakers to enhance their *pathos* among their live and online audiences in order to be listened to, remembered, and recognised. In particular, the study will focus on an exemplary TED talk chosen from a corpus of eighty four TED talks presented in English in 2012, as part of a research project of the department of Modern Philology of the Federico II University of Naples (Italy)<sup>2</sup>. The talk chosen for this preliminary analysis is *My Stroke of Insight*, a fascinating TED talk held by Dr Jill Bolte Taylor, which recounts the speaker's first-person experience of a major stroke. It has been chosen as it has been one of the most watched TED talks so far, with over 12 million views; thus, it was hypothesised that its analysis could have revealed some of the prominent features that contribute to making these talks remarkable and thus successful among the audiences.

#### INTRODUCTORY NOTES ON *MY STROKE OF INSIGHT*

Dr Jill Bolte Taylor is a neuroanatomist specialist in post-mortem investigation of the human brain as it relates to severe mental illnesses. Her inspiration to become a brain scientist was her brother's schizophrenia, as she wanted to understand the differences between her brother's brain and other people's brains. This desire led her to achieve a Ph.D. in Neuroanatomy and eventually become a researcher at the Harvard Medical School.

On December 10, 1996, Taylor woke up to discover that she was experiencing a stroke that irrevocably altered the course of her lifetime. The cause proved to be an arterio-venous malformation (AVM), i.e. a haemorrhage from an abnormal congenital connection between an artery and a vein in the left hemisphere of her brain: she suddenly could not walk, talk, read, write, or recall any of her life. Oddly, she describes the stroke as a positive state 'the incessant chatter' that normally filled her mind and all her worries disappeared and after experiencing intense pain, she said that her body disconnected from her mind, - 'the energy of my spirit seemed to flow like a great whale gliding through a sea of silent euphoria'. While her spirit was feeling free, she had lost her basic analytical functions, such as her ability to speak, to understand numbers or letters, and thus to ask for help. Eventually, she managed to dial a friend's number and get help. Her desire to teach others about nirvana, the state she says she reached during the stroke strongly motivated her to battle through an eight-year recovery. Following her experience, she wrote her best-seller *My Stroke of Insight: A Brain Scientist's Personal Journey* (2006), for which she was named to *Time Magazine's* 2008 Time 100 list of the 100 most influential people in the world<sup>3</sup>, and in 2008 she gave a TED talk<sup>4</sup> that has become the second most viewed TED talk of all time. In this beautifully orated talk, Bolte gives a very detailed account of her thoughts and emotions, guiding the audiences through the entire scientific process of her stroke and discussing the transcendental state she experienced throughout it.

The success of the talk might be due to her style, which is quite unusual for a scientific presentation: instead of a typical medical-vocabulary loaded speech, Taylor fills each sentence with emotions. Her talk is rich in details that illustrate her feelings, thoughts,

and actions. Like a very experienced storyteller, she carefully takes her audiences by the hand to lead them into her body while she experiences the consequences of her stroke. The audiences could feel the pain she had in her left lobe and the surprise of her right lobe while it was analysing the altered state of her body and of the objects around her. As she described it, the audiences could understand that she was re-living this state with a great emotional impact, tangible through the emotion in her voice. An interesting fact is that this speech was carefully prepared and scripted, differently from what this speaker says she usually does for her presentations. As can be read in an interview with Leslie Belknap (2013, para. 7):

The TED talk was the toughest one for me because I had only 18 minutes to share my life story. I knew I had to ‘give’ my audience the stroke experience, and let them feel it in order for them to truly receive the gift. This meant I had to script the piece, which I never do and am not comfortable with doing, at all! [...] In order to retain the sense of authenticity, it was critical that I feel every word of the presentation. I dug deep into my soul and shared the essence of my humanity. When I soared like “a great whale soaring through a sea of silent euphoria”, the TEDster’s souls soared with me. [...] Because I resisted teaching, and was willing to just ‘hold the space’, the TED talk proved to be a powerful success.

For these reasons, it is very interesting to analyse the strategies that have been used in its elaboration. Using Dlugan’s (2010) techniques suggested to TEDsters who would like to improve their communication skills, this work will now attempt to illustrate how this speaker has used strategies of emotional connection with her audiences to create the *pathos* of her presentation.

### COMMUNICATIVE TECHNIQUES USED TO ENHANCE *PATHOS*

According to the TED talk communication expert Andrew Dlugan (2013 a), the plethora of *pathos* strategies can be classified according to themes and points, words, analogies and metaphors, stories, humour, visuals, and delivery techniques.

#### THEMES AND POINTS

A speaker always has to choose the points to include in the time allotted, preferably focussing on points carrying some emotional power. In her TED talk, Taylor has carefully selected the elements to be included in order to achieve the purpose of her talk, as she reports in her interview:

The TED talk was the tough one for me because I had only 18 minutes to share my life story. I knew I had to ‘give’ my audience the stroke experience, and let them feel it in order for them to truly receive the gift.

The very title of the talk refers to a stroke of ‘insight’: this gives her audiences the idea that she does not want to speak only about the mere experience of the stroke, but especially about how it has influenced her life, having benefited from it in terms of personal spiritual growth. The structure of the talk is built in a crescendo that guides her audiences to her purpose of revealing the potentialities of the right lobe.

In the first point of her speech, the speaker explains her reasons for becoming a doctor, introducing the audiences to a personal experience from the very beginning of the talk, explaining how her career has been influenced by her brother’s schizophrenia and by the desire to research on this disorder:

I grew up to study the brain because I have a brother who has been diagnosed with a brain disorder, schizophrenia. And as a sister and as a scientist, I wanted to understand,

why is it that I can take my dreams, I can connect them to my reality, and I can make my dreams come true [...]?

In this part, she decides to not give her credentials, rather to establish an emotive connection with her audiences by answering the question ‘why am I here?’ precisely about what had led her to her choice of participating to TED. If she had not set off in that manner, the audience would have maybe perceived her position of a brain scientist as something distant, not interesting, or perhaps too difficult to follow and would have not been able to fully immerse themselves in the powerful lesson to come. Here, people can identify themselves and thus create a connection with the speaker through her story of her brother, rather than with her credentials. The second point includes a description of the basic functions of the brain to allow her audiences to understand her talk in depth. This function triggers a great emotional impact, not only for its content, but especially for the prop used to evoke emotion in the room: an assistant brings in a real brain on stage, so that the speaker can briefly describe how it works:

[Thanks.] So, this is a real human brain. This is the front of the brain, the back of the brain with a spinal cord hanging down, and this is how it would be positioned inside of my head. And when you look at the brain, it’s obvious that the two. Our right hemisphere is all about this present moment. It’s all about right here right now. Our right hemisphere, it thinks in pictures and it learns kinaesthetically through the movement of our bodies. Information in the form of energy streams in simultaneously through all of our sensory systems. And this was the portion of my brain that I lost on the morning of my stroke.

The last line of this section leads to the definition of the scope of her talk. She outlines what she will talk about, establishing the boundaries of her presentation, introducing her personal experience of a stroke:

On the morning of the stroke, I woke up to a pounding pain behind my left eye. And it was the kind of pain, the caustic pain that you get when you bite into ice cream. And it just gripped me and then it released me. Then it just gripped me and then released me. And it was very unusual for me to experience any kind of pain, so I thought OK; I’ll just start my normal routine.

The description of her unusual pain, followed by the narration of the beginning of her day, prepare her listeners to her story, in the attempt of making them curious to know what happened next, and ultimately to receive the message she is about to deliver. Finally, the speaker discusses her post-stroke considerations, reflecting on how she has benefitted from this experience, realising her meaning of life: I am the life-force power of the cosmos. I am the life-force power of the 50 trillion beautiful molecular geniuses that make up my form, at one with all that is. As strong as the opening was, the conclusion is strongly memorable as well, and quite unexpected for the scientific role of the neuroanatomist, because she uses the language of science to describe an occurrence that is normally ethereal:

But I realised “But I’m still alive! I’m still alive and I have found Nirvana. And if I have found Nirvana and I’m still alive, then everyone who is alive can find Nirvana.” [...] And then I realised what a tremendous gift this experience could be, what a stroke of insight this could be to how we live our lives.

This brought her to understand how there is such an open, free, calm beauty of the natural world that is almost never felt by mankind though it is within everyone. She says that it is only a matter of choice between the left brain, which ‘would rather be right than happy’ and the right one that ‘would much rather be happy than right’. Her final question, ‘who do you choose?’ with reference to which side of the brain we should prefer, leaves her listeners with wonder and a call to reflection.

## WORDS, ANALOGIES AND METAPHORS

The second strategy described by Dlugan is the proper use of words. Taylor's speech is characterised by the use of very simple language, which is fundamental in popularisation to reach laypersons. Although the speaker is a neuroscientist, her speech avoids jargon and explains all her points because she understands that her audiences do not need complex terminology, they need to understand the concepts behind the object of her speech. Her final aim is not to talk about the human brain, but rather to talk about her experience; therefore, the description of some brain functions is required to prepare the listeners to understand her stroke; she does not intend to deliver a lesson on brain terminology. Except for the concept of parallel processor, assumed to be known by a broad range of the audience and thus used to describe the functioning of the right lobe, every term is explained through a rich use of analogies close to the laypersons' world. These analogies guide her listeners into the speaker's terminology. In particular, metaphors and analogies are used to describe the basic functioning of the human brain; for instance, she talks about the 'mental chatter' in her brain as 'switched off like someone had pressed a mute button'; the pain she felt inside her head was 'like when you've bitten into ice cream':

For those of you who understand computers, our right hemisphere functions like a parallel processor. While our left hemisphere functions like a serial processor. The two hemispheres do communicate with one another through the corpus callosum, which is made up of some 300 million axonal fibers. But other than that, the two hemispheres are completely separate. Because they process information differently, each hemisphere thinks about different things, they care about different things, and dare I say, they have very different personalities.

As explained by Calsamiglia (2006, p. 370), these strategies of explanation, such as definitions, examples or metaphors, among many others, are the semantic means that allow language users to relate new knowledge to old and known domains of experience, meaning or knowledge. This means that this popularised talk is formulated in such a way that non specialised readers are able to construct lay versions of specialised knowledge and integrate these with their existing knowledge.

## STORYTELLING

Narrative is central in TED talks, as it conveys pathos, which leads to identification. This is actually true for all forms of communication, especially those involving rhetoric and persuasion. In line with Fisher's theories on the Narrative Paradigm, it can be said that all meaningful communication is a form of storytelling, as a sense of identification is best appealed to through stories. Human beings experience and comprehend life as a series of ongoing narratives shaped by history, culture, and character. Summarising Fisher's (1985) words, it can be said that actually we are all essentially storytellers; we tend to make decisions on the basis of good reasons, which are determined by our history, biography, culture, and character; therefore, the world is a set of stories from which we choose, and thus constantly re-create, our lives. These talks seem to aim at persuading through narrative fidelity: if a story matches the audience's beliefs and experiences, it is more probable that they will accept it, considering it as a guide for their actions. Identification can be obtained not only through logic of reason, but especially through values and emotions. In fact, according to Dlugan (2013 b), stories are often the quickest path to the greatest emotional connection with an audience because they are carefully crafted stories allow evoking a wide range of emotions. The recounting of the stroke is the core element of Taylor's speech, taking

up more than ten minutes of her eighteen-minute speech. It is so rich in details that the listeners are able to emotively re-live her experience through her words:

On the morning of the stroke, I woke up to a pounding pain behind my left eye. And it was the kind of pain, caustic pain that you get when you bite into ice cream. [...] So I got up and I jumped onto my cardio glider, which is a full-body exercise machine. And I'm jamming away on this thing, and I'm realizing that my hands looked like primitive claws grasping onto the bar. I thought "that's very peculiar" and I looked down at my body and I thought, "Whoa, I'm a weird-looking thing." And it was as though my consciousness had shifted away from my normal perception of reality [...].

The success of talks like this is certainly connected to the fact that new audiences seem to desperately look for trustworthy information, for what is real, also in science dissemination. Audiences seem to not want information from textbooks anymore; they prefer to listen to who is personally involved in research, technology, and science. This interest towards personal experience was already observed in 1979 by Jean François Lyotard (1979, p. xxiv-xxv) who called it the 'Postmodern Condition': "simplifying to the extreme, I define postmodern as incredulity towards metanarratives". In other words, audiences prefer little, personal, and direct stories. Taylor's talk is successful, especially because its story touches her listeners' inner feelings, making them care emotionally, intellectually, and aesthetically. It differs from other practices of knowledge dissemination in that it follows the rules of reflective practice (Lillis 2001), as it uses emotion over logic, personal experience over published academic truth, circularity over linearity, evocation over explicitness, uncertainty over certainty, informality over formality, and competitiveness over collaboration.

#### HUMOUR

Humour and laughter are "cultural universals [...] a condition of our humanity" (Oring 2003, p. x). This is why the study of humour has attracted the interest of researchers for centuries, drawing insights from several fields. Originally studied within the area of rhetoric, nowadays humour is a pervasive phenomenon of the new media. Humour actually permeates nearly every aspect of society; it has been the theme of extensive studies that have investigated the mechanisms underlying humour and its multiple functions as a communicative tool. For instance, according to Hertzler (1970, p. 127), humour has a very influent role in shaping a group's status system; because it can function as a social equaliser or it can serve to reinforce and maintain status differences. In particular, with regard to the levelling function, Hertzler suggests that humour used in a communicative context involving interlocutors with different statuses can open communication and push social barriers into the background, achieving a feeling of commonality. For Meyer (2000, p. 317), humour in communication can act as a "lubricant" when it smoothes "the way and integrate a speaker into a greater level of credibility within a group, but it can also ruffle feathers and cause social friction and conflict". Depending on these factors, humour can be a unifier, creating positive relations between participants (with a function of identification or clarification), or alternatively it can divide the interlocutors and create a negative environment that does not facilitate communication (differentiation or enforcement). However, the combination of objective scientific investigation and the pleasant emotional responses to humour can become a powerful educational tool. This is true not only in the context of the scientific community and formal education, but also, and especially, in public communication of science in the media. Humour is another fundamental aspect of Bolte's speech, as it helps audiences connect with the speaker through an emotional rather than an intellectual reaction while enhancing the audiences' attention. As Dlugan explains (2013 a): "if your audience is laughing, they are

having fun. If they are having fun, they are happy to be listening to you and they are attentive”. The peculiar aspect of this talk is that it uses humour to hedge some of the most tragic parts of the speech. This renders her speech light-hearted while triggering emotions at the same time, as can be seen in the following excerpt:

Then all of a sudden my left hemisphere comes back online and it says to me, “Hey! We got a problem, we got a problem, we gotta get some help.” [Laughter] So it’s like, OK, OK, I got a problem, but then I immediately drifted right back out into the consciousness, and I affectionately referred to this space as La La Land. And in that moment my right arm went totally paralysed by my side. And I realised, “Oh my gosh! I’m having a stroke! I’m having a stroke!” And the next thing my brain says to me is, “Wow! This is so cool. This is so cool. [Laughter] How many brain scientists have the opportunity to study their own brain from the inside out?” [Laughter] And then it crosses my mind: “But I’m a very busy woman. I don’t have time for a stroke! [Laughter] Eventually the whole number gets dialed, and I’m listening to the phone, and my colleague picks up the phone and he says to me, “Whoo woo woo woo woo.” [Laughter] And I think to myself, “Oh my gosh, he sounds like a golden retriever!” [Laughter].

In the examples quoted above, humour is generated from a sense of incongruity, because the arrangement of the elements is incompatible with the patterns expected by the audiences. In this case, the listeners would have expected a very sad description of the stroke and of its consequence; however, the speaker chooses to narrate the events in a way that makes the audience laugh. The speaker also uses laughter directed to herself, intellectually deconstructing her stroke from the inside out.

#### PERSONAL DELIVERY TECHNIQUES

Through the aid of visuals and her physical position on stage, the speaker magisterially magnifies emotions by matching her vocal delivery and gestures to her emotions. First of all, it is interesting to mention the elimination of physical barriers between her and her audiences: for the entire talk, she is never behind the lectern and she constantly moves closer to the audience, enhancing her connection with them. Her tone, volume, and pace mirror her emotions and the audience can highly empathise with her during her speech. These elements convey the sense of a person integrated with her emotions, giving greater strength and credibility to her speech. As regards her pace, anxiety is conveyed through a major speed of her path, when she recounts the recognition of moments of danger, for instance:

Then all of a sudden my left hemisphere comes back online and it says to me, “Hey! We got a problem, we got a problem, we gotta get some help.” “Hey! You’ve got to pay attention, we’ve got to get help,” and I’m thinking, “I got to get help, I gotta focus.”

She speaks really slowly, especially in the important parts where she wants to allow her listeners to track the concepts she is talking about during the conclusion, as in:

So who are we? We are the life force power of the universe, with manual dexterity and two cognitive minds. And we have the power to choose, moment by moment, who and how we want to be in the world. Right here right now, I can step into the consciousness of my right hemisphere where we are — I am — the life force power of the universe.

Another strategy used during her talk is the evocation of curiosity, especially when she first introduces the reasons why she became a neuroanatomist, when she suddenly says ‘on 10th December 1996, I could not walk, talk, read, write, or recall my life’ and then she starts talking about the right and left hemispheres of the brain. This suspense creates curiosity among her audiences about what had happened, while she sets the context of her speech by explaining the basic functions of the human brain. Only after this she describes her stroke.

Moreover, the speaker stresses her authenticity frequently through verbs such as ‘to believe’, as in the following excerpt, from her conclusions:

Which would you choose? Which do you choose? And when? I believe that the more time we spend choosing to run the deep inner peace circuitry of our right hemispheres, the more peace we will project into the world and the more peaceful our planet will be. And I thought that was an idea worth spreading.

As said earlier, during the entire speech, her body is another clue for the audience to gauge her emotions. Apart from not using the lectern, an important element is her use of non-verbal communication: for instance, she uses the left half of the circle she is standing in to describe the left hemisphere of the human brain and the right side of the circle to describe the right hemisphere. This contrast visually aids the explanation of the difference between the two lobes; moreover, the talk also includes some simple but captivating visuals: her pictures, graphs, and other visuals are an integrated part of the talk, giving more strength to the entire presentation, as they help her explain her experience genuinely. Even though Taylor is not an expert in linguistics, nor in science popularisation, her interview confirms her use of specific techniques during her talk to make her presentations appropriate for different audiences:

I don't talk about my brain very much at all. Instead, I help people perceive themselves in a different light, as a cellular being rather than as an individual separate from the whole, and I help them better understand how they can get their brains to do what they want it to do. We are beautiful living creatures with amazing abilities, and the better we understand what we are as circuitry, and how we can consciously influence what circuitry we are running, the easier it is for us to be who and how we want to be, moment by moment. It's great fun for me to present, and potentially life changing for those who are open and ready [...]

Though not explicitly discussing about the popularisation of science, Taylor expresses her desire to spread her ideas and her experience in the authentic spirit of knowledge dissemination for all levels of audiences.

## FINAL CONSIDERATIONS

The success of Bolte Taylor's talk may not be due only to its fascinating topic, but especially to how it was magisterially delivered, becoming an example for those interested in speech delivering techniques and in science popularisation in particular. Bolte Taylor's talk impacts her listeners for its great appeals to pathos. She guides her audiences through her experience with the aid of well-structured emotive storytelling, rich in metaphors, examples, humour, and visuals, inviting her audience to experience the stroke that has changed her life. Her authenticity reveals who she is as a person: a vulnerable human being beyond her professional role. As Taylor herself explains in the interview with Belknap:

I love talks that contribute to the overall well-being of who we are as humanity — that deal with how we can explore ourselves as individuals, as well as people in relationship with one another, and then ultimately, how we relate ourselves to the sustainability of this beautiful planet. And, of course, I always love interesting science told well in story form.

Taylor's ability keeps her listeners engaged because of the personal and emotional relevance of the experience unveiled and because she deeply satisfies her audiences' eagerness to know her reasons for the talk: telling why she was talking to them and sharing her emotive connection to the topic made her more ‘real’, and the issue more relevant. Ultimately, by talking about her personal epiphany, she reaches her goal of inspiring her audiences and

capturing their interest, by presenting opportunities to consider making a change in their lives and thus appealing to pathos to persuade them. In Taylor's words:

We can all learn that we can take full responsibility for what thoughts we are thinking and what emotional circuitry we are feeling. Knowing this and acting on this can lead us into feeling a wonderful sense of well-being and peacefulness.

Of course, this work must be considered as only a preliminary study. As this project has chosen to focus on one talk, used as an example to illustrate the prominent features of this relatively new genre of science popularisation, and to understand which characteristics are strategically preferred by speakers to reach the goal of getting closer to the audience, further studies are needed. For instance, it would be interesting to move beyond an analysis of a single talk and consider the genre overall, using a comparative approach of several talks. However, while the description of TED as a new hybrid genre is far from being fully explored, it is possible to say that presenters like Taylor are successful because they are able to authentically connect themselves to their topics, concentrating on their personal stories of discovery and innovation. Although some scholars are highly critical against this genre, claiming that it “dumbs down” (Bratton 2013) true science, it is important to understand that the aim of these talks is popular science for the general public, in the perspective of a culture of knowledge sharing and inspiration, in the hope of becoming a springboard for further personal studies. They can contribute to allowing audiences approach science not as something distant and separate, but as a heritage belonging to the whole community. Through TED, experts might contribute to the ‘humanisation’ of knowledge, establishing an interpersonal proximity with the audience, which could feel part of the knowledge and discovery event.

#### ENDNOTES

1. Although TED has given birth to several local TED-like experiences, such as the independently organised TEDx events, this work only refers to TED talks proper, retrieved from [www.ted.com](http://www.ted.com).
2. Also the author of the paper is part of this department project headed by G. Bongo, G. Caliendo, and M. Rasulo. All transcriptions of the talks are available at the TED website ([www.ted.com](http://www.ted.com)) and they have been divided into five macro areas by the research group: Arts and Design, Business, Education and Culture, Politics and Global issues, and Science and technology.
3. Source: [http://content.time.com/time/specials/2007/article/0,28804,1733748\\_1733754\\_1735155,00.html](http://content.time.com/time/specials/2007/article/0,28804,1733748_1733754_1735155,00.html) (Last accessed: September 2014).
4. All excerpts of Taylor's TED talk mentioned in this work have been retrieved from the transcript of the video available at: [http://www.ted.com/talks/jill\\_bolte\\_taylor\\_s\\_powerful\\_stroke\\_of\\_insight.html](http://www.ted.com/talks/jill_bolte_taylor_s_powerful_stroke_of_insight.html) (Last accessed: September 2014).

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