The Formula of Plague Narratives

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Abstract

The article is a narratological investigation of a selection of plague tales. The selection spans millennia and different text types, technologies and genres, from *The Bible* to apocalyptical films, iPhone games and testimonials from Médecins Sans Frontières. The research question is whether it is possible to establish a stable formula for plague narratives despite the spread over centuries and in different text types, and to explain this formula and possible variations of it. The initial and tentative hypothesis is that a formulaic narrative structure exists for accounts, both documentary and fictional, of epidemics. The samples include: *Exodus, History of the Peloponnesian War, Samuel Pepys' Diary, A Journal of the Plague Year, The Last Man, The Plague in Bergamo, Discipline and Punish: The Birth of the Prison, Doomsday, The Dead Zone, World War Z. An Oral History of the Zombie War, Pandemic, Plague Inc.* and testimonials from Médecins Sans Frontières about the 2014-15 ebola outbreak in West Africa.

Keywords: epidemic, plague, narrative formula, infection, pandemic

The research question of this article is relatively simple: Is there a stable formula for plague narratives? By a stable formula is here meant a relatively unchanging and standardized narrative structure with the same storyline and a combination of recurrent elements found in a large number of individual texts, so that these texts seem predictable and familiar even at a first reading. The relationship between the individual text and the formula may be compared to variations on a theme (Cawelti, 1976, 10). Plague narratives are here defined as descriptions of an epidemic; an epidemic being the rapid spread of infectious disease to a large number of people within a short period. For research purposes, the definition of a narrative is here wide in scope in so far as it encompasses fiction, non-fiction, historiography, cultural philosophy, a radio drama, an episode from a television series, film, a diary, documentary journalistic reports, a mockumentary, a web comic, an iOS and Android strategy video game, and myth. This selection of samples is also based on what is called the criterion of variation where the texts are chosen with the aim of including as wide a variation as possible within the optics or textual typology as it has been initially defined.

The narratological approach is a combination of qualitative and quantitative content analysis (Krippendorff 2013). It employs Gérard Genette's (1982/1997) and Umberto Eco's terminologies (1985) about hypertextuality and intertextuality, and is also to some extent influenced by John G. Cawelti and his *Adventure, Mystery, and Romance Formula Stories as Art and Popular Culture* (1976), where an empirical, systematic survey of the samples was performed in order to see if it is possible to establish a catalogue of recurrent topoi, themes and narrative mechanisms, and to seek to explain variations of these. Initially, a pilot survey was carried out. It included three different texts from the sample, and based on this survey a large and expanded spreadsheet table was created. The components of each of the sample texts were entered into the table, and the completed table was then analysed in order to validate or invalidate the hypothesis on which the research question has been set up. This hypothesis is that a formula exists, and this hypothesis will now be tested.

The pilot project

Analyses of three samples, *Exodus* 12:29, *A Journal of the Plague Year* and *Pandemic* suggested that plague narratives contain at least these elements: Description of symptoms, fear of infection and distrust of other people, incarceration in homes as official measures to stop infections and marks on doors, the use of protective clothing, fear of travels as spreading contagion, but also as escape from contagion, mass graves and burials, lamentations and grief, superstitions about causes of the epidemic or about divine intervention as a punishment, and 1st person narration and personalized cases and accounts. These elements were not present in all of the three sample texts that were chosen for their distinctiveness, but enough elements were shared so that the survey of all the samples could continue. The table from the pilot project was carried on as it was left open so that new items could be added from the remaining 13 samples, and the main research question was also expanded as subquestions about historical developments and genre specific characteristics arose from the pilot project.

A survey of plague narratives

When all the different texts in the overall sample were analysed some new categories were added to the initial number of elements of plague narratives. These are accounts of the number of deaths, the role of physicians, identification of the source of the pestilence, how animals influenced the epidemic or were influenced by it, how survivors of the plague were in conflict, sometimes violent conflict, revelling and partying as response to the plague, plague as a follower of war, cures that did not work, the epidemic developing into pandemic, official measures against the plague, pillaging and looting, increased religiousness, winter as relief from the plague, albeit sometimes only temporarily, how public administration failed and society broke down, the use of maps and descriptions of specific locations, descriptions of empty and deserted cities, the creation of safe zones with walls to keep out the infected, press reports, and more curiously how some people identified themselves with the disease.

The samples of the article are not only spread according to textual type, they span more than 2,500 years, and they are:

1. *Exodus* 12:29. *The Bible (King James Version).* C. 6th century BC.
2. Thucydides. *History of the Peloponnesian War. The Plague of Athens.* C. 460 - c. 395 BC.
3. Procopius. *History of the Wars: The Plague of Justinian*, Book I and II. C. 545.
4. Giovanni Boccaccio. *The Decameron*. 1348-1353.
5. Samuel Pepys. *The Diary*. 1660 -1669.
6. Daniel Defoe. *A Journal of the Plague Year*. 1722.
7. Mary Shelley. *The Last Man*. 1826.
8. J.P. Jacobsen. *The Plague at Bergamo*. 1882.
9. Michel Foucault. *Discipline and Punish: The Birth of the Prison*. 1975.
10. Mike Rohl. *Plague*. *The Dead Zone*. 2003.
11. Max Brooks. *World War Z. An Oral History of the Zombie War*. 2006.
12. Neil Marshall. *Doomsday*. 2008.
13. John Dryden. *Pandemic*. 2012.
14. Ndemic Creations. *Plague Inc.* 2012.
15. Minna Sundberg. *Stand Still. Stay Silent*. 2014.
16. The website of Médecins Sans Frontières. 2015.

As the results of the textual analyses for the survey can be inserted into a spreadsheet, the visualizations of it can be employed as a method to answer these pertinent questions: Is there a narrative template for a generic plague narrative, and if there is, what elements does it then contain? Can any of the elements be characterized as obligatory? Does the historical context influence the presence of the elements, and do the textual type and genre of the narrative determine which elements are present and which are not? These questions will be considered in the following part of the article.

Diagram 1 shows the quantity of occurrences of plague narrative elements in all the 16 sample texts combined. The total number of elements found was 33. This table answers the research question about the existence of a formula or template for plague narratives in the affirmative. In spite of the diverse selection of sample texts with regard to text type and historical period, some tropes are repeated at least in ten of the sixteen texts. Most of these seem straightforward and necessary considering the nature of the subject of the narratives. *Descriptions of the symptoms of the disease* are one of the ob-

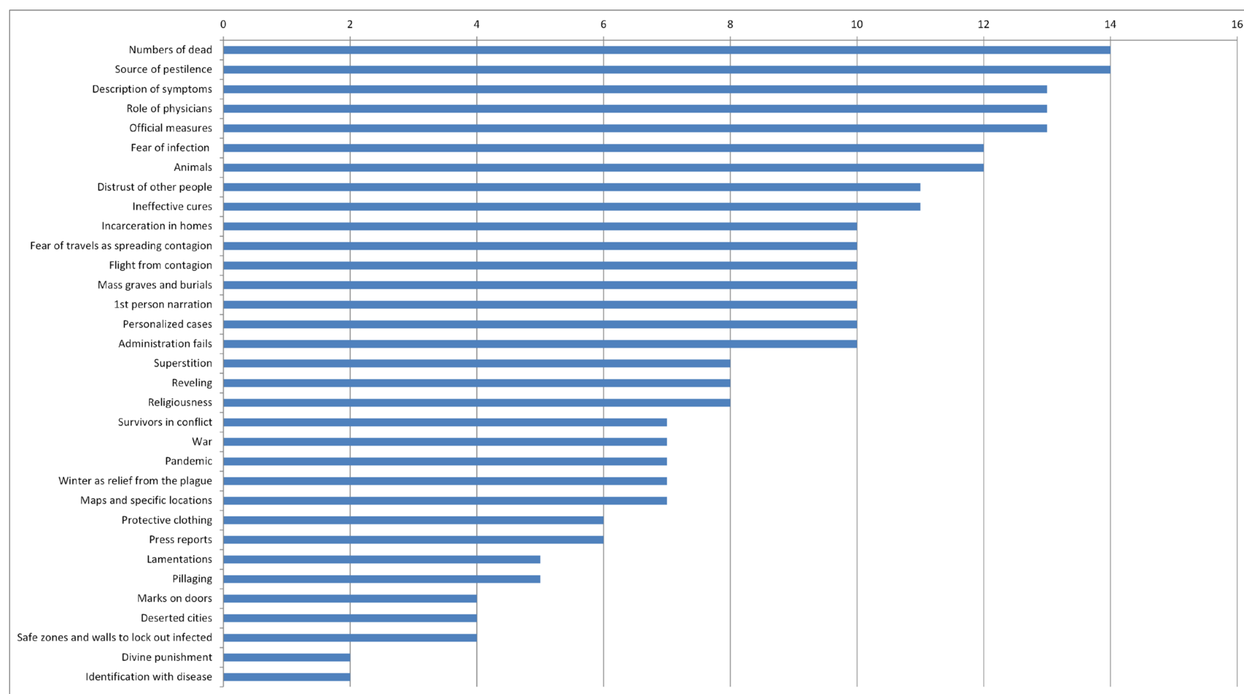

Diagram 1: The quantity of occurrences from 0 to 16 of plague narrative elements is given in the horizontal axis. The vertical axis lists the elements that have been found in the analyses of the 16 sample texts in numerically falling order from the top to the bottom of the diagram.

ligatory elements. They appear on the website of Médecins Sans Frontières: "If you are infected with Ebola the symptoms show after 2 or 21 days. They resemble the flu: a high temperature, drowsiness, and headache, muscle and stomach pains. Later follow vomiting, diarrhoea, a rash, and liver and kidney failure, and finally in the course of the disease both internal and external haemorrhaging." (Médecins Sans Frontières 2015) In the much earlier *History of the Peloponnesian War*, Thucydides gives a long and detailed account of the course of infection from its onset with sneezing and hoarseness to "the disease descended further into the bowels, inducing a violent ulceration there accompanied by severe diarrhoea, this brought on a weakness which was generally fatal." (Thucydides c. 460 - c. 395 BC, chapter VII).

Statements about the number of deaths is given as in *Exodus'* imprecise but dramatic "there was not a house where there was not one dead" (02:012:030) to the no less dramatic "Half the world's population, 50% in three weeks" in the radio play *Pandemic*. Samuel Pepys' day-by-day account enumerates the victims in London specifically down to neighbourhood and street level.

The use of mass graves instead of proper burials is repeated in several forms. *The Decameron* has this graphic description: "they dug, for each graveyard, as soon as it was full, a huge trench, in which they laid the corpses as they arrived by hundreds at a time, piling them up as merchandise is stowed in the hold of a ship, tier upon tier, each covered with a little earth, until the trench would hold no more" (Boccaccio 1348-1353, Introduction). The pit or mass grave is not the only means of disposal of corpses in *The Last Man* by Mary Shelley, though. Here the number of deaths is so great and the speed of the pandemic so fast that bodies lie around in houses, fields and by roadsides.

The source of the pestilence is a stable ingredient of plague tales. What the source of pestilence is believed to be takes many forms. The pestilence as divine punishment of the pharaoh in *Exodus* is not typical. Rather geographical areas are mentioned as where the plague originates. Thucydides has Africa: "It first began, it is said, in the parts of Ethiopia above Egypt" (Thucydides c. 460 – c. 395 BC, chapter VII), and Pepys traces the route of the plague to London: "much talk about the Turk's proceedings, and that the plague is got to Amsterdam, brought by a ship from Argier; and it is also carried to Hambrough." (Pepys 19th October 1663). In *The Dead Zone* a female flight attendant from China, who is a heroin courier, brings the disease to the USA, and in *Pandemic* the virus is also connected to crime. Here it is British bioterrorists, who create an artificial virus strain named "Red Eye" and let it loose in Asia and Africa, not unlike the video game *Plague Inc.*, where the player must generate his own viruses or bacteria.

It is not only the victims of the plague that are agents in the narratives. More active agents are *physicians and medicinal staff*, and their actions and how they act and what roles they play in the treatment of plague victims are parts of the plague narrative formula. Often the roles of victim and physician are tragically fused, as when the doctors are also infected and may die: "Neither were the physicians at first of any service, ignorant as they were of the proper way to treat it, but they died themselves the most thickly, as they visited the sick most often" (chapter VII) as stated already by Thucydides. Much later in *Discipline and Punish*, the physician becomes part of the administrative apparatus overseeing the plague and the population, appointed by the magistrates (Foucault 1975/1991, 196). A vi-

rologist is the main character of the first episode of *Pandemic*, and he becomes one of the first victims as he investigates the outbreak. The danger of infection is never forgotten in the testimonials by doctors and other staff of Médecins Sans Frontières, neither is caring for patients at a personal level. This element of pathos has its own indisputable value, but it must be seen in the context of the fact that the website also has as its aim to raise funds for the organization.

Cures that are not effective after all enter into many narratives. Defoe satirically quotes advertisements: "'Infallible preventive pills against the plague.' 'Neverfailing preservatives against the infection.' 'Sovereign cordials against the corruption of the air.' 'Exact regulations for the conduct of the body in case of an infection.' 'Anti-pestilential pills.' 'Incomparable drink against the plague, never found out before.' 'An universal remedy for the plague.' 'The only true plague water.' 'The royal antidote against all kinds of infection'" (Defoe 1722, 50). Just as pessimistic a headline on the Médecins Sans Frontières' website is "Ebola-medicine: Not the miracle cure we hoped for" (2015).

The subject of *what measures the authorities take or do not take* to combat the spread of infection and their treatment of victims is found in 13 of the 16 sample texts. This is the main theme of Foucault's *Discipline and Punish*. The point of departure of the discussion of panopticism is the disciplining and regulation of "the plague town" (195), here the administrative and military orders for Vincennes during an outbreak of the plague at the end of the seventeenth century. These orders are first of all spatial partitioning and surveillance – "The plague is met by order" (197) – and Foucault concludes that "this is the utopia of the perfectly governed city." (198). When only applied to epidemics this Foucauldian control is now called quarantine, and as such it is met in later sample texts. In *Doomsday,* this is taken to extremes, when the whole of Scotland under martial law is incarcerated with a wall, mines in the sea and a no-fly-zone. However, official measures can also be research to find cures as in *The Dead Zone* and *Plague Inc.*, and relief for famine as in the early *The Last Man*. *World War Z* describes each country's more or less successful war against the viral zombie-infection, and the main part of this book and later film adaptation are about political and military attempts to fight the pandemic.

When official measures fail, *the very fabric of society breaks down* under pressure from the epidemic. A recurrent theme is how government officials fail to perform their duty as they rather take care of themselves and especially their families. In *The Last Man* the highest-ranking politician and administrator, the Protector, deserts his duties and leaves with "Every man for himself." (176), and in *Doomsday*, the film's voice-over simply concludes: "social order decayed". It is not quite so devastating, but seriously enough, when Médecins Sans Frontières reports that there are no wages for local doctors and nurses in the West African states and that their health systems are not in order.

Descriptions of *how people fear infection and how people fear one another* as possible sources of contagion are stable topoi. An example both macabre and curious is Samuel Pepys' qualms about his wig during the plague of London: "3rd (Lord's day). Up; and put on my coloured silk suit very fine, and my new periwigg, bought a good while since, but durst not wear, because the plague was in Westminster when I bought it; and it is a wonder what will be the fashion after the plague is done, as to periwiggs, for nobody will dare to buy any haire, for fear of the infection, that it had been cut off of the heads of people dead of the plague." (Pepys 1665, 3rd September). *Travellers and travelling* were likewise feared, as this was believed to spread the plague. This is demonstrated with animated graphics in the game *Plague Inc.*, where flight routes are disseminating the viral infection globally. In contrast to this, people fleeing from centres of the plague, for instance into the countryside, is found in ten of the sample texts. The 1st person narrators of *A Journal of the Plague Year* and Samuel Pepys both stayed in London during the plague, but other people left and Pepys sent his family out of London to Woolwich in relative safety. Characters in the web comic *Stand Still. Stay Silent*, which takes place in Scandinavia, seek to flee to isolated huts in the mountains or to sail to Iceland, which is free from the infection.

Two narrative elements among the frequent ones may seem surprising. *The role of animals during the epidemic* is mentioned in 12 of the 16 sample texts. This role is, however, not the same. In some cases, animals are identified as the source of the epidemic, for instance bats in the case of Ebola, but animals may also fall victim to the disease. Alternatively, the narrative may simply tell how ani-

mals suffer from neglect or how animals thrive without humans. The other surprising finding is how frequent *1st person narration* is used. This testimonial-like aspect may be seen in unison with the inclusion of *personalised case stories and destinies of individuals*. This human and very often emotional aspect of plague narratives is woven into the broader, sometimes global sweep of the narratives.

Some of the less frequently occurring elements may be historically explained. *Press reports* depend on the existence of mass media, and *divine punishment* as the cause of an epidemic is tied to specific historical periods. A curious case is *marks on houses and doors*. This trope originates in *Exodus*: "And the blood shall be to you for a token upon the houses, where ye are: and when I see the blood, I will pass over you, and the plague shall not be upon you to destroy you, when I smite the land of Egypt." (*The Bible*. 02:012:013). It is repeated in the two narratives about the plague of London in the 1660s, Samuel Pepys' contemporary *Diary* and in Defoe's *A Journal of the Plague Year*, written about 50 years after the plague: "That every house visited be marked with a red cross of a foot long in the middle of the door, evident to be seen, and with these usual printed words, that is to say, "Lord, have mercy upon us," to be set close over the same cross, there to continue until lawful opening of the same house." (Defoe 1722, 63). In the post-apocalyptic movie *Doomsday* from 2008, the doors in Glasgow are marked with huge white digits, and one of the characters explains that they were the number of people living in the house to be evacuated, which they never were.

The other less frequent elements of the sample plague narratives in descending order of frequency are: *superstition* surrounding causes of the disease, *revelling* and partying as response to the closeness of death, survivors of the plague often in a post-apocalyptic world enter into *violent conflicts*, the plague and *war* may accompany one another, the plague may develop into a *pandemic*, as a contrast to revelling people may become more *religious* also in the closeness to death, *winter* is described as a season that offers relief from the plague, precise *topographical details and cartography* are included in the narratives, especially physicians wear *protective clothing and masks*, *press reports* about the epidemic are found in more recent texts, public *lamentations and private grief* follow the losses, but also *looting and pillaging* may take place. Curiously, in two texts only, *characters identify with the disease*. In *World War Z,* healthy peo-

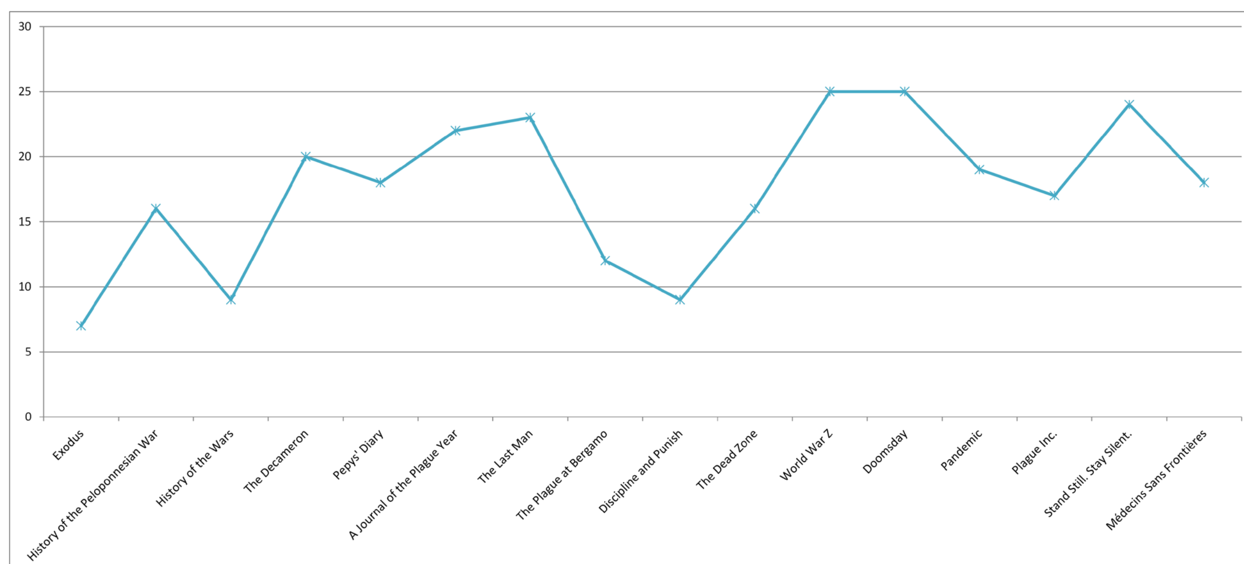

Diagram 2: The absolute number in each sample text of the total register of the found plague narrative elements can be seen in the curve of this diagram. The horizontal axis is historically organized from left to right. The length or scope of a text is not necessarily decisive for the number of elements included, though a short story of like "The Plague at Bergamo" of 11 pages with its theme of religious flagellants versus revellers does not allow a large number. No text includes all the 33 elements found in the survey.

ple behave as the infected zombies, and in the game *Plague Inc.*, the player must develop the contagious microorganism.

A generic plague narrative?

A comparative survey of the number of occurrences of the plague narrative elements found in all the samples can be visualized as in diagram 2:

Even though the sample texts are as diversified as they can be with regard to chronology, textual types, genres and even their media technologies, their resemblance reaches much further than the one depending on their shared subject, i.e. a plague epidemic. For instance, there is no conclusive difference between the average number of elements in the fictional samples (19 elements) and the nonfictional samples (14 elements).

Gérard Genette's structuring of text types and especially their relationships can be used as an explanatory framework to describe this resemblance, as well as the development of the genre of plague narratives. Of the five types of transtextuality considered in *Palimpsests* (Genette 1982/1997, 1-7), the one of hypertextuality can be the first step to examine if there is a generic plague narrative. It is defined in this way: "By *hypertextuality* I mean any relationship uniting a text B (which I call the *hypertext*) to an earlier text A (I shall, of course, call it *hypotext*), upon which it is grafted in a manner that is

not that of commentary." (5) It is tempting to compare the hypotext with a somewhat similar term, *Ur-Dichtung* in Genette's *The Architext. An Introduction* (1979/1992, 53), which is an original or first text that was the basis for an evolution into "elaborated forms". Does such an "earlier" plague narrative text exist? Is there an early text that has become the hypotext for later plague narratives, which can then be termed its hypertexts? Some of the sample texts are directly related in this way. The narrator of *The Last Man* refers to Daniel Defoe's *A Journal of the Plague Year* (Shelley 1826/1998, 187), and this genealogy reaches further back. Catherine Rubincam argues and concludes about Defoe's plague narrative and Thucydides' account of the great plague of Athens that "the similarities between them, even though they are matters of content rather than close verbal resemblances, are sufficient, especially when put together with what we know of Defoe's life and education, to justify the assumption that the English writer knew Thucydides' History and was influenced by it" (Rubincam 2004, 194).

Thucydides' *History of the Peloponnesian War* is the earliest full-scale sample text. It is a historical account of the Plague of Athens, which devastated the beleaguered Athens during the war with Sparta in 430 BC. The plague returned twice in the following years. Thucydides' historiographical description of the plague and its consequences contains these 16 elements: description of symptoms, fear of infection, distrust of other people, mass graves, superstition about the cause of the plague, 1st person narration, personalized cases, accounts about the numbers of the dead, the role of physicians, the source of the pestilence, the role of animals, the survivors in conflict, reveling, war, religiousness, and ineffective cures. As such, this early plague narrative can be seen as a hypotext of the genre, but obviously, all later plague narratives do not stand in a direct hypertextual relationship to it. For instance, Foucault's *Discipline and Punish* shares relatively few elements with *History of the Peloponnesian War*, as Foucault's theoretical text focusses on the societal discipline connected to an outbreak.

Genette's hypertextual category can be supplemented by Umberto Eco's related concepts of intertextuality in the light of repetition (1985). Eco writes that "Much art has been and is repetitive" (Eco, 28).One category of intertextual repetition is when texts do not quote an earlier text directly, but repeat commonplace topoi,

which the reader recognizes from his or her encyclopedic textual knowledge (22).This intertextual reception, which Eco argues is not only connected to mass-media products, "presumes the enjoyment of a scheme" (15). It seems far-fetched to talk about enjoyment of descriptions of plagues, but this kind of repetition of an established scheme may have an effect. The repetitive, formulaic character of these plague tales can to some extent create a narrative containment of fear of epidemics in the reader, and the mimetic embedding of a plague epidemic in a standardized and formulaic narrative form can in Cawelti's words have the effect that "Audiences find satisfaction and a basic emotional security in a familiar form" (1976, 9).

From a methodological point of view, the inclusion in the analysis of such a varied sample of texts can bridge the gap between textual analysis and cultural analysis. Cawelti stresses that working with formula literature "is useful primarily as a means of making historical and cultural inferences about the collective fantasies shared by large groups of people and of identifying differences in these fantasies from one culture of period to another." (1976, 7) The outcome of the analysis in this article can add to Cawelti's point about differences, in so far that these differences may become similarities, when the formula texts from different cultures and periods are about plagues.

Conclusion: The formula for plague narratives

This article asked the research question whether it was possible to establish a formula for narratives that dealt with epidemic outbreaks of the plague, and it was the hypothesis that such a formula actually existed. The 16 texts were selected using the criterion of variation in order to validate a conclusion. The analytical method was qualitative as the sample texts were analyzed consistently and their content and narrative modes were sifted for specific plague related elements. The qualitative approach was then followed by a quantitative survey, in which these elements were organized into groups of similarity, inserted into a spreadsheet, counted and visualized in diagrams. This made it possible to affirm that all the 16 samples had a high degree of similarity with regard to their plague-related elements.

The content of the survey was so numerically detailed that it is now safe to claim that there is a generic, formulaic and stable plague narrative, and that there is a group of obligatory elements in it. Similarly, it is not surprising that variations of the formula exist. Some elements only appear in few of the texts, and the appearance of these elements can be explained by the historical functions of the specific plague narrative and by their wider genre-related context. The result of the survey was not without surprises. The roles and fates of animals during plagues is one of these surprises, and so is the prevalence of the 1st person narrative mode.

The generic plague narrative has this formula plus some variations described above: The numbers of deaths are stated, the source of the pestilence is given, symptoms of the plague are described, and so is the role of physicians and doctors. There is a 1st person narrator, and this personal element is repeated in accounts of individual cases. People fear infection, and they distrust other people as they are regarded as bearers of contagion, and so are animals and travelers. Travelling is regarded as danger. On the other hand, people themselves seek to escape from the plague, but official measures mean that they can be incarcerated in their own homes. Other official, administrative measures are part of the formula, but it may also be the case that the public administration fails and society as a whole may collapse. The fatal seriousness of the plague epidemic is stressed in descriptions of how cures do not work, and the final and terminal icon of the plague narrative formula is the mass grave or the pit.

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