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**QUOMODO SCIT QUOD MORTUUS ERAT? SIGNS OF DEATH IN 15<sup>TH</sup>-CENTURY ITALY****Jyrki Nissi**

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**Resum**

Els materials hagiogràfics del Quattrocento italià revelen diversos signes de mort que es tenien en compte per confirmar si una persona havia mort o s'apropava a la mort. Els signes més freqüentment repetits són la fredor del cos, canvis en el color de la pell, i la falta de pols o respiració. La pèrdua del coneixement, l'absència de parla i la immobilitat també s'observaven sovint.

Una anàlisi en profunditat mostra molts altres senyals inesperats. Alguns signes en els ulls de la gent, les dents o la llengua també podien ser una prova de mort. De vegades, fins i tot les llàgrimes als ulls o la suor al front eren considerats signes mortals. Per a alguns, la posició adoptada per una persona moribunda assenyalava la mort, per exemple, jeure sobre l'esquena o amb el cap cot, com era el costum per als morts. De la mateixa manera, les ferides o el dolor indicaven que la mort s'apropava. Les expressions 'dents de cera', 'llengua negra', 'llavis morts', i 'suor i llàgrimes de mort' demostren que les persones observaven senyals que avui no s'associen amb la mort.

**Paraules clau:** Quattrocento, Itàlia, mort, signes de la mort**Abstract**

Fifteenth-century Italian hagiographic materials reveal several signs of death that were taken into account to confirm whether someone was dead or approaching death. The most frequently repeated signs are the coldness of body, changes in skin colour, and the lack of pulse or breathing. Unconsciousness, speechlessness, and immobility were also often noted.

An in-depth analysis shows many other unexpected signs. Some signs on peoples' eyes, teeth or tongue could also be proof of death. Sometimes even tears or sweat on the forehead were considered as deadly signs. For some people, the position adopted by a dying person signified death, for instance, lying on one's back or with the head laid down, as was the custom for the dead. Similarly, wounds or pain told about the approaching death. The expressions like 'waxen teeth', 'black tongue', 'dead lips', and 'sweat and tears of death' show that people looked for signs that are not associated with death today.

**Key Words:** Quattrocento, Italy, death, signs of death

## 1. Introduction

Since death is something we all have in common, we should be interested in the ways our ancestors faced it. A historical understanding of death and dying may help us to deal with our own tensions and taboos concerning this matter.

These days death is defined very accurately through primary and secondary signs of death. The first signs are lack of breathing, absence of a heartbeat, slackened muscles, and unresponsiveness to stimuli. Secondary signs include a drop in body temperature, paleness of skin, stiffness of limbs, and post-mortem lividity. Death also follows when the brain is dead (Ihmisen Fysiologia ja Anatomia: 598-599). In the Middle Ages, death was not as clearly defined, or at least its medieval definition is not clear to us. According to Yves Ferroul, medieval medical handbooks omit the instructions to determine death. In his opinion, these signs were so obvious to everyone that there was no need to repeat them (FERROUL 1999: 31-50).

The aim of this paper is to discover how people acknowledged the arrival of death in 15th-century Italian hagiographic material. These sources can provide interesting information on this subject since it was important for the validity of miracles to be absolutely sure of someone's death. The commissioners of the canonization processes would frequently ask the witnesses how they knew whether the candidate was dead. Therefore, hagiographic material reveals the signs of death better than any other medieval source.

With this paper, I wish to address two questions: Who declared someone's death and what were the signs of death from which this conclusion was drawn? The answers to these questions will enhance our understanding of the challenges and tasks that medical experts, but also regular people, encountered in the Middle Ages. It is important to keep in mind that doctors and other medical professionals did not only treat illness but also had to determine a person's death, just as any modern doctor. This paper will also discuss the role of the community during the process of dying. In addition to the spiritual aspect, the community also played a more practical role in the observation of signs of death alongside medical experts.

In order to answer these questions I have studied the canonization process of Bernardino of Siena, held in the mid-15<sup>th</sup> century,<sup>1</sup> and the miracle collection of James of the Marches, which was written at the end of the same century.<sup>2</sup> The first section below is mainly based on the canonization process of Bernardino of Siena. I chose to focus on it for the miracles of James of the Marches do not offer much information about the people responsible for determining death.

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<sup>1</sup> I use the critical edition of Letizia PELLEGRINI 2009.

<sup>2</sup> I use the manuscript held in the Vatican library: *Miracoli di Jacobo della Marcha*, Vat. lat 7639, incipit «Lui si contengono alcuni miracoli da il signore Gesu Christo».

The second section examines the miracles of James of the Marches. These two sources were selected for this paper because of the wealth of information they provide on signs of death. All data used in this paper can be found in Tables 1 and 2. Table 1 presents all the signs mentioned in the canonization process of Bernardino of Siena, as well as who was the observer.<sup>3</sup> Table 2 includes the signs mentioned in the miracles of James of the Marches.<sup>4</sup> The signs are recorded in the original language in order to note which words are used in the sources.

Hagiographic material has been used in many ways as a source for medieval studies during the past decades.<sup>5</sup> Although the opportunities hagiographic material offers are undeniable, there are also important matters related to source criticism that are essential to acknowledge when working with this material. Since these texts were written years after the actual historical events took place, the reports are based on the memories of witnesses. It is also important to note that witnesses were not free to express their opinions, but could only answer the questions they were asked. Also, their depositions may be influenced by the fact that they are given in order to make Bernardino and James saints. Thus, it is possible that witnesses exaggerated their testimonies in order to make events seem more miraculous than they were. It is also important to note that the notary for the canonization process of Bernardino wrote the testimonies in Latin even though they were given in Italian.<sup>6</sup> The miracle collection of James of the Marches is written in Italian.

Perhaps the biggest methodological challenge when using this kind of source material for the study of death is the fact that, in these cases, nobody actually died. In the sources I have selected, at the end of each case in which someone is said to be dead, dying, or nearly dead, the dying person is miraculously cured. Hence, I have only focused on what happened before the miracle, although it is of course possible that the miracles altered the witnesses' memories of the preceding events. Despite this disadvantage, and leaving the miracle aside, we get a glimpse of people's attitudes on death and dying.

Death and dying in the Middle Ages have aroused a great interest among medievalists since the end of the 1970s. A French historian, Philippe Ariès, was the pioneer in this field. According to Ariès, in the twentieth century people were no longer as used to the presence of death as they were in pre-modern societies and it is for this reason that historians should study the history of death and dying. Ariès's classic work *The Hour of Our Death* is an ambitious work on the history of death

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<sup>3</sup> On the left side of the table we find the signs of death and the observer; the header notes the specific miracle. The Roman number refers to the process number, whereas the Arabic figure refers to the running number of the miracle in the process in question. For example II/1 is the first miracle in the second process.

<sup>4</sup> The manuscript page number appears on the left side of the table; the signs of death are mentioned on the top.

<sup>5</sup> On the use of hagiographic sources see for example: FINUCANE 1997; GOODICH 1995; KATAJALA-PELTOMAA 2009; KLANICZAY 2004; KRÖTZL 1994; VAUCHEZ 1997; WETZSTEIN 2004.

<sup>6</sup> Notaries were the ones who gave miracles final credibility when they wrote it down as a "instrumentum publicum". They wrote the acts in a form of juridical documents and thus made processes authentic and public. On the notaries' role in the canonization processes see MICHETTI 2004.

from the Middle Ages to the present (ARIÈS 1981). Despite the flaws of his study, he managed to raise important questions which following researchers have tried to answer.<sup>7</sup> Following Ariès, other French historians also had an important role in writing the history of medieval death and dying. Almost at the same time as Ariès, Michel Vovelle published his masterpiece *La mort et l'occident, de 1300 à nos jours* which was well connected to the changes of medieval society and was also highly based on statistical analysis. Later, Jacques Chiffolleau also made an important contribution to the study of death with his work *La comptabilité de l'au-delà. Les hommes, la mort et la religion dans la région d'Avignon à la fin du Moyen Age (vers 1320-vers 1480)*, which is especially important in the field of testamentary research. Of course, the importance of *The Birth of Purgatory* by Jacques Le Goff cannot be overlooked either.<sup>8</sup>

Previously, signs of death have only been studied by Christian Krötzl (1992) in his article on Scandinavian hagiographic material. As opposed to Krötzl, I am focusing on Italian material.

Signs of death, as I understand them, are certain symptoms hinting that someone was dying or dead. In other words, these are outer signs on a person's body, which indicated that someone's life had ended or was just about to end. Hippocrates, in his *Prognosis*,<sup>9</sup> lists many fatal symptoms, which, to my understanding, are different from signs of death. When Hippocrates noticed fatal symptoms on a patient's body, he still attempted to find a remedy for their illness, for there was still some hope for recovery. However, when signs of death are apparent on a patient this is a fatal situation, from which one cannot come back to life.

It is essential to understand the difference between Hippocrates' fatal symptoms and the signs of death which I am discussing. Hippocrates instructs physicians to observe certain symptoms on a patient's body in order to see how the illness proceeds. For Hippocrates, fatal symptoms are indications that should make a physician suspect the worst. These symptoms do not express that a patient's life is ending or has already ended but that he or she is approaching death. When speaking of fatal symptoms, Hippocrates is not speaking of people who are dying, but people whose illnesses are incurable.

## 2. Determining Death

In Italy it was common to declare that “according to everyone who was present, a person was dead.” In the canonization process of Bernardino of Siena, in 15 out of 29 death cases the decision was made

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<sup>7</sup> On the criticism and importance of Ariès see PORTER 1999: 83-90.

<sup>8</sup> The history of purgatory is a highly debated question. In his classic work, Jacques le Goff dated the birth of purgatory to the twelfth or thirteenth century. However, Aron Gurevich saw the birth of Purgatory already in the Early Middle Ages and Michel Vovelle on the contrary, delays it to the fifteenth century. David D'Avray combines these theories proposing that the idea of purgatory was established already in the Early Middle Ages, the official doctrine was regularized during the High Middle Ages and adopted by artistic expressions during the Late Middle Ages. D'AVRAY 1994: 179.

<sup>9</sup> For Hippocrates, fatal symptoms are for example red eyes, pale lips, and cold sweat on the back of the neck, HIPPOCRATES 1959.

by all people present. In these cases, the moment of death was a community situation in which family and friends gathered around a dying person; the bystanders took part in the process by observing the signs of death. Christian Krötzl (1992) has made the same observations in Scandinavian material. In northern Europe the decision was also made by all the people present. This was an important task for the community in order to proceed along the process of dying and mourning.

In addition to the fact that relatives needed to be sure when to start preparing the funeral, consensus among the people present was also something that the witnesses for the canonization processes could use as an argument in favour of the performance of a miracle. In order to prove that they had witnessed a true miracle, they had to convince the commissioners that the dying person was confirmed dead. A relevant argument was that he or she was thought to be dead by everybody present at the sickroom.<sup>10</sup> This was also frequently asked by the commissioners.<sup>11</sup> In some respect this explains the high percentage of cases in which the approach of death was observed by everybody who was present at the time. In some cases, however, these people were simply the members of a family or a household. Thus, it was not always a large group but only a few devoted persons who were present at the last moments of the dying.

In the case of a dying boy called Johannes, we encounter an interesting situation where people offer different testimonies about the vital status of one dying person. Johannes was gravely ill and the members of his family thought that he was dead or nearly dead. The testimonies of the family are interesting; the father used the terms “quasi mortuus,” the mother said that the boy was “tamquam mortuus,” and his eighteen-year-old brother said that the boy “fuit mortuus.”<sup>12</sup>

This is a good example of the different phrases used to describe the dying or dead. Although all three persons witnessed the same event, they used different expressions. Father and mother stated that the boy was almost dead or as good as dead. For the brother, the boy was confirmed dead. It is clear that for all of them the boy had passed away or was passing away since they were all grieving; without a doubt, they felt they were losing him. It is still extremely interesting that these different expressions are mentioned in the testimonies, and we might see here differences of opinion on the stage of physical health.

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<sup>10</sup> “Interrogata si vere credit quod mortuus fuerit, dixit quod, attendis signis prescriptis... atque quod ab omnibus mortuus iudicabatur qui aderant, credit” quod sic” PELLEGRINI 2009: 537.

<sup>11</sup> For example: “Interrogatus si ceteri astantes eum iudicarunt mortuum, dixit quod sic et quod omnes plorabant.” PELLEGRINI 2009: 233.

<sup>12</sup> Father: “... una dicti mensis fuit taliter gravatus quod pater recipiens ipsum in ulnis et videns ipsum quasi mortuum, proiecit ipsum super unum lectulum, plorantibus ipse teste, uxore et tota familia.” Mother: “ipsa testis et alii de domo tamquam mortuum dimiserunt et iudicarunt.” Brother: “...dixit se non scire aliud quam quod Johannes fuit mortuus et pro tali ipse testis et pater ac mater ipsius iudicabant.” PELLEGRINI 2009: 254-256.

Of course, it is essential to keep in mind the nature of the sources we are using. First comes the linguistic problem: the witnesses gave their testimonies in Italian which the notary translated into Latin. However, the testimonies are clearly recorded in a pedantic manner. Had the notary performed his job more carelessly, he would have repeated the same words. Instead, he has made the effort to write down these different wordings. Thus, this is not a probable cause for different expressions. The second problem is time: the miracle happened in 1446, whereas the witnesses spoke of the events one year later to the commissioners of the canonization process. However, this was an event that they would obviously remember their whole lives, thus, in my opinion it is not very likely that the witnesses' memories were affected over time. Finally, it is possible to assume that the brother didn't have quite the same experience in determining his brother's death as his parents had. Whereas the parents could tell that the boy was not dead, the brother who was an adolescent himself thought his brother was already gone. This last remark is important because we see here a possible indication that young people could not recognize death as easily as older people, who had more experience on this matter. Thus, recognizing a corpse required previous knowledge on the subject.

### *2.1. Physicians as Experts on the Signs of Death*

Physicians play an important role in determining death in fifteenth-century Italian hagiographic material. This is a major difference with respect to Scandinavian sources, since there doctors do not have a strong presence around the deathbed. Joseph Ziegler discovered that from the thirteenth century onwards, physicians appear frequently in southern European canonization processes (ZIEGLER 1999: 220). The variety of doctors in fifteenth-century Italy was vast. On top of the hierarchy were university professors, and at the bottom the self-learned empirics. Most of the physicians who made their living by combining the practical work of a physician with teaching students could be found in between (SIRAISI 2008: 7). In addition, there were also pharmacists and surgeons who gave medical advice to patients. Generally, in fifteenth-century Europe, only a minority of the physicians were university graduates. In Italy, however, the percentage of university graduates was higher. From the thirteenth century onwards, the University of Bologna was the centre for medical studies in Europe. Later on, in the fifteenth century, Padua also gained an important role in the field of medicine. One should also keep in mind the long tradition of the *Schola Medica Salernitana*.

Medieval medicine reflected people's understanding of the universe and the human body. From the end of the eleventh century onwards, the theoretical background of Galenic medicine was available in Western Europe. The most important principles were the four temperaments and the balance of elementary qualities of the human body.

In order to better understand the role of physicians in hagiographic material, it is important to take a look at the relationship between medicine and religion. The appearance of physicians in hagiographic sources is no coincidence. Like the above mentioned consensus among the people present at the deathbed, physicians also had the authority to determine whether someone was dead. They provided miracles with a scientific context when they testified that a patient would not have been able to recover without the miraculous intervention of God (ZIEGLER 1999: 221). The authority of physicians was based on their knowledge of the human body and its functions. In this way, physicians embodied the voice of science in canonization processes.

In hagiographic sources, the different healing methods did not exclude one another nor compete among them; instead, it is more likely that they complemented each other. Physicians tried to heal their patients as long as they thought it was possible for them to recover by means of remedies. When a physician faced the limits of medicine he declared that there was nothing more he could do. This was when religion and praying to saints became important. If natural medical methods could not heal, supernatural methods were always an option for medieval people (ZIEGLER 1998: 4). Sometimes physicians themselves were the ones who recommended supernatural methods, and sometimes patients were willing to use supernatural methods while refusing the help of the professionals of medicine.

During the canonization process of Bernardino of Siena, physicians confirmed death in every third death case. In six out of nine death cases there were witnesses to the whole process. In the rest of the cases, other witnesses mentioned their presence. It is notable that in six cases there seems to have been more than one medical expert healing the dying. A normal term for a physician in the canonization process of Bernardino of Siena is “*medicus*,” which, for example, was used by Gentile da Foligno—probably the most renowned Italian physician in the fourteenth century—when he referred to a learned and respectable physician.

In one case there were also surgeons who were treating a patient with the help of physicians. A man called Leonettus Benedictus fell off a horse outside the city walls of Siena in July 1447. The fall caused severe wounds on his head and chest. Three days later he was cured with the care of physicians and surgeons who concluded that it was necessary to operate on his head wounds.<sup>13</sup> Unlike physicians, surgeons generally kept their knowledge to themselves and shared it only within a small circle. For instance, surgeons would teach their sons to continue in their fathers’ footsteps. Although surgery was a university discipline, a surgeon’s prominence was generally based on his reputation as a healer and the number of cured patients. Thus, if they wanted to excel in their field, it was necessary to keep their knowledge to themselves (FRENCH 2001: 249; HENDERSON 2006: 27). According to Nancy Siraisi, the boundaries between surgery and medicine

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<sup>13</sup> “*Delatus ad domum Iohannis ser Anthonii patroni sui, ubi fuit sibi per dies tres continuo a medicis et cirurgicis acuratissime ministratum, qui medici tercio die dixerunt dicto Iohanni quod necesse era incidere capud...*” PELLEGRINI 2009: 411.

were probably not very distinct in practice, whatever may have been the case in theory (SIRAISI 1981: 299). Moreover, John Henderson (2006: 27) has noted that in Italy the professional and social distinction between physicians and surgeons was not as clear as in northern Europe where a surgeon was basically a barber. Like our example suggests, Italian physicians and surgeons probably co-operated in the cases that required the help of both disciplines.

The case of Leonettus is also interesting in another respect. It provides us with accurate information, helping us to identify the physicians who were healing him and would be declaring his death. After Leonettus had fallen off the horse he was taken to the house of his patron, the Sienese Johannes ser Anthonius de Massa. The commissaries asked Johannes whether physicians had lost hope for the recovery of the patient and who were these physicians. He replied that hope was lost according to magister Carolus, who was the physician at the famous hospital of Santa Maria della Scala,<sup>14</sup> and other physicians had agreed with him.<sup>15</sup> Carolus, 32 years old, declared that Leonettus presented many signs of death on his injured head.<sup>16</sup> According to Carolus, there were also two other physicians present: magister Bartolo and magister Baverio, who Letizia Pellegrini has identified as the well-known Baverio Maghinardo Bonetti da Imola, a professor of medicine at the University of Bologna in the 1430s and 1440s. From 1443 to 1447 Baverio was working in Siena and later moved to Rome to work as a pontifical *archiater* of Pope Nicholas V.<sup>17</sup> He was one of the most important physicians in mid-fifteenth century Italy. This also hints at the importance of Leonettus and his patron Johannes ser Anthonius de Massa. A man like Baverio probably did not tend to any average citizen.

In addition to the physicians and surgeons, we also find a death case where a pharmacist appears with his students. When a woman named Jacoba was struck by falling stones and pieces of wood, magister Dominicus heard the noise and rushed out of his pharmacy to see what happened. He and his two students, Domenico and Bernardino, found Jacoba lying dead on the ground.<sup>18</sup> According to Jacoba's husband, Meus, it was Domenico and Bernardino who confirmed Jacoba's death.<sup>19</sup> Consequently, the authority of apothecaries was used to grant authenticity to miracles.

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<sup>14</sup> In addition to the Florentine Santa Maria Nuova, Santa Maria della Scala in Siena was one of the most famous Italian Renaissance hospitals. These two hospitals were models for other hospitals in Italy as well as in other parts of Europe, PELLEGRINI 2009: XXV - XXVI.

<sup>15</sup> "Interrogatus si fuit diffidatus a medici, dixit quod sic. Interrogatus a quibus, dixit quod a magistro Carolo, medico hospitalis Sancte Marie de la Scala et quodam alio." PELLEGRINI 2009: 469.

<sup>16</sup> "Habebat enim caput conquassatum cum multis signis mortis adeo quod eius liberacionem credit miraculosam et non naturalem." PELLEGRINI 2009: 470.

<sup>17</sup> DICCIONARIO 1969: Bonetti, Baverio Maghinardo de.

<sup>18</sup> "Magister Dominicus magistri Anthonii fabri, de populo Sancti Martini Senis, etatis annorum 38... cum ipse testis erat in apotheca sua et quemdaam equum ferraret, sensit magnum rumorem ac eciam clamorem personarum, et accurrens ad domum prefati Mei, vidit prefatam dominan Iacobam iacentem prostratam in terra, ut videbatur sibi, mortuam... Interrogatus quibus presentibus, dixit de se teste, Dominico et Bernardino, discipulis suis." Il processo di canonizzazione di Bernardino da Siena, 521.

<sup>19</sup> "...omnes ibi astantes, mares et femine, eam iudicabant mortuam. Interrogatus qui erant hoc iudicantes, dixit de

In every eight out of nine death cases in the canonization process of Bernardino of Siena, physicians treated their dying patients at their own home. Only in one case was a physician in charge of determining death in a hospital. It is in this case that we again meet magister Carolus from the Florentine hospital of Santa Maria della Scala, this time at his workplace.<sup>20</sup> An eleven-month-old girl was brought to said hospital to be taken care of. She was possibly an orphan or given away by her parents who were unable to raise her. The girl, who was nursed by a woman named Catherina, had been sick for ten days and had not suckled any milk for three days. Magister Carolus was asked to cure the girl, but he did not see any hope for her recovery. The next day, to his surprise, when he returned to see the girl he found her perfectly healed. Catherina, her husband and the hospital's priest, ser Fabiano, had asked Saint Bernardino to help the poor girl and the outcome was successful (PELLEGRINI 2009: 416).

## 2.2. *Death in the Birth Chamber*

All physicians found in the death cases of the canonization process of Bernardino of Siena were male. Since the doors of universities were closed to women, the career of a physician was not an option for them. This does not mean, however, that there were no female healers in the Middle Ages. Women were empirics who learned their skills from someone they knew or through their own experience (PARK 1998: 130, 135), and they were also the experts on giving birth. In five death cases the approaching death was determined by a midwife. These are all cases where childbirth had not proceeded as hoped for, and the baby was still-born or died soon after birth. When there were problems during labour it was the midwife's responsibility to find out whether the baby was dead or alive, and they did so by conducting certain tests. In the context of childbirth, signs of death appear more often in the death cases affecting babies. This was due to the fact that, in order to baptize a child, he or she needed to be alive. Thus, even the slightest signs of life were crucial to save a baby from damnation. In addition to the important role of observing a baby's life status, midwives also took care of emergency baptisms.

The midwives' authority to declare a child dead or alive was based on their experience on delivering babies. In the cases used in this paper, midwives were elderly women, between fifty-five and sixty-five years old. Their expertise was not, however, taken for granted, but the commissaries questioned them in order to assess their skills. For example, in 1447, when a child of Nicolaus Paulinus was still-born, a midwife named Nanna was asked if she was used to cases like this. She responded by saying that she had come across plenty of them.<sup>21</sup> Women also spoke on their own initiative about their experiences delivering babies. When a midwife named Bucia

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magistro Dominicho fabro et Bartholomeo fabri." PELLEGRINI 2009: 520.

<sup>20</sup> It was not uncommon that hospital physicians also worked as private physicians, as magister Carolus did in the previous case. Low wages were the main reasons for this (HENDERSON 2006: 233).

<sup>21</sup> "Interrogata si consueverunt sic nasci infantes, dixit quod pluries intervenit casus similis..." PELLEGRINI 2009: 538.

was asked how she knew that the baby boy of Margarita de Basilea was born dead, Bucia replied that she had seen more than 140 babies and none of them looked like this one, not even those who had died during labour.<sup>22</sup> Thus, Bucia used her experience as evidence of her authority to confirm the baby's death.

The case of Margarita de Basilea is the only birth which took place in a hospital. In 1446 when she was eight months pregnant she entered the hospital of Saint Louis in L'Aquila with her husband. There were three women helping her give birth. The midwife responsible was the aforementioned Bucia. In addition, Margarita de Capite Istrie, who was also a midwife but clearly of higher status than Bucia—for she said that she was governing the hospital—and Margarita de Francia were also present. Both of these women said that they saw the dead baby; however, it was Bucia who performed tests to confirm whether the baby was dead or alive.

Not only midwives but also other women who had participated in deliveries told of their experiences in the field in order to cement their authority in recognizing the signs of death. In 1448 in Siena, a woman named Mariana gave birth to a child who was so severely ill that died eighteen days later. Although the word midwife is not used here, a certain domina Anthonia was acting as one. She helped the mother in labour and took care of the baby afterwards.<sup>23</sup> A noblewoman named Dea also assisted Mariana during the delivery. Dea told the commissioners that she knew that the child was dead because she herself had delivered several babies and seen those and also older children dead. Due to her experience she could recognize the signs of death.<sup>24</sup>

If we are to use modern childbirth terminology, the case of Mariana's child is the only one that can be identified as a neonatal death. To be more precise, a late neonatal death since the baby died more than a week after birth. Four other cases can be identified in modern terms as fetal or perinatal deaths.<sup>25</sup> Three of the babies were found dead at birth and thus their cases could be identified as intranatal deaths. Of course it is impossible to say whether these babies were dead in utero or had died during labour. In one case it is only said that the baby was born dead.<sup>26</sup> In two other cases the delivery is explained in more detail. Both are a depiction of a so called breech birth, in which the baby is born bottom first. In 1447 in L'Aquila the baby boy of Antonius Andree was born in such manner.

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<sup>22</sup> "Interrogata de causa sciencie, dixit se colegisse ultra centum XL pueros, et numquam vidit aliquem - eciam ex illis qui non bene nati fuerunt et non supervixerunt..." PELLEGRINI 2009: 230.

<sup>23</sup> "...erat in domo prefati Grifuli ad servicia uxoris sue deputata in puerperio, et sic habebat dictam puellam in sua custodia, gubernacione et regimine." PELLEGRINI 2009: 471.

<sup>24</sup> "Addidit tamen quod plures filios et filias genuit et peperit, etatis predictae infantule et eciam maioris, quos vidit mori, per quos cognovit in dicta infantula omnia signa mortis." PELLEGRINI 2009: 471.

<sup>25</sup> There are several definitions for a perinatal death, here I refer to the one used by the World Health Organization: "infant deaths that occur at less than seven days of age and fetal deaths with a stated or presumed period of gestation of 28 weeks or more". BARFIELD 2011: 178.

<sup>26</sup> "Bernardinus, filius Nicolai Paulini, de civitate Esculana, mortuus natus..." PELLEGRINI 2009: 423.

When the midwife Angeluca took the baby in her arms she found him dead and placed him on the ground as it was the custom.<sup>27</sup>

An interesting example of a breech birth is the case of Margarita who in 1446 entered the hospital of Saint Louis in L'Aquila. Hers was a difficult labour due to the breech position of the baby. Bucia, the midwife, played an important role helping the mother to give birth, and she also needed the help of other women: she told them to take a hold of the baby and pull him out because it seemed to her that the baby was dead. Bucia herself took a hold of the baby's foot since it was near the mother's genitalia. Finally when the baby was in her arms, Bucia confirmed that he was dead.<sup>28</sup> The case proves that midwives sometimes had to really work hard to deliver a baby. Of course, when a baby is forced out in this way, the results can be dramatic. A breech birth was a real difficulty for pre-modern societies for a baby born in such position was likely to hurt the mother severely. Because of the position there was little to do to prevent the baby from damaging the mother's internal organs.

In one case, a baby was confirmed dead in utero; clearly an antenatal death. A woman named Vannucia was three days in labour when her mother Collacia said to her that she believed that the baby was dead in her womb.<sup>29</sup> Ultimately, the mother managed to give birth to a dead child.<sup>30</sup> Collacia asked a midwife who was also named Vannucia to place the baby in the bed with the mother but she responded by saying that it wasn't necessary since the baby was already dead.<sup>31</sup> Collacia prayed to Saint Bernardino and the baby started to breathe. Vannucia put salt in the baby's mouth and placed her in a hot bath. The baby seemed deformed and dead apart from being able to breathe, thus Vannucia rushed to the church to baptize her. The journey must have been overwhelming since she was worried that the baby might not make it there.<sup>32</sup> In the

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<sup>27</sup> "Bernardinus, filius Antonii Andree dicti Morello, de Castelliono, comitatus Aquile, laborante matre in mortis articulo propter partum ipsius, mortuus, per pedes extractus est violenter de utero matris primum apparentes." "Vidit dictam creaturam existentem pedibus per prius, quem extrahens dimisit in terram ut mortuum." PELLEGRINI 2009: 214, 270.

<sup>28</sup> "...vidit creaturam primo exeuntem cum pedibus et paulatim cum reliquo corpore usque ad brachia exclusive coadiuvantibus dicta obstetrice et reliquis, quia nec mater se iuvabat ut debebat, nec dictus puer se iuvabat ut reliqui pueri quos plures levavit obstetricando. Et ideo dicta obstetrix dixit astantibus 'ponite manum ad cannam dicti pueri et ipsum extrahite, quia mortuus est', ipsa obstetrice teste pedem affigendo ad ilia dicte mulieris parturientis et premendo, ut adiuveret ipsam ad emittendum dictam creaturam. Que quidem mulier statim emisit dictam creaturam, quam collicens ipsa obstetrix in gremio suo, et intuens eandem creaturam, vidit eam mortuam." PELLEGRINI 2009: 230.

<sup>29</sup> "...dixit matri sue, nomine Collacia, se credere habere mortuam creaturam in utero suo." PELLEGRINI 2009: 206.

<sup>30</sup> An extraction of a dead fetus was not unusual in the Middle Ages. The *Chirurgia* of Albucasis, the most popular surgical text of the Middle Ages, described how and with which instruments a dead fetus should be removed. DONALDSON 2010: 85-88.

<sup>31</sup> "Et cum dicta Collacia dixit obstatrici ut grabataret eam, respondit ipsa obstetrix: 'Non expedit, quia mortua est'." PELLEGRINI 2009: 223.

<sup>32</sup> "Et dicta Collacia in corde suo ferventer orabat Deum ut, ex meritis beati Bernardini, puella viveret ut baptizari posset, sique statim dicta puella ossitari incepit et dicta obstetrix inmisit modicum salis in os puelle et, parato balneo calido, balneavit eam et, quamquam adhuc mortua videbatur, attamen in balneo etiam ossitavit, videbaturque facies

canonization process of Bernardino of Siena, this is the only case in which the emergency baptism was performed in a church. We can also know how the baby was prepared for the baptism. In the Roman church salt has a religious and sacred character and was used to prepare babies for baptism before entering the church.<sup>33</sup> In the previous case, since there was enough time to prepare the child for a baptism, it seems that she was not in as big danger as those who were baptized immediately at home.

An example of a home baptism is the baptism of the baby boy of Antonius. This boy was born feet-first and the midwife Angeluca placed him on the ground as she thought him dead. Next she asked Saint Bernardino to have mercy on the poor boy and raised him from the ground to bathe him. As she was bathing him she noticed that he moved, therefore the boy was alive and could be baptized.<sup>34</sup> Angeluca was asked whether she had seen other babies born without any signs of movement. She responded that she had seen plenty of similar cases where a baby had revived once she had bathed them. However, on those occasions she had not prayed to any saint. The commissaries were clearly interested in Angeluca's experience on similar cases. Her testimony is interesting because she told the commissaries that such a revival was possible without divine intervention, and thus in a way she was undermining the miraculousness of the case. At any rate, she was treated as an expert in recognizing the signs of life and death on newborn babies.

### 3. Signs of Death

In this chapter, I will take a closer look at the signs of death. These are the symptoms that confirmed whether someone was dead or alive and whose observation determined the status of a dying person. Phrases like "quasi mortuus or como morto" were commonly used. Christian Krötzl has also made the same remark on the basis of Scandinavian sources. Thus it seems that people saw "quasi mortuus" as a preliminary stage before death (KRÖTZL 1992).

By searching all the signs of death mentioned in the canonization process of Bernardino of Siena and in the miracles of James of the Marches I am trying to provide as comprehensive a picture as possible of the determination of death in fifteenth-century Italy. Given that criminal civil law cases do not include information on ways of recognizing death, in this respect this chapter is filling the gaps that other sources are not able to.<sup>35</sup>

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dicte puelle adeo deformis et concussa et livida et nigra quod neque oculi neque nares discerni poterant, et signa mortui corpusculi cernebantur. Sollicita erat tamen Colucia predicta de salute anime ipsius puelle: cum prefata obstitrice dictam puellam ad ecclesiam detulit baptizandam, dubitans eciam ne dicta puella in itinere deficeret baptismate non suscepto; et predicta Colucia continue orabat...» PELLEGRINI 2009: 223.

<sup>33</sup> Catholic Encyclopedia: Salt. <http://www.newadvent.org/cathen/13403b.htm>

<sup>34</sup> "Deinde dum ipsa testis clamaret: 'O sancte Bernardine, fa de lu morto vivo, reviva questo citulo' et dictum puerum posuit ad balneum, qui puer cum fuit in balneo statim se movere incepit et eum statim baptizavit". PELLEGRINI 2009: 270.

<sup>35</sup> On criminal civil law cases see: BEDNARSKI 2013. I thank Doctor Steven Bednarski for a fruitful discussion and his information on criminal civil law cases and their lack of signs of death.

### 3.1. *Pulse and Breathing*

According to Aristotle's biology, the heart is the most important organ of the human body: it is the source of life and heat and heart controls both the human mind and body. According to the Galenic tradition, the body is controlled by three organs: heart, brain, and liver. Each of them is as important as the other for the human body and the preservation of life. In the Middle Ages, medical authorities were generally combined: the theories of Aristotle, Galen, Hippocrates, and Avicenna walked hand in hand. Thus, Aristotle's opinion on the heart's principality remained dominant but was combined with the teachings of other authors (SIRAISI 1981: 187, 189).

In the Italian hagiographic sources used in this paper, a lack of pulse is one of the main signs of death. Heartbeats were however only one sign among others, and not in any way dominant or the most frequently mentioned. In the canonization process of Bernardino of Siena, a lack of pulse is mentioned as proof of death in four cases out of twenty-nine. For example, when Jacoba was hit by the falling pieces of wood and stones she lay dead for a quarter of an hour. Jacoba was found lacking pulse, but there were also several other signs of death: she was not breathing, her eyes were rolled back and her limbs were cold. Thus, according to her husband, her body showed all the signs of death.<sup>36</sup>

Similarly a three-year-old girl was found dead after having a fever. The same Jacoba who was confirmed dead in the previous case is presented here as a witness. She stated that the girl was dead since one could not find a pulse on her hands or feet.<sup>37</sup> Pulse was also taken on newborn babies. Midwives conducted practical tests to find out whether a baby was dead or alive. One of these tests was to confirm whether a baby had a pulse or not: a midwife would place her hand above the baby's heart, as Bucia did in the hospital of Saint Louis in L'Aquila.<sup>38</sup> Thus, it was possible to search for a heartbeat in the hands, feet, and heart. Another option was the throat. Mariana's eighteen-day-old baby was confirmed dead because she had no pulse, was not breathing, and her body was cold. Anthonia, who was helping the mother and taking care of the baby, tried to find a heartbeat in the baby's throat and limbs, but unfortunately the baby seemed to be dead.<sup>39</sup>

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<sup>36</sup> "...addens quod per prius, per tempus predictum, non respiraverat nec habere pulsum demonstrabat, oculos revolutos habebat et exteriora frigida veluti mortui habere solent; demonstrabat etiam omnia signa mortis." PELLEGRINI 2009: 520.

<sup>37</sup> "Interrogata ad quid cognoscebat eam mortuam fore, respondit quod nec in manibus nec in pedibus reperiebatur pulsus." PELLEGRINI 2009: 551.

<sup>38</sup> "Interrogata quale experimentum dicta obstitrix fecit, dixit quod apponebat alium pistum ad os dicte creature, ac etiam stringebat digitis auriculas, et manum apponebat erga cor..." PELLEGRINI 2009: 229.

<sup>39</sup> "Interrogata ad quid perpendit quod mortua erat, respondit quia vidit eam tractus facientem, item apposuit manum suam ad guttur et non sensit ibi pulsum, item similiter ad os non sensit respiracionem, item in nullo membrorum suorum apparebat pulsus, item membra suorum frigida erant." PELLEGRINI 2009: 471.

In the miracles of James of the Marches, pulse is mentioned more frequently: in eleven out of fifty-two cases. As previously mentioned, in none of the cases was the absence of a heartbeat the only sign. For example, an eight-month-old boy was declared dead because he was not breathing and no one could find a pulse in any part of his body.<sup>40</sup> Similarly a three-year-old boy was thought to be dead when he fell on the ground from a high place. The boy turned black, did not speak and had no pulse in any part of his body. Some of those who were present wanted to call a physician but the others said that there was no need for that since the boy was already dead.<sup>41</sup>

In one case in the canonization process of Bernardino of Siena a physician discovered a patient's pulse after he had recovered. A fifteen-year-old named Benedictus was so severely ill from a fever that a physician had lost all hope for his recovery.<sup>42</sup> Doctor Nicolaus came to see Benedictus the following day and to his surprise found that he was cured. To see if the boy was still in danger of dying he tested his urine and pulse,<sup>43</sup> which were fundamental ways of making a prognosis. The heartbeat told physicians whether a patient was ill or not. By taking a patient's pulse the physician could confirm what was going on in their heart—the source of a human's inner heat. By observing urine, on the other hand, it was possible to discover the nature of the illness. The most feared sign was black urine, for it signaled an approaching death (FRENCH 2001: 148-154).

According to medieval medicine, pulse, and breathing were connected to each other (FRENCH 2001: 241). Although these two were sometimes mentioned together as signs of death (along with some others), in some other cases only one of them is recorded. Thus, the link between the two (pulse and breathing) is not evident in the sources used for this paper. Even though in theory these two might come hand in hand, it seems likely that for medieval people these two were both important signs of life and death, but not linked to each other. In the canonization process of Bernardino of Siena there are eight cases in which breathing (“*anhelitus/respiratione/spiritus*”) is mentioned as a sign of death. In the miracles of James of the Marches we find eleven cases where the lack of breathing is mentioned (“*non fiatava*”).

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<sup>40</sup> “Una notte morio et cossi stette morto. E quelle de casa credendo se omnino che fosse morto perche tutti li segnali de morto hauea che niente fictaua et lo pulso no se sentia in nulla parte.” MIRACOLI: 44r - 44v.

<sup>41</sup> “...quando casta in terra et tutto il uiso deuento nero como un caldaro infiato, perdette la parola et lo pulzo che niente se sentiu. Et alcuni uoleuano chiamare el medico et alcunaltri diceano a questo non li bisogna piu ne medico ne medicine perche gia e' morto.” MIRACOLI: 61v - 62r.

<sup>42</sup> “...misser Nicola medico disse che infallanter lu dicto Benedicto era morto et che non possea durare la sua natura fyn allo die vicesimo...” “Et venuto vede primo lu singio et non credea che fosse de Benedicto, al ultimo certificato et veduto lu dicto Benedicto et toccatoie lu sou pulzo disse che stava beny et che li darea un poco minoratino et che forea guarito.” PELLEGRINI 2009: 264, 265.

<sup>43</sup> “...demum expergefactus est, ad quem cum de mane medici aduenissent, iudicaverunt ex aspectu urine ipsum esse liberatum ab omni mortis pericul...” PELLEGRINI 2009: 212.

### 3.2. *Skin Colour and Body Temperature*

The most frequently mentioned sign of death in the sources of this paper is a change of skin colour. In a total of twenty-one cases among the miracles of James of the Marches, death is recognized by the black colouring of the skin, although the specific body part that had turned black is not usually mentioned. The most common expression was that the person had turned black (“deventava nero”). Sometimes the whole body blackened, as in the case of Bricita, who was abandoned by a physician, was speechless for five days and turned all black; that is, like a corpse.<sup>44</sup> Sometimes those present noticed that only the face or head had turned black, like in the case of Pompeo, a small boy who fell from a window and was believed to be dying.<sup>45</sup> The black colouring of the head is normally a result of a dead body being hung upside down; for Pompeo, it might also be a consequence of a serious head injury.

In the canonization process of Bernardino of Siena, there are five cases in which black colouring is evidence of death. In the miracles of James of the Marches, black colour is generally identified in the whole body or just in the face; as in the case of four-year-old Gentilesca in 1447. Gentilesca, her sister Rosanna, and her mother went to reap the harvest in the fields outside the city walls of Civitavecchia. As little girls tend to do, Gentilesca was not interested in working the fields and asked her mother if she could go back home to eat cherries. The little girls’ journey back home turned into a dreadful tragedy: when they were walking along the road, water bursted out of a moat and Gentilesca was thrown into it.<sup>46</sup> The townspeople were building a fortification for the city walls, and in order to fill the moat with water they had to open a new stream. It was a misfortunate coincidence that the water was released as the girls were passing and Gentilesca was covered by mud and drowned. When she was rescued she appeared to be dead,<sup>47</sup> and when

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<sup>44</sup> “In Napoli una domina chiamata Bricita fo infirma grauemente de certi dogly de corpo et altre paxioni tanto grandemente che fo da li medici diffidata et stette V die che non parlo mai et deuento tutta negra et staua como un corpo morta.” MIRACOLI: 54v.

<sup>45</sup> “In Napoli un mercante chiamato Jacobo Pozzo de milano haue uno figliolo nomine Pompeo de misi XXII. Il quale figliolo casco da una fenestra alta tre canne et dette de capo in certe petre grosse el quale se roppe in tal modo el capo chel medico mettea tutta la mano fra la pelle et lacza del capo tanto era grande la peritura et era tutta la testa et lo uiso infiato negro et da niuno occhio non uideua lume et era in tal modo che tutti quelli che uideuano diceuano che non era possibile che posisse campare.” MIRACOLI: 140r-140v.

<sup>46</sup> “...Antonia de Gango... cum exivisset ad agrum causa metendi granum, et adduxit secum Gentilescam, etatis quatuor, una cum Romana, eius filias, dicta Gentilesca dixit matri testi: ‘Ego volo ire ad domum pro serasis’, et dum ipsa Gentilesca filia, una cum Romana altera filia, eius sorore, ivisset pro dictis serasis, venit aqua fossati per eandem viam in qua ipse due sorores ibant, ubi dicta aqua non fuit solita transire sive currere.” PELLEGRINI 2009: 261.

<sup>47</sup> “...dum domines ipsius loci ipsum castrum fortificare et circumvallare vellent fossatis, recluserunt aliquos meatus, quibus reclusis, aqua habuit necessario facere impetum ita quod, considerata natura loci que montuosa est, descensum faciebat per spacium viginti cannarum. Et dum homines de dicto castro apperirent cursum aquarum, aqua repperiens puellam in via impetuose duxit eam ad planum descendendo per dictum descensum viginti cannarum, ubi submersa reperta fuit, coperta non solum aqua sed eciam luto, et ipsa puella extracta apparuit tamquam mortua.” PELLEGRINI 2009: 259.

an honoured man, Pax Henrici, saw the girl later in her mother's lap he described that she seemed dead: her eyes were closed and her face was black.<sup>48</sup>

Trying to determine medical diagnoses from medieval sources is always dangerous. When dealing with death, it is however easier to know what symptoms people showed since we now know pretty well how a human body reacts to death. It is therefore interesting to see how the descriptions of dead bodies differ from our own modern descriptions. Black colouration on dead corpses is probably a sign of *livor mortis* or in other words, postmortem lividity. In modern medicine, postmortem lividity is one of the secondary signs of death. It is however a bit surprising that it is precisely black colouring that which is most frequently mentioned (in modern medicine *livor mortis* is described as purplish).<sup>49</sup> We might find an explanation in medieval symbolism: black was a symbol of death, sin, and hell. In the lives of medieval people, black was associated with death which might be an important clue to understand why they saw dead people differently than we do today.<sup>50</sup>

Black is not however the only change in skin colour. In the canonization process of Bernardino of Siena there are two cases in which the skin of a dead corpse became livid ("livida"), a sign nowadays normally associated with death. Sometimes black and livid are used in the same description, like in a case of the thirteen-year-old Johannes Marcheti from Castro Veteri. He drowned in a canal when he followed a bird that was flying over the water. Unluckily, his foot slipped when he jumped back to the road, and as a result he fell into the canal. The poor boy floated downstream to the nearby mill where a man named Lucas found him. He and another man named Jacob dragged the boy out of water. When asked how he knew that the boy was dead Lucas responded that he had seen several dead people and in this boy he could see all the signs of death. He specified that the boy's eyes were closed, his face was low-lying and black, his limbs were rigid, and his head hung down.<sup>51</sup> Jacob's testimony is slightly different since he adds that the boy did not move or breathe, his body was cold, and his face was livid.<sup>52</sup> Thus Jacob describes the boy's face as livid, while for Lucas it was black. It is possible that time had made the men's memories differ from each other. However, it seems that black and livid were the colours which medieval people associated with death.

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<sup>48</sup> "...vidit dictam puellam in manibus matris ipsius filie, que apparuit sibi quasi mortua, quia nigra fuit in facie et oculos habebat clausos..." PELLEGRINI 2009: 259.

<sup>49</sup> See for example the Finnish textbook of medicine *Ihmisen Fysiologia ja Anatomia*: 598 - 599.

<sup>50</sup> On the history and symbolism of black, see PASTOREAU 2008.

<sup>51</sup> "...dixit se plurima mortuos vidisse, et ipse puer omnia signa mortui pueri demonstrabat, et clausis oculis, facia dimissa et denigrata, et membris ac nervis conspicatis et fustatis, capite ad terram dimisso." PELLEGRINI 2009: 232.

<sup>52</sup> "...dixit quod puer se non movebat, et faciem habebat lividam, oculos clausos ac os et membra intexita et totum corpus frigidum et nullus spiritus aut anhelitus in eo sentiebatur." PELLEGRINI 2009: 233.

There are also two cases in which skin turned pale (“pallida”). As with *livor mortis*, paleness also (or *pallor mortis*) happens when blood circulation stops. However, *livor mortis* is a result of blood settling in the lowest parts of the body and is more spotted in colour, whereas paleness does occur all over the body when blood is drained from the veins.

In L’Aquila in 1447, for a respectable doctor named Nicolaus de Porcinariis, paleness was one of the signs that told him that his daughter Bernardina was approaching death. When Nicolaus was asked how he knew that his daughter was near death, he responded that he had carefully weighed the signs and come to the conclusion that death was approaching. The commissaries were not satisfied with this and wanted to know the precise signs. The answer was that her limbs were cold and she was pale as people who are approaching death.<sup>53</sup>

In addition to skin colour, body temperature was frequently observed. Like skin colour, temperature is dependent on the circulation of blood. According to Hippocrates, a body should be evenly warm. It was always a bad sign if head, arms, and legs turned cold (HIPPOCRATES 1959: 21). Body temperature came from the “innate heat” produced by the heart and body’s “radical moisture.” This moisture was like oil for a lamp, thus keeping it alive. When the oil burned out due to old age, a body’s temperature decreased and the outcome was natural death.

Coldness is mentioned seven times as a sign of death in the canonization process of Bernardino of Siena. Usually there are several other signs mentioned along with coldness, like in a case of a drowned boy. The boy’s mother stated that she knew that her son was dead because his whole body was black and swollen, even his tongue was black and hanging out of his mouth. The boy was also cold and he did not breathe, nor showed any sign of vigour. Two other women also witnessed signs of death on the boy. Metussa and Sucia both touched the boy on every part of his body to confirm whether he was alive. Metussa discovered the boy was cold as ice. She also put her ear above the boy’s heart to find out if he was breathing but all this was in vain since the boy was dead.<sup>54</sup>

Whereas change in the skin colour was evident for everybody who saw the dying person, coldness could only be confirmed by touching the dying. Like the women in the case of the drowned boy, also in 1447 in L’Aquila, Tadeus Bucii de Picencia touched his dying son’s body only to find out that it was cold. The boy had suffered a long illness and ultimately one evening his condition got worse. At night the father touched his son who was lying completely covered in a bed. The father

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<sup>53</sup> “Interrogatus si vicina erat morti suo iudicio, dixit ut in articulo. Interrogatus in causa sciencie, dixit quod ad signa perpendebat. Interrogatus ad que signa, dixit quod erat frigida in extremitatibus et palida, ut solent esse morti vicini.” PELLEGRINI 2009: 546.

<sup>54</sup> “...ipsum puerum manibus suis in diversis corporis partibus tetigit et palpavit, eundemque sensit frigidem veluti congelatum ac eciam apposuit aurem suam erga cor ipsius pueri si sentire posset spiritum seu anhelitum in eo, et dixit se nichil sensisse aut percipere potuisse, propter quod tenuit et tenet ipsum mortuum fuisse...” PELLEGRINI 2009: 563.

felt that the boy was ice cold from head to toe. The boy was sweating and had two tears on his eyes signifying that he was dying.<sup>55</sup>

Coldness is mentioned eighteen times as a sign of death in the miracles of James of the Marches, being the second most frequently mentioned sign after black colouring. Unlike in the canonization process of Bernardino of Siena, in the miracles of James, we find cases where people try to warm up a dying person's cold body. For example, a two-year-old child was taken ill with the plague, and he was believed to be dying by a physician and all the other people as well. Therefore, his cold body was warmed up with heated clothes.<sup>56</sup> The same could be done even to unborn children. In Napoli, a woman called Violante was pregnant in her eighth month when her child was believed to be dead in her stomach. During three days, she could not feel her child move and her stomach became cold, so much so that not even the heated clothes, baths, or ointments could warm it up. Violante's husband was a physician and thus we can assume that heating of the stomach was an accepted method in the medical circles of fifteenth-century Italy.<sup>57</sup>

### 3.3. Eyes and Mouth

Signs of death could also be observed in the eyes and mouth. Closed eyes were an obvious trait of dead people. They are mentioned four times in both sources. In the canonization process of Bernardino of Siena there are also three cases where eyes are mentioned as being rolled back ("oculos revolvit"). This could mean that the eyes were essentially turned around thus being open and all one could see was their white. In one case, Jacobus Anthonius from Perugia had fallen ill after he pricked himself with a black thorn. When his condition weakened, his wife Alexandra called in two men, Herculanus and Matheus. When the men came in, Jacobus asked to be placed on the ground thus expressing his will to die on the ground as was the pious custom in the Middle Ages.<sup>58</sup> Once he was placed on the ground, Alexandra, Herculanus, and Matheus saw the signs of death on Jacobus. His eyes were rolled back and he remained dead for a half an hour. When Herculanus was asked how he knew that Jacobus was dead he mentions three signs: one of them

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<sup>55</sup> "Adveniente vero septima hora noctis, supradictus testis, tangens ipsum puerum, licet in lecto et copertum iacentem, repperit ipsum gelidum in pedibus, naso et toto corpore, et respiciens vidit circa tempora et frontem aliquas guttas sudoris et ad oculos lacrimas duas mortem significantes." PELLEGRINI 2009: 247.

<sup>56</sup> "Uno piccolino de dui anni grauemente infirmo de febre pestinenciale continua durando li molti di che lo conduxe quasi amorte el quale fo desperato da medici et dogni homo. E fo tanto presso ala morte che gia era tutto refredato che gli panni caldi non lo possano scaldare." MIRACOLI: 52r - 52v.

<sup>57</sup> "In Napoli una domina chimata Uiolante muglia de un medico chiamato mss Rogeri de Cucbaro, questa era grauida de VIII misa ala quale uenne una scesa con una doglia de reni che stette tre di et tre nocte che mai non sentene/senteste la creatura uiua in corpo et refredosse in tutto el uentre in tal modo che ne con panni caldi, ne bagni ne uncioni ne con niuna cosa mai non possiua rescaldare." PELLEGRINI 2009: 136v.

<sup>58</sup> For example saints Francis of Assisi and Bernardino of Siena wanted to die lying on the ground. ORIGO 1963: 238. It was believed that the separation of body and soul was easier if the dying was lying on the ground. VOVELLE 2009: 13 [1983].

in his eyes; another was that he was lying on his back as Herculanus had seen many dying people do; and third were three “tractus,” which dying people usually took.<sup>59</sup>

“Tractus” are also mentioned by Jacobus’s wife and they appear in other cases: three times in the canonization process of Bernardino of Siena and ten times in the miracles of James of the Marches (“tratti della morte”). According to Du Cange’s dictionary, “tractum facere” is a synonym for “extremum spiritum agere,” that is, the last breath that one takes before dying. It is extremely interesting that Jacobus is mentioned as having taken three last breaths: it reminds us of a long Christian tradition of three utterances. According to this tradition, the soul makes three utterances as it leaves the body. The fate of one person’s afterlife depended on whether it was a demon or an angel who dragged the soul out of the body. This was a popular pedagogical device especially in the British Isles.<sup>60</sup> According to Michel Vovelle, the last breath was one of the repeated metaphors of a good death in the examples of the *Legenda aurea*.<sup>61</sup> Thus, we can assume that describing the last utterances was a way of describing a good death.

Surprisingly enough, medieval people discovered signs of death also on teeth. Teeth are mentioned to turn “seratos/inserrata” in the mouth of dead people. For example, the one-year-old Troiano was thought to be dead because his eyes were closed, his teeth “serati,” and he had no pulse.<sup>62</sup> In one case the whole mouth is mentioned to be “inserrata.”<sup>63</sup> “Seratos/inserrata” teeth could be perhaps translated as “waxy” teeth. This would mean that the moisture in the mouth dries up, thus making teeth dry and waxy. Another explanation would be that the teeth (or the jaw) stiffened as it tends to do when a person dies. There is also one case where the teeth of a dead person turned black. A mother of a three-year-old girl knew that her daughter was dead because she could not find a pulse, the girl’s teeth were black, her eyes were rolled back, and her limbs were cold.<sup>64</sup> A black tongue or throat was also a sign of death: a woman was suffering for three months of a fever which ended with her being as good as dead, that is with her tongue and throat black as coal.<sup>65</sup> It

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<sup>59</sup> “Interrogatus si credit ipsum fuisse mortuum, dixit quod sic, quoniam tractus solitos fieri a morientibus fecit tres, atque signa cum oculis. Iacebat eciam supinus, prout vidit evenisse multis quos mori vidit.” PELLEGRINI 2009: 536.

<sup>60</sup> For the three utterance tradition see RITARI 2013: 125 - 152.

<sup>61</sup> VOVELLE 2009: 37.

<sup>62</sup> “...uno figliolo de un anno nomine Troiano infirmo de una graue infirmita et una uolta deuento como morto, et molti diceuano che era morto: et scapizato, chiosi gli occhi, serati li denti, perduti li pulsus et como morta staua et tutti per morto lo piangeuano.” MIRACOLI: 165 r.

<sup>63</sup> “Ad castellammare del torno un chiamato Petro de Stanella hauea un figliolo nato de otto di chiamato Johannes Antonio infirmo de scesa de testa tanto grande che moriua facendo el tratto, inserrata la bocca, cominzato a refredare.” MIRACOLI: 153 r.

<sup>64</sup> “Interrogata ad quid cognovit dictam puellam fuisse mortuam, respondit quod ad hec signa: primo enim carebat pulsus, item habebat dentes nigros, item habebat eciam oculos revolutos et omnes extremitas frigiditas.” PELLEGRINI 2009: 550.

<sup>65</sup> “una citella Maritata... fo inferma de febre continua misi tre intanta grauita che la sua lingua et lo cannarozo deuento secco et nero como carboni et desperata dalli medici et dogni aiuto humano...” MIRACOLI: 31 r.

was not unusual in the Middle Ages that the tongue was observed for medical purposes. When for example Gentile da Foligno treated the first plague patient of Perugia, he made his prognosis based on the patient's pulse, tongue, and urine (FRENCH 2001: 280).

Even lips could indicate that someone was dead. For example a certain mother in Naples saw that her baby had dead lips.<sup>66</sup> Unfortunately what she meant by "dead lips" is not specified. Hippocrates (1959: 11) gives us a clue: according to him, death is near if one has loose, hanging, white, and livid lips.

Another sign of death related to the mouth was speechlessness. In seven cases in the miracles of James of the Marches, silence was a sign that someone was dead. Similarly when a baby was born crying it was a clear sign confirming that the baby was alive. In one case in the canonization process of Bernardino of Siena and in four cases in the miracles of James of the Marches, lack of crying was one of the signs which indicated that a baby was dead.

#### 3.4. *Unconsciousness, Wounds, and Pain*

Some deadly signs are related to unconsciousness. In the canonization process of Bernardino of Siena we can see several different ways of saying that someone was unconscious or not reacting to worldly matters. Sometimes the word "insensibilis" is used, as when a girl named Anthonia fell into a river.<sup>67</sup> Another way of discussing unconsciousness was by saying that someone was without senses or understanding ("privabat sensu et intellectu"). In the miracles of James of the Marches a similar phrase is "non sentiva." When in Policastro two physicians found a fallen man called Caramello lying on the ground they were desperate about his recovery despite of all the remedies they tried. Even after bloodletting the man was without senses, as if he was dead, except for having a pulse.<sup>68</sup>

Another physical sign could be wounds on a dying person's body. Sometimes a patient wounds were so severe that physicians or other bystanders were sure that death was imminent. In L'Aquila in 1446, a boy called Micutius fell so severely from a portico that two physicians saw it necessary to operate on his head.<sup>69</sup> Leonardus de Camerino, a doctor who was treating the sick, thought

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<sup>66</sup> "dicte la madre chera presente che quello piccolino morio et che le scappaua per la bocca la forma le labre morte." MIRACOLI: 29 v - 30 r.

<sup>67</sup> "...invenitque filiam suam respirantem, que prius sine spiritu insensibilis apparebat." PELLEGRINI 2009: 424.

<sup>68</sup> "In Policastro un omo chiamato Caramello pastore li casco la goctachel fe cascare in terra como morto, al quale se trouorono doi medici luno nomine mastro Sanato laltro mastro Cola, e questi fecero al predicto infirmo molti remedii et nulla cosa le trouaua. Lo fecero sagnare et niente de sangue lensiua perche staua como corpo morto che da niuno senso se sentiua excepto un poco lo pulso." MIRACOLI: 146 v.

<sup>69</sup> "...Micutius...cum de quodam porticali, seu grifo Aquilano vocabulo, cecedisset, altitudinis cannarum trium vel circa, festinanter advocatis medicis et videntibus caput conquassatum et concussum, iudicatum extitit per eosdem capitibus incisuram esse necesse." PELLEGRINI 2009: 213.

that the boy would have died without the operation. Thus, the wound was a sign of approaching death. Similarly bleeding was a sign of death; when a three-year-old Loysi Bisbano fell from a high place he did not cry or speak, and his mouth, nose, ears, and eyes were bleeding.<sup>70</sup>

Even pains could be considered telling of an approaching death.<sup>71</sup> In one case, a patient suffered from such unsurmountable pains that he lost his senses and showed the sweat of death on his face.<sup>72</sup>

#### 4. Conclusions

Fifteenth-century Italian hagiographic sources reveal that people recognized several signs of death that confirmed when someone was dead or approaching death. The most frequently repeated signs were coldness of body, changes in skin colour, and lack of pulse or breathing. Unconsciousness, speechlessness, and immobility were also often observed. These are to be expected, for they are the same signs that our own medical experts observe today. Since a human body works more or less in the same way as it did five hundred years ago, it is no surprise that the most important signs of death were the same as in modern times. It is crucial to our knowledge that people were aware of exactly the same signs that our own doctors observe today on the dead. Thus, here we might be facing the early development of medical expertise in forensic science.

A more thorough analysis also reveals many unexpected signs. Signs on peoples' eyes, teeth, or tongue were proof of death. Sometimes even tears or sweat on the forehead were deadly signs. For some people, the position adopted by a dying person signified death, for instance, lying on one's back or with the head laid down, as was the custom for the dead. Similarly, wounds or pain told about the approaching death. The expressions like 'waxen teeth', 'black tongue', 'dead lips', and 'sweat and tears of death' show that people looked for signs that are not associated with death today.

Even though some of the signs appear more frequently than others it is not possible to see one of them as more important than the others. Normally there are several signs mentioned together. Therefore, there is no evidence, for example, of Aristotle's opinion of the heart's superior role in the human body. In the Middle Ages, death was not as strictly determined as today: there were several signs that signalled death and none of them was insuperable.

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<sup>70</sup> "Uno chiamato Loysi Bisbano de tre anni casco da alto piu de 4 canni el quale fo raccolto per morto che lui non piangiua, non parlaua ne fiataua et ensiuale sangue per la bocca per lo naso et per gliocchi et per le orecchie et tutto era deuentato infiato nero, refredato et desperato de medici." MIRACOLI: 104 r.

<sup>71</sup> "...lei era in tanto dolore che li pareva morire." MIRACOLI: 247v.

<sup>72</sup> "Antonello li uenne un dolore de corpo et de uentre tanto grande che tutto se abandono un dolore insupportabile che li faceva uenire li sudore de la morte, et era priuato dogni sentimento per gran dolore..." MIRACOLI: 266r.

It seems that the signs were familiar to people in general for, in most cases, they were observed by everyone present. In some cases authority was given to physicians, surgeons, pharmacists, or midwives. They could tell when there was no hope left, but death or dying was imminent. Unlike in the Scandinavian sources, medical experts had an important role in the determination of death in Italy. This is not surprising if we think back to the strong Italian medical background from the twelfth century onwards. However, it seems that medical experts were not asked to visit a dying person solely for the purpose of confirming their death. They were called in earlier to treat and take care of the patient. Thus, they remained by the patient's side until he or she was dead and at that point they confirmed their death. Also midwives' first priority was to take care of babies, and when the time came they had the responsibility to announce the baby's death.

There seems to be no mistrust of physicians and midwives, but people did seem to rely on their own analysis. They had clear methods of observing the signs. They touched the body, especially the arms, legs, chest, and throat in order to find a pulse or investigate if a body was already cold. Similarly, they put their ear above the chest or mouth of the dying in order to see if they were breathing. These methods were also used by those who had no medical background. Sometimes, however, when physicians were not present, people had contradictory opinions on how to proceed, given that determining death and its signs was not always an easy task. Occasionally people waited hours by a dead corpse before they prayed to a saint; sometimes it was done immediately when someone was found dead. Interestingly, there are no mentions of bad smell as a sign of death. Perhaps in none of the cases a corpse remained in place so long that it would have begun to decompose. Or, more likely, when the corpse had remained long enough to begin its decomposition, there were no miracles anymore. We have to take into consideration the fact that in some cases people were probably not dead according to our modern standards, but they were simply thought to be dead. Even modern doctors make mistakes when determining death. For this reason, some doctors say that decomposition is the only definite sign of death. Of course, it is also possible that for some reasons people were not willing to speak about bad smells.

In the hagiographic sources, the proportion of child deaths is relatively high. When studying the death cases of both children and adults, we get an impression that the signs were the same for all of them. Even a dead fetus was declared dead because of the coldness of the mother's stomach. There is not however any mention of dying of old age. This is due to the character of the sources. In the hagiographic sources we encounter only the kind of cases where people were not willing to die. Thus there are no mentions of cases in which someone had led a long life and was ready to meet death. When a man was ready to die there was no need for a miracle. This explains why old age is not one of the signs of death in these sources.

When studying the medieval signs of death, one could not escape from the social and collective nature of death. Inside a private home a public occasion took place when someone was dying.

Sometimes it was just members of a household who took part in the moment of death and observed the signs. Usually also close relatives, neighbours, and friends participated in it. Sometimes there were also medical experts and clerics. Occasionally even total strangers were present, especially when an accident took place in a public space. Determining death and observing the signs of death were tasks which made dying a community situation: bystanders had an active and important role in observing the signs. While people were grieving their loved one, they also had to make observations on his or her body to be sure whether death had already arrived. Sometimes there was an expert taking care of this but by the same token everybody needed to be aware of these signs.

It is crucial to note that modern medical expertise in determining death is deeply rooted in medieval tradition. People recognized all the same signs of death as we do today. Even though medieval medical handbooks omit information about the recognition of a dead corpse, from hagiographic sources we can clearly see how it was done, and the fact is that it resembles many of our own ways. From other legal sources we know that it was a custom to declare that someone was dead because many people declared him or her to be. Hagiographic sources are rare however because they tell us also *how* people knew that someone was dead. These sources could be useful not only for medical history but they can also offer important knowledge for the study of legal and criminal history. Since we can clearly observe how death was determined in this period, the study of the signs of death could benefit not only medical and death studies but also legal studies.

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## Appendix

Table 1. Signs of Death in the Canonization process of Bernardino of Siena

	II/1	II/2	II/3	II/5	II/6	II/9	II/10	II/12	II/13	II/14	II/15	II/16	II/18	III/1	III/9	III/35	III/36	III/43	III/50	III/52	III/60	III/62	III/64	III/72	III/81	III/82	III/83 83	III/90 90	III/95 95
omnibus presentibus	X		X		X		X	X	X		X			X				X	X			X			X		X	X	X
familia							X	X																					
medicus						X				X		X			X	X		X			X		X	X					
obsterix		X		X									X				X									X			
sacerdos																					X								
sine pulsu				X													X							X					X
frigida	X				X		X										X							X				X	X
vomitus																X													
fluxu sanquinis																X					X								
fecit tractus																	X								X				X
declinasset caput					X												X												
vulnus												X				X			X										
quasi mortuus								X	X														X						
oculos revolvit																								X	X				X
oculos clausa					X		X		X																				X
sine anhelitus	X			X	X						X																		
sine respiratione																								X					
sine spiritus	X			X	X																								
sine vigore	X																												
insensibilis etc.										X				X		X								X	X			X	
os revolvit																									X				
oculos levavit																									X				
pallida																									X			X	
tumefactus	X																											X	
inflatus																					X								
livida		X			X																							X	
nigra	X	X			X				X																			X	
non movebat				X	X						X		X													X			
color innormal																										X			
dentes nigros																													X
dentes seratos							X																						
pustule nigre							X																						
lacrimas							X																						
lingua innormal	X																												
membra infustata					X																								
dolore mortis																					X								
supinus iacebat																									X				
sudor							X																						
infans non ploravit																										X			

**Table 2. Signs of Death in the Miracles of James of the Marches**

	Labre morte	tratti della morte	lingua nero	non fiatava	senza polso	senza parlare	raffred dato	nero	ferita	non sentiva	fluxu de sangue	occhi chiusi	Bocca/dente incerata	occhi incerata	non piangeva	senza muovere	dolore	sudore
29v-30r	X																	
31r (a)		X																
31r (b)			X															
44r-44v				X	X													
47r		X																
51r-51v						X												
52r-52v							X											
52v							X	X										
54v (a)							X	X										
54v (b)									X									
61v-62r					X	X		X		X								
63v-64r						X		X										
65r				X														
66r				X	X					X								
68r					X			X							X			
68v		X																
70v-71r								X										
72v							X	X										
86r					X		X											
104r				X		X	X	X			X				X			
116r		X																
118v									X									
119v		X																
133r			X				X	X				X						
134r				X	X			X				X						
136v							X											
140r-v								X	X			X						
145r-v							X											
146v										X								
153r		X					X						X					
153r-v				X	X			X				X						
155r				X											X			
164v								X										
165r					X							X	X					
168v					X							X	X					
169r				X		X		X								X		
176r		X																
179r-v					X		X	X										
184r						X	X	X			X							
187r							X	X					X					



196r		X	X															
200v						X				X							X	
209r-v		X							X						X			
220r							X											
220v							X	X										
228v																	X	
229r		X																
230r				X			X	X										
234r				X			X	X										
247v									X								X	
266r																	X	X
274r-v				X	X		X											

