

The Semantics of Eucharistic Miracles

Anna Wierzbicka

Faculty of Arts: Australian National University College of Arts and Social
Sciences, Australian National University, Canberra, Australian Capital
Territory, Australia
Anna.Wierzbicka@anu.edu.au

Abstract

The term “Eucharistic miracles” refers to some seemingly inexplicable phenomena which have been observed at many times in Catholic churches in various countries. (“Eucharist” is the central element of Christian worship in general and Catholic worship in particular). According to Wikipedia, “reported Eucharistic miracles usually consist of unexplainable phenomena such as consecrated hosts visibly transforming into myocardium [heart] tissue”.

From a believer’s point of view, a “Eucharistic miracle” can be read as a message – a message which doesn’t force belief but which does “want to be believed”; and which, first of all, “wants to be understood”. As such, these phenomena present a task for a semanticist: what meaning can be plausibly attributed to them by people open to faith and how can this message be best articulated?

In this paper, the author, a semanticist with a special interest in the semantics of religion (Wierzbicka, 2001, 2019) takes a look at “Eucharistic miracles” from a semantic point of view. Her goal is to explore these phenomena through Minimal English anchored in universal human concepts (Wierzbicka, 1996, 2014; Goddard and Wierzbicka, 2014; Goddard, 2018, 2021).

Keywords

semantics of religion – Christian faith – Minimal English – NSM semantics – Eucharistic miracles

1 Introduction

The phenomena usually referred to as “Eucharistic miracles” occur in the context of a central practice of Christian religion known as “the Eucharist”. Before discussing the meaning of “Eucharistic miracles”, therefore, I need to say something about the meaning of the word “Eucharist” itself, and also about the importance of this concept, and of what it stands for, to a large part of the world’s population (some one and a third billion people).

The *Collins Cobuild English Language Dictionary* (1991) offers the following definition: “The Eucharist is the Christian religious ceremony in which Christ’s last meal with his disciples is remembered and celebrated. E.g. ...celebrating the Eucharist”. *Encyclopedia Britannica* gives a slightly more elaborated explanation:

Eucharist, also called Holy Communion or Lord’s Supper, in Christianity, ritual commemoration of Jesus’ Last Supper with his disciples. The Eucharist (from the Greek *eucharistia* for ‘thanksgiving’) is the central act of Christian worship and is practiced by most Christian churches in some form. Along with baptism it is one of the two sacraments most clearly found in the New Testament.

The *Catechism of the Catholic Church* (1994: 334) describes the Eucharist as “the source and the summit of the Christian life”, and also, as “the sum and summary of our faith”. To illustrate the importance that this central rite had for Christians from the very beginning, the *Catechism* quotes St Irenaeus’ famous second-century work “Against the Heresies”: “Our way of thinking is attuned to the Eucharist, and the Eucharist in turns confirms our way of thinking”. In the twenty first century, too, few Christian writers would disagree that the Eucharist is central to Christian faith, and that the practice based on it is central to Christian religion.

Roughly speaking, one could say that in its most basic meaning, the word “Eucharist” refers to the re-enactment of what Jesus did and said during the “Last Supper” with his disciples, on the night before he died on the cross. This re-enactment typically takes place in a Christian church, in the presence of a Christian congregation, and it is celebrated by a priest or a pastor. As Christians believe, it is not only a commemoration of what happened at the historical “Last Supper” in Jerusalem in the year 29 AD or thereabouts, but also a kind of “re-presentation” (“making present”) of what happened then, as the *Catechism* puts it. (The *Latin-English Booklet Missal* (2015: 35) uses the word “renew” instead: “[In the Eucharist] Christ renews sacramentally (...) the sacrifice of His death upon the Cross.”)

The full meaning of the word “Eucharist” is very complex because it refers not only to observable actions and events but also to their meaning, as understood by Christians. I will try to unpack this meaning in section 4. Before I can do that, however, I need to set out the basic assumptions of the framework within which the explanation of the meaning of the word “Eucharist” will be presented. This framework, usually referred to as either the Natural Semantic Metalanguage (NSM) approach or the Minimal English approach, is well-known. Nonetheless, the fundamental ideas on which this approach is based do need to be briefly recalled. This is done in section 2.

Before I proceed any further it will be in order to state clearly that I regard semantic analysis of faith-related concepts and ideas as a perfectly legitimate, and indeed important, object of inquiry for cognitive semantics. To scholars with a strong sense of tradition this may seem so obvious as to be unnecessary to state. However, as one of the leading scientists of our time, geneticist and leader of the Human Genome Project Francis Collins comments in his 2010 book *Belief: Readings on the Reason for Faith*, “The increasingly secular Western world seems to be losing touch with the long history of intellectual arguments supporting a rational basis for faith.” (2010: viii) Perhaps as a result, he notes, “Public discussions of faith and reason in the early twenty first century are more often than not abrasive and contentious, and tend to be dominated by extreme voices. There is not a lot of listening going on.” (2010: x) In fact, in Collins’ view, “Faith and reason are not, as many seem to be arguing today, mutually exclusive. They never have been.” (2010: xi)

One might add to Collins’ comments that the increasingly secular Western world is also often losing touch with the long tradition of inquiry into the rational content of faith. The prominent physicist, as well as theologian, John Polkinghorne, the author of the well-known book *The Faith of a Physicist* (1994), in his contribution to Collins’ book remarks that “faith” is one of those words which “can trip a scientist” (2010: 198). Faith, he says, “can readily conjure up the image of a blind belief in really incredible propositions that are presented for unquestioning acceptance on the sole basis of an unquestionable authority.” As Polkinghorne says elsewhere (*Quarks, Chaos and Christianity*, 2005: 20), it is not so: “Faith may involve a leap, but it is a leap into the light, not the dark.” In his essay in Collins’ volume, he also comments: “the idea that thinkers like Augustine or Aquinas were deficient in reason – or in interest in the science of their time, for that matter – is a very curious belief.” (2010: 210)

Arguably, what Polkinghorne says about intellectual giants like Augustine and Aquinas can also be said (with full acknowledgement of the difference in stature) about present-day scientists investigating phenomena known as “Eucharistic miracles”:

to assume that if some scientists study such phenomena with an open mind they must be deficient in reason is also a curious assumption. The conviction that such phenomena cannot happen is not based on reason. Rather, it is usually based on the assumption that, in the final analysis, matter, as it is described by physics, is all there is. Such an assumption has nothing to do with science; rather, it represents a philosophical, in fact, a metaphysical position.

"In the twenty first century", Collins comments, "many seem to have concluded that the spiritual experience and the life of the mind ought to occupy separate domains, and that disruptions, conflicts and disenchantments will result if the firewall comes down." (cover page) This has also been my experience; and I identify with Collins when he says: "Surely humanity's search for truth is not enriched by such limitations. In the words of Socrates (at least as imagined by Plato), the key to a fully mature and richly rewarding life, both for us as individuals and as a society, is to 'follow the argument wherever it leads', unafraid of the consequences." I also identify with the attitude of John Polkinghorne when he says that in his writings he tries to offer an explanation for his Christian belief "comparable to the kind of explanation one might offer of one's conviction that matter is composed of quarks and gluons and electrons. In both cases, a web of interlocking insights has to be woven before the tapestry can be presented for inspection." (Collins, 2010: 6)

The tapestry offered for inspection in the present paper weaves together strands from lexical semantics (the meaning of words), semiotics in the narrow sense of the word (the meaning of signs other than words and phrases), theo-linguistics (the intersection of linguistics and theology), and more. Some of these strands draw on faith, others don't, but they all seek rigour as well as insight. The unifying focus is the study of meaning, a search for the truth of the matter, and a desire for clear and rational understanding.

It might be asked at this point: who is this paper for? The answer is that as usually in my semantic work in general and my work on faith-related semantics in particular, I am first of all trying to achieve a clear understanding for myself. Once I have attained it, as best I can, to my own satisfaction, I can share it with others, Christians and non-Christians, believers and non-believers, thus providing a deeper understanding of "Catholic linguaculture" and of faith-related ways of thinking in general.

As Polkinghorne (1994: 199) observes, "The idea that faith might be concerned with the search for understanding (as Anselm said in the Middle Ages) will often be a novel concept for scientists." One reason for this misconception is "the failure to recognise that religious believers have motivations for their

beliefs.” Referring to his books on quantum theory and those defending his own Christian belief, Polkinghorne states:

Although the material is very different in these two sets of writing, the underlying strategy is the same. In each case, one has to tell a complex story of interlocking experience and interpretation that has developed within a truth-seeking community, not without the struggles, perplexities and setbacks that are common to human intellectual endeavour.

Of course there are scientists who do not see the relationship between reason and faith in the same way as Collins and Polkinghorne, the most obvious and best known example being Richard Dawkins, the author of *The God Delusion* (2006). Still, it is interesting to note that in his public debate with Collins (also in 2006), Dawkins, while rejecting Christianity, says some things that do not quite fit his image as the author of that book. For example:

My mind is not closed, as you have occasionally suggested, Francis. My mind is open to the most wonderful range of possibilities, which I cannot even dream about, nor can you, nor can anybody else. [...] If there is a God, it's going to be a whole lot bigger and a whole lot more incomprehensible than anything that any theologians of any religion has ever proposed.

So perhaps even someone like Dawkins is able to recognise, at times, that there's no inherent conflict between faith and reason, between science and belief in God.

In this paper, I do not intend to defend my Christian belief in general or my belief in Eucharistic miracles in particular. I do think, however, that the belief in Eucharistic miracles has a rational content and presents the same kind of challenges for intellectual inquiry as any other area of semantics, whether the focus is on words, phrases, grammatical categories, non-verbal signs, cultural scripts or conversational routines. Here as elsewhere, the underlying assumption is that understanding can best be achieved with the help of simple words available to all people, that is words which can be understood by children as well as adults, and moreover, have equivalents in all (sampled) languages.

The paper is organized as follows. In section 2, a quick sketch of the NSM approach is given, and the concept of Minimal English is introduced. In section 3, both NSM and Minimal English are illustrated with a relatively simple concept of “miracles”. In section 4, the meaning of the word “Eucharist” is unpacked through NSM-based Minimal English.

Section 5 describes the phenomenon known as the Eucharistic miracles, which is the central theme of this paper, and it does so with special reference to the evidence presented in a recent book written by a medical doctor, the cardiologist Franco Serafini, *A Cardiologist Examines Jesus: The Stunning Science Behind Eucharistic Miracles* (2021). In this book, Dr Serafini surveys extensive medical and scientific research, presenting the reader with testimonies of hematologists, geneticists, molecular biologists, pathological anatomists, and others, who have independently reached startling but converging results. Section 6 seeks to unpack the meaning of Eucharistic phenomena as they can be understood from the perspective of Christian believers, that is, as visible signs made, on purpose, by an invisible “signer”. Section 7 explains the phenomenon of Eucharistic miracles and their meaning as perceived by Christian believers, in Minimal English, and it does it in the forms of four blocks. Since this is the focal section of the paper, some components of the explication are commented on in some detail.

The final section, “Concluding Remarks” (section 8), reiterates the main point: that the NSM and Minimal English approach can be used to unpack meanings expressed by people through all kinds of signs, verbal as well as non-verbal. In particular, attention is drawn to the fact that “communicators” do not need to be visible for meaningful messages to be sent. Obviously, (the section points out), words can be written, rather than spoken by visible speakers; non-verbal signals such as traffic lights can convey important messages without any human controller being seen anywhere where the signals themselves are seen; and if one does not rule out miracles *a priori*, as adherents of philosophical scientism (in contrast to science) do, one can also accept, with scientists like Collins and Polkinghorne, that an invisible God can use visible signs to speak to people on earth; or that Jesus, believed by Christians to be the Son of God, can convey messages of real presence and sorrowful love through visible occurrences of blood on Eucharistic bread (in Christian language, “consecrated hosts”).

The task of a semanticist is the same in all these cases: to formulate a hypothesis about the meaning of the visible signs in a coherent, tightly argued, and logically justifiable way, without any arbitrary assumptions, based either on religious faith or on a personal faith in scientism.

2 The NSM Approach: “NSM” and “Minimal English”

The key idea of the NSM approach to language and thought, which originated in my 1972 book *Semantic Primitives*, is that, as Leibniz put it more than three centuries ago, “if nothing could be understood by itself, nothing at all could

ever be understood" (Couturat, 1903). If we can understand anything at all, it is because there is, embedded in all languages, a set of concepts which are simple and self-explanatory. All complex meanings can be explained in terms of the simple ones which cannot be explained any further and which don't need to be explained because they are self-explanatory. These simple and self-explanatory meanings – "semantic primes" (or "semantic primitives") – are shared by all people on earth. They are embedded in words which can be found in all languages, different in form but identical in meaning.

The roots of this hypothesis can be found in Leibniz's idea of what he called "the alphabet of human thoughts". As discussed in my 2021 paper "Semantic primitives fifty years later", with time, this hypothesis, tested across many languages by many scholars, developed into a broad program of investigation of languages and cultures with a tool known as the Natural Semantic Metalanguage (NSM). and with "minimal languages" based on NSM (see e.g. Goddard and Wierzbicka, 2002; Wierzbicka, 2014; Goddard and Wierzbicka, 2014; Goddard, 2018, 2021).

After decades of searching and testing, we are now able to confirm, with confidence, that such a universal set of concepts – "the alphabet of human thoughts" – does exist and can be found in the shared core of all languages: it presents itself to us in the form of "universal words", that is words with semantic equivalents in all (sampled) languages.

Obviously, the search for such a shared conceptual and lexical core of all languages is akin in nature to the "Human Genome Project", the outcome of which points to an essential unity of humankind. The same can be said, colleagues and I believe, about the results which have emerged from the study of languages undertaken through the lens of NSM, in its different forms, as it (NSM) evolved over the years. The most tangible result is the discovery of sixty five concepts which (as we think) can be located in words of all the languages studied with this hypothesis in mind. The full set of these concepts is given in Table 1 below.

Sometimes, the shared lexical core of all languages is slightly expanded, as needed for a particular project. For example, experience shows that in trying to "unpack" Christian beliefs in simple words one needs, in addition to the primes, some other words which have equivalents in all languages but are more complex in meaning than the foundational sixty five, for example, "blood", "earth" and "hands".

Apart from such complex but universal words, in order to unpack Christian beliefs in Minimal English we need at least two crucial and indispensable "Christian molecules": "God" and "love" (the latter used as a verb, as in the key Christian tenet "God loves all people"). Both these words have been explicated through universal semantic primes in my earlier work (see e.g. Wierzbicka,

TABLE 1 Semantic primes (English exponents), Goddard and Wierzbicka (2014)

I, YOU, SOMEONE, SOMETHING~THING, PEOPLE, BODY
KINDS, PARTS
THIS, THE SAME, OTHER~ELSE
ONE, TWO, SOME, ALL, MUCH~MANY, LITTLE~FEW
GOOD, BAD
BIG, SMALL
KNOW, THINK, WANT, DON'T WANT, FEEL, SEE, HEAR
SAY, WORDS, TRUE
DO, HAPPEN, MOVE
BE (SOMEWHERE), THERE IS, BE (SOMEONE/SOMETHING)
(IS) MINE
LIVE, DIE
WHEN~TIME, NOW, BEFORE, AFTER, A LONG TIME, A SHORT TIME, FOR SOME TIME, MOMENT
WHERE~PLACE, HERE, ABOVE, BELOW, FAR, NEAR, SIDE, INSIDE, TOUCH
NOT, MAYBE, CAN, BECAUSE, IF
VERY, MORE
LIKE

2019a, 2019b). In addition to these indispensable Christian molecules, in order to unpack Christian beliefs, we need a number of concrete nouns which don't have equivalents in all languages but are essential for this particular domain. These concrete nouns include, for example, "bread", "wine" and "cross", which will be used in my explications of the meaning of "Eucharist" (section 4).

A second tangible outcome of this work is the identification of the shared grammatical core of all languages, understood as the sum total of the shared ways in which the universal semantic primes can be combined in phrases and sentences. For example, not only do the words "I", "you" and "say" have counterparts in all languages, but also, in all languages they can be combined to form the sentence: "I say to you" ("to" is not a separate semantic element here). A distillation of the shared grammatical core of all languages, seen as combinatory properties of the primes, is set out in a chart which can be found at

https://nsm-approach.net/wp-content/uploads/2022/05/Chart-of-NSM-Semantic-Primes_English_v20_May-2022.pdf.

A third outcome of the NSM-based program of research which I want to mention here consists in a number of “minimal languages” which have been developed, to a different degree, on the basis of the shared core of the sixty five primes and their shared grammar. Given the global position of English in the present world, Minimal English is the most important practical tool developed so far by the NSM research community, and the one that has been most widely applied in fields as diverse as health, education, development (in third world countries), translation and, as in the present paper, religion. For other examples of application of NSM to religion, see Durie (in press), Habib (2011, 2017), Wierzbicka (2001, 2019).

Taken together, the set of primes and the full repertoire of their combinatory properties constitute the Natural Semantic Metalanguage, or NSM. The English version of NSM can be called “NSM English”, the Chinese version, “NSM Chinese”, and so on. Minimal English is “bigger” than NSM English, but it is still “very small”, as compared to the ordinary English, in both its vocabulary and its grammar. To put it differently, Minimal English is a highly reduced version of ordinary English, which extends the core of sixty-five primes to a larger, but still fairly minimal set, to suit a given project. So for example, “The Story of God and People”, which is one part of my book *What Christians Believe*, extends the core of sixty five to some two hundred.

Minimal English also allows for some phrases which don’t have counterparts in all languages and are not part of the local culture, but nonetheless are important, for one reason or another, in a particular domain. For example, the explication of the Eucharist in section 4 includes Jesus’ own words, pronounced by him over a cup of wine, at the “Last Supper” that he shared with his disciples on the night before he died: “Drink of it, all of you, this is my blood, it will be shed for you”. Neither the verb “to shed” nor the passive construction “will be shed” are universal. Nonetheless, I have kept them both in my Minimal English explication, because they are very close to Jesus’ authentic utterance, as recorded in the New Testament (in Greek), and have an enormous significance for Christianity, as part of every Eucharist. I have, however, added the word “poured out” in brackets, as it will be easier to understand for a wide audience.

As these examples illustrate, Minimal English seeks to stay as close as possible to the shared core of all languages but allows some flexibility to suit a particular purpose. And the same applies, of course, to other Minimal Languages, such as Minimal Chinese, Minimal Russian or Minimal Cree.

3 Miracles

As Christian writer C.S. Lewis puts it, the idea of “miracles” presupposes a belief “in a normal stability of nature”, and also, a belief “in some reality beyond Nature”. He illustrates this with the New Testament story of Jesus walking on water (Lewis, 2010: 219):

When the disciples saw Christ walking on the water they were frightened: they would not have been frightened unless they had known the laws of Nature and known that this was an exception. If a man had no conception of a regular order in Nature, then of course he could not notice departures from that order ... Nothing is wonderful except the abnormal and nothing is abnormal until we have grasped the norm.

The event of Jesus’ walking on water can be seen as a miracle because normally people can’t walk on water. If someone calls this event “a miracle” then they assume that Jesus could walk on water (in that place at that time) because God wanted it, and also, that people can’t know how it happened. C.S. Lewis elaborates:

The experience of a miracle in fact requires two conditions. First, we must believe in a normal stability of Nature, which means we must recognize that the data offered by our senses recur in regular patterns. Secondly, we must believe in some reality beyond Nature. When both beliefs are held, and not until then, we can approach with an open mind the various reports which claim that this super- or extra-natural reality has sometimes invaded and disturbed the sensuous content of space and time which makes our ‘natural’ world. The belief in such a supernatural reality itself can neither be proved nor disproved by experience.

In my Minimal English explication of “miracles” given below, a similar understanding of this concept is expressed in very simple, and, with one exception, fully cross-translatable words, without any philosophical terms such as “reality”, “nature”, “supernatural” or “extra-natural”. The one exception is the word “God”, which is not universally cross-translatable but which is a necessary part of Minimal English and which has been fully explicated through simple and universal concepts before. (Wierzbicka, 2019)

MIRACLE (MIRACLES)

(e.g. “I believe it was a miracle”; “I was praying for a miracle”; “Jesus’ first miracle was changing water to wine at Cana”)

[IT DOES NOT HAPPEN OFTEN]

something of one kind, it happens at some times in some places, it does not happen often

before something like this happens, some people think about it like this: “it cannot happen”

it happens because God wants it to happen

[IT IS NOT LIKE THINGS OF MANY OTHER KINDS]

things of many other kinds happen very often,
people can know how they happen

because some things are always the same

(e.g. people in a place see light after dark, day after night)

things of this one kind [miracles] are not like this

[HOW PEOPLE CAN THINK ABOUT IT]

when something of this one kind happens somewhere, people there can think like this:

“something very very good happened here

we can’t know how it happened

we can know that it happened because God wanted it to happen”

at the same time, they can think like this:

“God is saying something here;

maybe he is saying to someone: ‘I heard you’,

maybe he is saying: ‘when I say something to you, it is true, I want you to know it’,

maybe he is saying: ‘I am here.’”

As the first block indicates, “miracles” (in the literal sense of the word) are seen as something very rare, something regarded by some (perhaps many) people as impossible, and something caused directly by God. The second block refers to events following “natural laws”. Such events can be seen by people as understandable because they are stable and predictable. Crucially, “miracles” are not like that. The third block interprets “miracles” as signs: they are not magical tricks but messages from God. Most commonly, they are responses to prayer (“I heard you”), but they can also be, as it were, appeals for trust: “You can trust me”; or, in Minimal English, “When I say something to you, it is true, I want you to know it”. They can also be signs of God’s presence: ‘I am here’. As C.S. Lewis notes, the concept of “miracles” embeds a believer’s perspective, a perspective of someone who accepts that while many kinds of events have “natural causes” (and can be explained), some others are not like that and are due to direct agency of God.

English dictionaries also recognise that in its basic meaning, “miracle” is a believer’s word. For example, the *Collins Cobuild English Language Dictionary* (1991) defines the first meaning of the word as “a wonderful and surprising event that people believe was caused by God”.

If someone doesn’t believe in God (as Lewis puts it sometimes, “some reality beyond nature”) then they cannot use the word “miracles” in its literal sense. They can use it in an extended sense, as in the example cited by the same dictionary: “My father got a job. It was a miracle.”, but as the dictionary acknowledges, this is a different, extended, use of the word (“a very surprising and fortunate event”).

A non-believer can use the word “miracle(s)” in a sentence like “I don’t believe in miracles”; in this case, however, the speaker is using it in order to reject the presuppositions embedded in the word’s literal sense. As the dictionary just quoted recognises, a sentence like “I believe it was a miracle”, or, for that matter, “I don’t believe it was a miracle” used in a literal sense reflects a believer’s perspective, and therefore implies religious belief. In the Minimal English explication of that literal sense, I have sought to account for the believer’s perspective by using the word “we” rather than “people” in the third block: “we can’t know how it happened, we can know that it happened because God wanted it to happen”.

It might be added that while according to Dawkins’ *The God Delusion* “educated people” no longer believe in miracles (like the Resurrection of Jesus), Wikipedia cites fifteen Nobel Prize winners in the field of physics alone who are Christians and thus do accept the truth of the Resurrection. And of course, as Dr Serafini’s book shows, there are many scientists and medical specialists, including cardiologists, who fully accept the truth of Eucharistic miracles.

It may also be worth noting that the Pentecostal Church, which according to Wikipedia has 644 million adherents, places a strong emphasis on miracles. Presumably, not all of these 644 million are uneducated.

4 “The Eucharist” – A Minimal English Explication

The concept of “Eucharist” was introduced in the first section of this paper, where some definitions from representative sources were also cited. Here, I will focus on unpacking this concept through Minimal English. First, however, I will adduce a few lines from a source called “Simple English Wikipedia” (online):

The Eucharist, also called holy communion, the sacrament, or the Lord's supper, is a kind of religious ritual in many Christian churches. It started when Jesus Christ told his followers to eat bread (His body) and drink wine (His blood) in memory of him, at the Last Supper. (...) First century St. Ignatius of Antioch, disciple of the beloved disciple John, in speaking of "the heretics plaguing the church" in their day, wrote: "They abstain from the Eucharist because they do not confess that the Eucharist is the flesh of our Savior Jesus Christ".

As this entry illustrates, the word "Eucharist" can actually be used in three distinct but closely related senses: something that happens somewhere for some time (usually an hour); something that believers do (consuming the special bread which according to the Christian belief has become "the Body of Christ"); and the substance itself, which can actually be consumed (or which can be displayed for adoration, in which case it is referred to as "the Blessed Sacrament").

The Minimal English explication aims at unpacking the first of these three senses, but it could easily be adapted to articulate the other senses. In this explication, all the key elements included in the "Simple English Wikipedia" entry, and in the definitions cited in the introduction, will reappear in some form, but without words like "communion", "sacrament", "religious", "ritual", "followers" and "memory". Words of this kind may seem simple to a suitably "enculturated" English speaker but are not familiar to *all* English speakers, and do not have counterparts in most of the languages of world.

The explication presented here includes six blocks, each composed of several lines. The first block says, very briefly, what kind of event a Eucharist is, what kind of people (Christians) bring it about, and why they do it. The second and third blocks together describe how Christians think about the event called "the Eucharist", and they do so with reference to what Jesus did and said during his last meal with his disciples (the twelve "Apostles") on the night before he died. Both these blocks not only report Jesus' words (as recorded in the Gospels) but also try to unpack their intended meaning, as it can be understood from a Christian point of view. Both blocks refer to Jesus' love for all people, expressed in his readiness to suffer and die for them, indeed, to be killed and tortured.

If the second and third blocks focus on what Jesus did and said, the fourth block focuses on the Apostles, and especially on what the Apostles could understand at the time of the Last Supper with Jesus, and as well as later when Jesus was no longer with them on earth.

Blocks five and six seek to set out how the people present at a Eucharist can understand what is going on. Block five focuses on the person of the “celebrant” (the priest or pastor who repeats Jesus’ gestures and words), and block six focuses on the meaning which those present can attribute to the event. This meaning is distilled in three parts: first, Jesus’ “real presence” and action during the event culminating in the invitation: “Take, eat: this is my body”; second, the unity (“oneness”) of the many people present which can be achieved if they accept this invitation; and third, the invisible aspect of what is happening; the aspect which allows Christians to speak of the Eucharist as a sacrifice: “something is happening here as it happened when Jesus died on the Cross”.

It is on this understanding of the Eucharist (as presented here in six blocks) that the phenomenon of Eucharistic miracles, as understood by those who witness them, builds.

“THE EUCHARIST” – A MINIMAL ENGLISH EXPLICATION

[IT HAPPENS IN MANY PLACES AT MANY TIMES]

Something of one kind called the Eucharist, it happens often, in many places.

When it happens in a place, there can be many people there.

It happens because people of one kind (Christians) want it to happen.

Christians think about Jesus; they want to live as he said.

They can know what he said because they can read something called “The Gospels”.

They can know what happened on the night before Jesus died.

During the Eucharist they can think about it; they can think about it like this:

[“THIS IS MY BODY”]

On that night Jesus was with the twelve people called the Apostles.

It was a time of the year called Passover.

They were eating lamb, they were eating bread, they were drinking wine, as Israelites did at that time of the year.

When they were eating, Jesus took some bread into his hands.

He broke it, gave some of it to the Apostles, then said to them:

“Take it, all of you, eat of it; this is my body, it will be given for you”.

Christians can think about it like this:

“He wanted to say something like this with these words:

‘I love you, I love all people.

I want to do something very good for you, for all people.

I want all people to live with God; I will die because of it.
People will kill me, very bad things will happen to my body.”

[“THIS IS MY BLOOD”]

When they were not eating anymore, Jesus took a cup with wine into his hands.

He gave it to the Apostles, then he said to them:

“Drink of it, all of you, this is my blood, it will be shed [poured out] for you”.

With these words he wanted to say, like before:

“I love you, I love all people. I want all people to live with God.
I will die because of this. People will kill me. My blood will be shed.”

At the same time he said something like this:

“You know that people don’t live with God; this is very very bad for people.

I want all people to live with God. God wants it. God wants people to know it.”

[“I WILL BE WITH YOU ALWAYS”]

After he did these things, Jesus said: “Do this when I am not on earth like before”.

He wanted people to know what happened to him, what he did, why he did it.

He wanted people to think about it.

The last time the Apostles saw Jesus he said to them: “I will be with you always”.

They could know that he was thinking about many many people because he said:

“I will be with you always when there are people on earth”.

When the Apostles thought about it later, they could think like this:

“We know now how Jesus can be with people on earth always.
We know now why he said: ‘Do this when I am not on earth like before’”.

[SOMEONE OF ONE KIND CAN DO SOME THINGS AS JESUS DID]

When the Eucharist is happening somewhere
someone there does some things

like Jesus did on that night, says some things as he said.

The other people there can think about it like this:

“People of one kind can do this,
other people cannot; this is someone of this kind.”

[JESUS IS HERE, HE SAYS: “TAKE, EAT”]

During the Eucharist the people there can think like this:

“Something is happening here as it happened on the night before
Jesus died.

Jesus is here, we can’t see him. Something like bread is here, we can
see it.

We can eat it, Jesus wants us to eat it.

He says to us now, as he said to the Apostles then: “Take, eat, this is
my body”.

They can think:

“Jesus can be with us now not like at other times: he can be in us.

Because of this, we can be one now not like at other times.”

At the same time, they can think:

“Something is happening here now as it happened when Jesus died
on the cross.

It is happening because Jesus wants it.

He wants it because he loves us, because he wants us to live with
God forever.”

The way Catholics in particular understand the Eucharist is reflected in the diary of an anonymous Benedictine monk, *In Sinu Jesu: When Heart Speaks to Heart – the Journal of A Priest in Prayer* (A Benedictine Monk, 2016). Even the title of this book is revealing, as it interprets the Eucharist – the “Blessed Sacrament” – in terms of love, Jesus’ love for people symbolised by the heart and combined with a longing for human response. The author of this prayer journal, who records many remembered or imagined conversations with Jesus before the “Blessed Sacrament”, attributes to Jesus, in particular, the following words:

This is the immense sorrow of My Heart: that this Sacrament, which I instituted in order to remain among My own until the end of time, meets with indifference, with coldness, and with a cruel insensitivity, even on the part of My chosen friends, My anointed ones, My priests. Many receive My Body and Blood, few discern the mystery of My burning love, concealed beneath the sacramental veils. Holy Communion has become, in so many places, a routine act, a mere custom. This is why I ask for

adoration of My Eucharistic Face and for reparation to My Eucharistic Heart. (2016: 63)

The phrase “My Eucharistic Heart” is particularly significant here, as it points to the long Christian tradition of associating the Eucharist with Jesus’ heart. This tradition is linked with the devotion to Jesus’ five wounds, and especially, to the wound in his side pierced with a spear by a Roman soldier. It is well documented from the beginning of the second Christian millennium, and features prominently in the testimonies of medieval mystics such as St Lutgarde (13th century), who according to Thomas Merton (1948) was a great precursor of the devotion to the Sacred Heart of Jesus:

Some four hundred years before St Margaret Mary prayed and suffered for the institution of the feast of the Sacred Heart, St Lutgarde had entered upon the mystical life with a vision of the pierced side of the Saviour. But there are other facts besides which make Lutgarde of interest to the theologian, the Church historian, and to the general Christian. She was a contemporary of St Francis of Assisi, the first recorded stigmatic, and she too received a mystical wound in her heart which historians have not hesitated to class as a stigma. The life of St Lutgarde introduces us to a mysticism that is definitely extraordinary, yet her mysticism springs from the purest Benedictine sources. Lutgarde’s mystical contemplation, like that of St Gertrude and St Mechtilde, is nourished almost entirely by the liturgy. Above all it centres upon the sacrifice of Calvary and upon the Mass which continues that sacrifice among us every day. (Merton, 1948: IX, X, XII)

The most significant source of the devotion to the Sacred Heart and of the firm association of the Sacred Heart with the Eucharist was St Margaret Mary Alacoque, a French nun who lived in the late 17th century, a mystic who successfully called for the establishment of a feast in honour of the Sacred Heart and who initiated Eucharistic adoration in church during what is called a “Holy Hour”.

As we will see, the symbolism and the imagery of the wounded heart of Jesus crowned with thorns and radiating love, closely associated in the Catholic tradition with the Eucharist, provides an important context for the way Catholic believers interpret Eucharistic miracles. One aspect of this tradition is the link between Jesus’ “wounded heart” (in the visions of mystics) and John the Apostle’s eye-witness report of a Roman soldier piercing Jesus’ side with a spear.

5 The Phenomenon of ‘Eucharistic Miracles’

Phenomena known as “Eucharistic miracles” can be illustrated with an account of what happened in a town called Tixtla in Mexico in 2006 during a Catholic Mass concelebrated by the parish priest Father Leopoldo Roque and another priest, Father Raymundo Esteban. The quotes below, as well as the images, come from an account given by the Italian cardiologist Dr Franco Serafini, in his book *A Cardiologist Examines Jesus: The Stunning Science Behind Eucharistic Miracles* (2021). To understand this account the reader needs to know that the word “host” stands for one of the small round flat pieces of special bread distributed to people by the priest during the Mass, as shown in Figure 1A (see below).

On Sunday, October 22, 2006, he [Father Raymundo] concelebrated the Mass concluding the spiritual retreat. There were about six hundred people who could not fit inside the church. Hence the mass was celebrated at the nearby town hall. Two nuns were helping with the distribution of the Eucharist for Holy Communion. While holding a ciborium [special container full of consecrated hosts], Sr.[Sister] Arely Marruquín, one of the two, suddenly paused and turned pale in front of the faithful who were queuing up to receive. (Serafini, 2021: 60)

According to the eyewitnesses (as reported by the local newspaper), at one point,

The nun had returned to the altar with teary eyes and had shown the ciborium to Fr. Rayito [Raymundo] after kneeling, without uttering a word: one of the hosts was stained with blood. It had a moist, friable texture, so much so that a small fragment had come off it by gently touching it. Fr. Rayito and Fr. Leopoldo quickly talked to one another until Fr. Rayito loudly spoke out – “This is a miracle!” – and publicly showed the host that was stained by a few drops of fresh blood. With his booming voice, he began singing “*Que viva mi Cristo, que viva mi Rey*,” a hymn well known to all Mexicans. There were people who applauded and people who wept. (Serafini, 2021: 60)

The event (captured partly in Figure 1a and 1b, both photos and captions from Dr Serafini’s book) was subjected, over a period of time, to investigations



FIGURE 1A

At the Tixtla town hall auditorium on October 22, 2006, Fr. Rayito shows those who attended Mass the consecrated host that had just bled.



FIGURE 1B

The Tixtla ciborium, a few minutes after the event, on October 22, 2006.

which were initiated by the local bishop and were conducted first within the church (through interviews with eyewitnesses) and then were followed by a long series of investigations in scientific laboratories.

The scientific investigations were funded by a body called “Grupo Internacional para la Paz” (founded by a scientist, Dr Ricardo Castañón Gomez):

It was Dr Castañón himself who sampled three millimetre-sized fragments of the apparently bloodstained host. Then a series of investigations began that were only finally concluded on February 25, 2013. Dr Castañón’s association relied on several forensic medical laboratories in Mexico, Guatemala, Bolivia, and the United States that specialized in immunohistochemistry and genetics. During the course of the analyses, the same findings were often verified multiple times, by multiple alternative and complementary analytical methods performed by different scientists. The scientists themselves were also unaware of each other’s undertaking and worked under “blinding” conditions – that is, without knowing the original of the material. (...) The results that were obtained were many and converging. (2021: 62-63)

As reported and referenced by Dr Serafini, the investigations ended with a formal symposium, which led the bishop to declare, a few months later, that the event in Tixtla, in 2006, was indeed a miracle.

In his book, Dr Serafini groups the results from different laboratories into seven categories, which he discusses in seven sections in considerable detail. I will only include here the headings of the sections (2021: 63-71):

1. Human blood was found.
2. The blood group was AB.
3. There were cellular fibres belonging in all likelihood to heart muscle.
4. Other various histological findings.
5. There was human DNA, but no genetic profile could be obtained.
6. Under a superficial layer of clotted blood, fresh blood was still present in contact with the host.
7. The blood arose from within the host.

Referring in particular to the seventh of these results, Dr Serafini comments:

Thus, the question that unsettled the diocesan bishop on the eve of the investigation was eventually answered: the red stain was not added by some ill-willed person, because the blood inexplicably oozed out from within the host. (2021: 72)

Of course, many readers may respond to such findings with disbelief – not because they have examined the evidence and found it faulty, but because of their prior assumption that such results are impossible: “I can’t believe this”. (See chapter 4 in Dr Serafini’s book). Some people say simply: “I don’t want to believe this.”

There is an even greater challenge for such readers than the blood arising from within the host: the presence of heart tissue in the “bleeding” host (see point 3 in the set of seven points above). Many Eucharistic events of the kind recorded in Tixtla have been reported over centuries, but according to Dr Serafini, only five have undergone scientific testing over the last two decades, resulting in published reports. In all five cases, the reports state that human heart tissue was detected in the host. Acknowledging that the sample is very small, Dr Serafini comments: “Still, it can’t be missed that the heart muscle tissue was remarkably found in all of these five miracles” (2021: 135).

Furthermore, in four of the five cases, the heart tissue detected in the host points to a “traumatised” heart (in the fifth case, the host was stored for a very long time in a monstrance without preservatives, and finer tissue analysis could not be performed on it).

(...) the heart muscle tissues of Buenos Aires, Tixtla, Sokółka, and Legnica all revealed specific pathological signs suggestive of a common and narrow differential diagnosis; a limited number of medical and traumatic conditions that would give rise to the abnormal features seen in these tissues – all linked with extreme physical, emotional and spiritual suffering. (2021: 145)

The pathological picture found in the heart muscle tissue in the “bleeding” Eucharistic host is known to doctors as “myocardial cell fragmentation”. It has been identified in medicine for several decades in victims of plane crashes, violent murders, or death by stroke or suffocation. The pathological symptoms found in such cases “are unquestionable signs of the most acute and harrowing suffering of spasms so rapid and violent that they were able to break the muscle cells themselves” (2021: 151). These are also the symptoms found in the “bleeding” hosts.

Unbelievably, in addition to being traumatized, in all these four cases, the heart tissue investigated was found to be a living tissue: “Finally, a truly mind-blowing fact: except for the ancient and mysteriously mummified Lanciano relic, all of the other four tissues undoubtedly revealed living features despite of the concurrent degradation”. (2021: 151)

Dr Serafini asks in wonder and almost in disbelief: “How could a fragment of living heart appear in the midst of a piece of bread?” And he comments: “It is a brainteaser without solution for a man of science.” (2021: 135)

6 Eucharistic Miracles Seen as Non-Verbal Signs

From the point of view of a Christian investigator like Dr Serafini, then, Eucharistic events of the kind witnessed in Tixtla on October 22, 2006 are not just miracles but signs endowed with meaning. But when these events are viewed as signs, three questions suggest themselves: First, who is the signer? Second, who are the addressees? Third, what exactly is the message?

The answers to these questions are hinted at, if not fully spelled out, in the introduction to the book:

In fact, all these miracles are (...) talking to us in language and symbolism that is fully understandable: as Catholics, we cannot see anything other than the Blood (...) when looking at the faithful adoring a host exuding a red liquid. (...) The miraculously appeared, jellylike dark mass obviously wants to remind us of the Real Presence of that one Body. (2021: 6)

In other words, from this perspective, the signer is Jesus, invisible but present, the addressees are Christians (Catholics) who in principle believe in Jesus' Real Presence in the Eucharist but whose faith may be weak and vacillating, and the message is a reminder of Jesus' own words: "this is my body, this is my blood".

According to this view, the Eucharistic miracles are not events seeking to coerce non-believers to believe (by confronting them with a proof) – they are not addressed to non-believers at all. Rather, they are addressed to believers, and when they appear in a predominantly Catholic country like Mexico, during a Catholic Mass (Eucharist), they can be seen as addressed, in the first place, to the Catholic believers present there, and indirectly, to all Christian believers who need their faith in the Eucharist to be strengthened. Dr Serafini puts it like this:

If a miracle happened, if a sign was allowed to be seen, it had to be because Heaven deemed it useful and appropriate at that time in that place. Eucharistic miracles are truly for all of us, and they happen to sustain our faltering faith. (2021: 8)

Presumably, when he says "all of us" and "our faltering faith", Dr Serafini is referring above all to his fellow Catholics, whose Eucharistic faith has been, according to surveys, increasingly weakening in recent times. ("Pew Survey" National Catholic Reporter publications online, 8 Aug 2019)

It might be asked: what would be the point of a "Signer" presenting people with a sign (some traumatised heart tissue) that can only be read under the microscope? "Writing" a sign with blood is one thing, but "writing" a sign in a medium which is not visible to the onlookers' eyes doesn't seem to make sense. Here is Dr Serafini's reply:

The concept of a selfless gift is inherent in the language of the Eucharist (...). Similarly, Eucharistic miracles, too, become food for our contemporary souls and rational minds. These miracles "know us"; they know we live in a time when science and technology dominate, and they have already anticipated well before happening that we would look at them under the microscope, analyse them with genetic probes, and pick at them with chemical and immunological reagents. They lend themselves to our curiosity, and in the end, test results also become integral parts of the actual miracles. (ibid.)

From a Christian point of view, the most important findings of the laboratory investigations are these: 1. the evidence of harrowing suffering visible in the

heart tissue; 2. the evidence that the person whose heart it was almost certainly died from a trauma to the heart; and 3. the good fit between the results of the medical analysis of the heart tissue found in the host and the fact (reported by the Evangelist John, an eyewitness) that blood and water flowed from Jesus' side pierced by the spear of the Roman soldier some hours after the moment of death.

To be more specific. Citing the opinions of other cardiologists, such as Professor Frederick Zugibe, Professor Odoardo Linoli, and Dr Pietro Pescetelli (and assuming that the heart in question is Jesus' heart), Dr Serafini concludes that the most likely cause of Jesus' death appears to have been stress to the heart, in medical terms, "catecholamine-related stress, capable of mimicking a heart attack".

This catecholamine-related physiological stress could have been severe to the point of actually causing the rupture of the ventricular wall [a sac enclosing the heart] of Jesus' heart [ventricle is one of two large chambers at the bottom of the heart]. This would have led to the collecting of Blood in His heart's pericardium, leading to compressive pericardial tamponade and immediate death. After death, His accumulated Blood vertically stagnated in the pericardium around the heart for some hours: it underwent the expected sedimentation, with its cellular component, depositing at the bottom and its transparent serum floating at the top. After the spear thrust by the centurion in the right sixth intercostal space, Blood and then watery serum separately poured out of Jesus's side, according to the narrative in the Gospel of John.

All these new findings can be said to corroborate what Christian tradition (including visions of the mystics and the iconography) held throughout the two Christian millennia: the link between Jesus' love for all people, symbolised by the heart, and his suffering, symbolised by the blood and the piercing of the heart. The messages attributed to Jesus in the second and third block of the explication, as we will see in section 7, are consistent with both the medical findings and the Christian tradition.

7 The Meaning of Eucharistic Miracles

In this section, I have sought to unpack the meaning of Eucharistic miracles, as it can be understood by Christian, and especially Catholic, believers, through Minimal English. The explication is presented in four blocks of several lines

each. All the words used in it are either universal or have been introduced through universal words earlier: the word “Eucharist” in the present paper (section 4) and the other words in my *What Christians Believe*.

The most important “Christian” words used here are “Eucharist” (which has been explicated in Section 4), and three fundamental Christian “molecules”: “God”, “love” and “cross”. Two further molecules used here are less central but are also needed for explicating Christian faith and tradition: “saints” and “centuries”. A few words are introduced as “names”, so to speak, including “Catholics” (“Christians of one kind called Catholics”) and “host” (“small things of one kind called hosts”).

The explanation presented here does not seek to repeat the content of that of “Eucharist”, but it does expand on it at one point: the reference to “small things of one kind called hosts”, which is essential for describing Eucharistic phenomena such as that in Tixtla.

The choice of Tixtla as a reference point (in the first block) anchors the concept of Eucharistic miracles in place and time, while at the same time allowing us not to try to specify a set of necessary and sufficient conditions for a phenomenon to be so categorized. This is, I believe, as it should be, given the way the phrase in question is currently used. In addition, the photographs available from the event in Tixtla seem particularly striking and self-explanatory: a priest displaying the host with blood on it in front of a congregation of 600 people.

The second block of the explication seeks to identify the key purpose of the sign, as it can be understood from a Christian perspective: in Dr Serafini’s words, to “sustain our faltering [Eucharistic] faith”. Thus, people who witness a Eucharistic miracle can think like this:

“Jesus is saying something to us here, he is saying this: ‘I am here, I live’.
During a Eucharist, we have often heard the words: ‘This is my body’. ‘This is my blood.’
Perhaps we have thought sometimes: ‘Is it true?’
Jesus says to us here: ‘I say to you: it is true. I want you to know it.’”

The choice of blood as the means of achieving this purpose is obviously not accidental, as it symbolically recapitulates the main point of the concept of Eucharist itself: Jesus’ suffering and death on the Cross as a means of “giving life to the world” (“the bread I give for the life of the world is my flesh”, John 6:51), and the real presence of Jesus, saying at every Eucharist: “Take, eat: this is my body” (First Corinthians 11:24).

It’s true that while blood was found to be actually present in the consecrated host in Lanciano, Tixtla and Buenos Aires, it was not found in the hosts from

Legnica and Sokółka: in these last two cases, what looked like clotted blood proved to actually be heart muscle. But the appearance of clotted blood combined with the heart muscle sends the same message as the presence of physical blood: in all five cases, people looking at the hosts “see blood”.

The message behind the appearance of the heart issue in the host can be read, as first of all, “I love you, I love all people”. The fact that, to the scientist’s eye, this heart is visibly traumatized, allows us to expand these words as follows:

I love you, I love all people. I love all people very very much. I died on the cross because of it.
Before I died, I felt something very very bad in my body; in my hands, in my feet, in my heart.

The strong association between the heart and love in biblical culture can be illustrated with the opening words of the first commandment of the Decalogue: “Thou shalt love the Lord thy God with all your heart” (Deuteronomy 6:5, KJV). It is given even more prominence in the New Testament, as one of the two commandments which according to Jesus sum up “the whole Law and the Prophets” (Mark 12:30, Matthew 22:37, Luke 10:27). The connection between the heart and love in biblical culture is also evident in the quote from Isaiah (75:13), recalled in Matthew’s Gospel (15:8): “These people honour me with their lips but their heart is far from me”. The references to the physical suffering attributed to Jesus in the block 2 are based both on the historical aspects of his crucifixion and his self-identification with the sufferer in the Psalm 22, whose experiences match, prophetically, the specifics of what happened to Jesus six hundred years later.

On the cross, Jesus identifies with the sufferer of Psalm 22 by crying out the opening verse of the Psalm: “My God, my God, why hast thou forsaken me?” (Matthew 27:46; Mark 15:34), as noted, for example, in Wikipedia (with reference to, e.g. Menn, 2000; Tkacz, 2008), in the entry on “Psalm 22”, verses 14-18 of which I will quote: “Although Jesus said its first verse alone in his duress, it is well established that the first word or words of a Jewish text are understood as indicating its entirety, so thereby he regards the whole psalm as foreshadowing his passion and resurrection.”

¹⁴ I am poured out like water,
[...]
my heart is like wax,
it is melted within my breast;

- ¹⁵ my strength is dried up like a potsherd,
 and my tongue cleaves to my palate [Darby: RSV has “jaws”];
 [...]
¹⁶ [...]
 a company of evildoers encircle me;
 they have pierced my hands and feet –
¹⁷ I can count all my bones –
 they stare and gloat over me;
¹⁸ they divide my garments among them,
 and for my raiment they cast lots.

Block 3 of the explication describes what happens in the place of Tixtla after something like blood was seen on one of the hosts. It refers to scientific investigations, to the use of scientific tools such as a microscope, and to various scientific tests (“they [scientists] did many other things to it [the host] as scientists do”). And it reports the consensus: we can see, the scientists report, that there is human heart tissue there, and also, that this heart was traumatized.

In all five cases which were investigated by scientists, the appearance of blood in the host was accompanied by the physical presence of heart tissue in the host; in two cases out of the five, only heart tissue was discovered under the microscope despite of the appearance of a red, blood-like clot on the host.

Block 4 connects the appearance of blood and the invariable presence of heart tissue in the host to the long Christian tradition of devotion to “the Sacred Heart of Jesus”, often associated with devotion to the Eucharist. For example, in the 17th century, St Margaret Mary Alcoque wrote in her letters of “the Heart of my lovable Jesus in the Blessed Sacrament” (2012:256) and wanted to “live day and night before the Blessed Sacrament” [because] “this divine Heart ever present there is all my consolation here below” (p.36). Catholic writer Michael O’Brien encapsulates this connection (often highlighted in the visions of Christian mystics and saints) by his frequent references to Jesus in the Eucharist as “the Beating Heart.” (See for example, *A Cry of Stone*, 2003: 269, 281, 717). Earlier, Edith Stein – a Jewish German philosopher and a Carmelite nun, martyred in Auschwitz, and later canonised by the Catholic church – wrote in a poem (“I shall stay with you”, 1935):

This heart beats [for us] in a tiny tabernacle
 Where it remains in hidden mystery,
 Within that orbit, silent.

Presumably, the basis of this connection lies in the notion of love. From a Christian perspective, the Eucharist is, in the words of St Thomas Aquinas, “the Sacrament of love: it signifies love, it produces love”; and “the Sacred Heart of Jesus” is the supreme symbol of love. As the 1956 encyclical of Pope Pius XII “*Haurietis Aquas* (On Devotion to the Sacred Heart)” makes clear, “the Sacred Heart” venerated by Christians (and especially Catholics) from the 11th century onwards, stands, first of all, for Jesus’ physical heart, pierced by the spear of the Roman soldier. Describing Jesus’s heart as a symbol and image of Jesus’ love for the human race, the Encyclical says:

...we ought to meditate most lovingly on the beating of His Sacred Heart by which He seemed, as it were, to measure the time of His sojourn on earth until that final moment when, as the Evangelists testify, “crying out with a loud voice ‘It is finished’ and bowing His Head, He yielded up the ghost.” (...) But after His glorified body had been re-united to the soul of the divine Redeemer, conqueror of death, His most Sacred Heart never ceased, and never will cease, to beat with calm and imperturbable pulsations (60-61).

The correspondence between the intuitions and ideas of Christian mystics over the centuries and what present-day scientists find when studying the heart tissue of the “bleeding hosts” under the microscope and attesting that it is living tissue, is very striking.

The meaning that the Sacred Heart of Jesus has for Catholics is a big topic which requires a big semiotic and semantic study, undertaken with NSM principles of clarity and cross-translatability in mind. Accounts relying on complex and untranslatable terms such as “physicality”, “divinity”, “humanity”, and even “agony”, “sacrifice” and “passion” are clearly not sufficient, and need to be supplemented by explanations couched in simple and cross-translatable words such as “body”, “heart”, “blood”, “water”, “feel”, “break”, “live” and “die”, and in phrases such as “a beating heart” and “to feel something in one’s heart”. (I will return to this in section 8.)

One point which can be made here is that when Catholics venerate “the Sacred Heart of Jesus” they want to think of Jesus dying on the Cross, thinking about all people with great love, alive but with his heart nearly breaking with pain, recalling Psalm 22, which says, *inter alia*, “I am poured out like water (...), my heart is like wax, it is melted within my breast”. At the same time, they want to think of Jesus as being alive and present to them in the Eucharist, and of the connection between Jesus’ suffering on the Cross and his presence to them now.

The fourth line of block 4 connects the long devotional tradition stemming from the mystics and the reports of present-day scientists: “Christians can think now: the blood on the host is Jesus’ blood, the heart [in the host] is Jesus’ heart”. The second half of block 4 elaborates on this connection, emphasising the perception that Jesus *lives* – not in some abstract and metaphysical sense but in a very real way, “like someone lives when their heart is beating”. It is a living heart which can present itself to scientists as traumatised flesh and which Christian saints and mystics saw as loving, producing love, and also asking for response. (“He loves us. He wants us to love him, to love God, to love other people.”)

I conclude the section with a full explanation of Eucharistic miracles in Minimal English.

EUCCHARISTIC MIRACLES EXPLAINED IN MINIMAL ENGLISH

[NOT LIKE AT OTHER TIMES DURING A EUCHARIST]

Sometimes something happens at a Eucharist not like at other times (it can happen after a Eucharist).

People don’t know how it happens. It happened in Tixtla in Mexico in 2006, many people could see it.

It happened in other places where many people are Christians of one kind called Catholics.

Many people in these places think like this: “It happened because God wanted it to happen”.

[BLOOD ON THE “HOST”]

At some time during a Eucharist it is often like this:

The people there can see, in someone’s hands, some small things of one kind called hosts.

They can know that people can eat these hosts, that they are like bread of one kind.

They can know that before people eat them, someone says about them: “The body of Christ”

Sometimes in some places, as in Tixtla, people can see something like blood on one of these hosts.

When this happens, people in this place can think like this:

“Jesus is saying something to us here, he is saying this:

‘I am here. I live.’”

They can think:

“During a Eucharist, we have often heard the words:

‘This is my body’. ‘This is my blood’.

Perhaps we have thought sometimes: 'Is it true?'

Jesus says to us here: 'I say to you: it is true. I want you to know it.'

At the same time, they can think: "Jesus wants to say more to us, he wants to say this:

'I love you, I love all people. I love all people very very much. I died on the cross because of it.

Before I died, I felt something very very bad in my body; in my hands, in my feet, in my heart.'

[A VERY SMALL PART OF A HUMAN HEART INSIDE THE HOST]

We can know that after people saw the blood on a host in Tixtla, something like this happened:

Some scientists, in four countries, looked at this host with something called a "microscope".

They did many other things to it as scientists do. After some time, they all said the same:

"There is a very small part of a human heart there. Before, it was part of someone's body". They said:

"I don't know how it can be like this. I know this: this someone felt something very bad in their heart.

I can know it because I can know that many very small parts ["cells"] in this someone's heart broke.

At the same time, I can know that this small part of someone's heart is like a part of a living body.

[They said: "a living tissue".] I don't know how it can be like this."

We can know that in all the other places where scientists looked at such a host they said the same.

[HOW CHRISTIANS CAN THINK ABOUT IT]

For many centuries Christian saints spoke about Jesus' heart, they called it "the Sacred Heart of Jesus".

They said: "Jesus lives; he loves us; he loves us very very much; he wants us to love him".

They said: "When people don't love him, he feels something in his heart because of it".

Christians can think now: "the blood on the host is Jesus' blood, the heart is his heart".

Christians can know what happened after Jesus died; they can know that it was like this:

Two days after he died, the Apostles saw him, he wanted them to see him, to know that he lives.

One of them, Thomas, was not with the others. They said to him: "Jesus lives, we have seen him".

Thomas thought then: "this can't be true".

Christians can think: "Jesus wants us not to think like Thomas". They can think:

"Jesus wants us to know that he lives, like someone lives when their heart is beating.

He wants us to know that he loves us. He wants us to love him, to love God, to love other people".

8 Concluding Remarks

From a Christian point of view, Eucharistic miracles can be understood as signs endowed with meaning. From a semantic point of view, the meaning of these signs can be explicated like the meaning of other signs, verbal or non-verbal. Like any other signs, these signs too can be explained in Minimal English (or any other Minimal Languages), in a way which can make the meaning transparent to anyone.

The key elements of these events are, first, the inexplicable appearance of something looking like blood, on a Eucharist host (a piece of Eucharist bread), during or after a Catholic Eucharist (called "Mass" by Catholics); second, an equally inexplicable presence of human heart tissue within the host, detected by scientists under a microscope; and third, the fact – perhaps most baffling of all – that when subjected to tests, the heart tissue in the host turns out to behave like a living tissue, i.e. like tissue in a living body.

Whose blood and whose heart tissue are they? From a believer's point of view the answer seems clear: it must be Jesus' blood and Jesus's heart tissue. From a non-believer's point of view the answer can only be: it is a total puzzle. (Unless, of course, it is regarded as an inexplicable fraud, even though scientists cannot see now how such a fraud could be produced.)

What is the meaning of these events? From a non-believer's point of view there is no meaning. From a believer's point of view, on the other hand, the event is a sign in which someone – Jesus – is conveying a message to the people present. When explicated through Minimal English, the core of this message is this: "I say to you: it is true, I want you to know it", a message applying to the words which, (according to the Gospels) Jesus actually said and which are repeated at every Eucharist: "this is my body", "this is my blood". This message can be readily expressed in universal human words.

In a more expanded form, this message can be seen as a response to the doubt of Christians themselves, perhaps in particular Catholics, whose faith in the real presence of Jesus in the Eucharist, has been (as already noted) steadily falling.

From a Christian, or specifically Catholic point of view, the message is not something like: “You’ve got to believe now”, or in Minimal English, “You can’t think like this anymore: ‘perhaps it is not true’”. Rather, it is, I think, framed like this: “I say to you: it is true, I want you to know it.” This can be read as a loving appeal, consistent with the hidden presence of living heart tissue in the host, invisible to the naked eyes of the congregations but under the microscope visible to the eye of a modern day sceptic who wants to know “what scientists say”. There is no intention here to present these miracles as “proofs”, or as signs which carry in them incontestable evidence. As Dr Serafini says at the end of his book, “These miracles are restrained. They (...) do not mean to crash the necessary but fragile treasure of our personal faith under the weight of overpowering displays. The Eucharist ultimately wants to be believed.” (2021: 277)

This resonates with what many Christian writers have said about the “style” of Jesus of Nazareth as we know him from the Gospels. To quote the Orthodox Russian priest Father Alexander Men’ (regarded by many as a Christian martyr): “He [Jesus] did not go about the earth conquering people with His obvious power. (...) If the Messiah appeared ‘in glory’, if no one could have denied Him, that would have been compulsion. But Christ taught differently. ‘And ye shall know the truth, and the truth shall make you free.’” (*Son of Man*, 1998: 127)

Thus, the final block in the explication is introduced with the sentence: “Christians can think like this”. The interpretation of the phenomenon of Eucharistic miracle presented in this paper seeks to explain the Christian perspective. I believe that here as elsewhere, the use of NSM and Minimal English as analytical tools leads to a greater clarity and increases understanding.

One last point: from a Christian believer’s point of view, what is the ultimate purpose of these miracles? Assuming that they are read as signs, and the meaning of these signs is, as I have suggested, “I say to you: it is true, I want you to know it”, why is it important for the “Signer” to convey this message at the outset of the third millennium in this particular way, through the traumatised heart tissue hidden in the Eucharist bread and visible only under a microscope?

Presumably, from a Christian’s point of view, it is not just the vindication of Jesus’ message as true, but his ongoing offer of himself as “the bread of life”, an offer made through concrete symbols, which can be understood everywhere in the world: blood, heart, bread.

Such concrete symbols can be seen as complementary in relation to the abstract nouns which appear in some of Jesus' key sayings, such as "I am the way, the truth, and the life" (John 14:6), or "I am the resurrection and the life" (John 11:25). Jesus belonged to a highly literate culture, with a long tradition of abstract thought, and he did not always avoid abstract nouns (which, surprising as it may seem, are not available in all languages, cf. Goddard and Wierzbicka, 2014, chapter 9). At the same time, he relied, to a very high degree, on concrete symbols and metaphors of a kind that can be understood anywhere, such as words for body parts, living creatures (e.g. fish, birds) or parts of plants (e.g. seeds, roots, branches).

The concepts of blood and heart may be culturally elaborated in different ways by different human groups, but they are anchored in some realities and experiences that all people share. Bread and wine may not be eaten and drunk in all parts of the world, but they are anchored in universal human practices of eating and drinking.

In this connection, it is important to note that the centuries-long Christian (and especially Catholic) devotion to the heart of Jesus relies on the symbols which find their echo in what twenty-first century scientists have found over the past two decades under the microscope when they investigated Eucharistic miracles. The "Sacred Heart of Jesus" has been traditionally depicted in images involving blood and thorns, as well as the heart, and also spoken of as a "Beating Heart", that is, a living and feeling heart (not just an abstract symbol of emotions, but a physical heart, whose heartbeat one can hear and feel).

Historically, such symbols have their roots in the visions of saints and mystics, as reported by St Lutgard, St Mechtilde and St Gertrud the Great in the 13th century, St Margaret Mary (17th century), St Catherine Labouré (19th century) and others. The semiotics of these symbols deserves a careful and fine-grained semantic study.

The key verbs and verbal phrases which are needed to explicate the meanings of such symbols ("to live", "to die", "to feel something very very bad" and "to break") correspond, for the most part, to those that scientists need to describe and interpret what they find in their investigations of events such as that in Tixtla: "living (tissue)", "traumatised (heart)", "fragmentation (of cells)", "death". Except, of course, the verb "to love", which is a key to a Christian tradition of interpreting both the visions of the saints over the centuries, and the meaning of Eucharistic miracles in the past and at the present time.

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