# "An Abstract Model of Conjecturality"\*: Prolegomenon to an Understanding of Labyrinths and Mazes as Metaphors

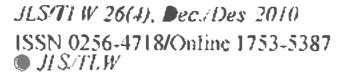
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#### **Summary**

This article addresses some of the problems of meaning that arise when authors use labyrinths – and mazes, too, although to a lesser extent – as metaphors. To this end, it explores the considerable corpus of information prerequisite for a fuller understanding of the metaphorical potential of labyrinths and mazes. An absence of a terminology to distinguish labyrinths from mazes contributes further to the problem as does the manner in which labyrinths and mazes are defined in dictionaries and other reference works, leading to the erroneous assumption that the words "laby rinth" and "maze" are synonyms. The way in which authors are inclined to assume that there is only one essential form of labyrinth, when, in fact, there are several, aggravates the problem just as much as the assumption that the words "labyrinth" and "maze" are synonyms. Unravelling these issues is important because they affect the meaning and understanding readers derive from the authors' use of such metaphors.

## **Opsomming**

Hierdie artikel spreek sommige van die probleme aan wat ontstaan wanneer outeurs die woord "labirint" – asook "doolhof", alhoewel laasgenoemde tot 'n mindere mate – as metafoor gebruik. Met hierdie doel ondersoek die artikel die aansienlike korpus van inligting wat 'n voorvereiste is vir 'n wyer begrip van die labirint en die doolhof se metaforiese potensiaal. Die afwesigheid van terminologie – wat noodsaaklik is om tussen die labirint en die doolhof te onderskei – dra verder by tot die probleem sowel as tot die wyse waarop "labirint" en "doolhof" in woordeboeke en ander naslaanwerke omskryf word. Hierdie omskrywings lei tot 'n wanbegrip dat die onderskeie woorde sinsverwante begrippe is. Die wyse waarop outeurs geneig is om die aanname te maak dat daar slegs een essensiële labirintvorm is, terwyl daar verskeie vorme bestaan, vererger die probleem in dieselfde opsig as die aanname dat die woorde "labirint" en "doolhof" sinsverwant is. Dit is dus belangrik dat hierdie kwessies uitge-klaar word omdat dit die betekenis en begrip wat lesers van die outeur se gebruik van sodanige metafore aflei, beïnvloed.







#### Introduction

"The female heart," Carlos Ruiz Zafón writes, "is a labyrinth of subtleties" (2005: 135). The present exploration of labyrinths and mazes as metaphors aligns the article with the theme of this conference, "Worlds in Dialogue", for the ancient symbol of the labyrinth and the mediaeval symbol of the maze are engaged in an exploratory dialogue, first, with the imprecision of meaning manifest in the way they have been defined and (mis)understood, and, secondly, with their potential as metaphors for the modern world.

While it is tempting to discuss the ramifications and consequences of Zafón's delicious assertion, it is not my purpose here. Instead, I present this metaphor as an epitome of the problem this article seeks to explore. In broad terms, we want to know precisely what and how the metaphor means. So we begin with some preliminary questions: Which particular sort of labyrinth did the author have in mind when creating that metaphor? In what ways is Zafón's model of a labyrinth congruent with the readers' own knowledge or experience of labyrinths? What information about mazes and labyrinths should readers possess in order to understand some of the possible meanings of the metaphor? In other words, what information do readers require in order to ascertain whether they share sufficient commonality of experience (or lack of it) with the author to allow him to create a comprehensible (or incomprehensible) metaphor for his readers? (Clearly, readers with no experience or knowledge of labyrinths will be unable to make sense of the metaphor.) These questions are equally pertinent to all metaphors employing labyrinths and mazes. However, seeking answers to these questions takes us directly into a maze of etymology, synonymity, and definition.

# S(E)Y(T)N(Y)O(M)N(O)Y(L)M(O)I(G)T(Y)Y: Into the Maze of Etymology and Synonymity

The myriad writings about, and references to, labyrinths and mazes belie the uncertainties of meanings lying just below even their denotative surfaces.

For example, this is Pennick's opening sentence: "The maze or labyrinth is perhaps the most complex of all the symbols which have been used by human beings" (1994: 13), the singular verb suggesting that the two entities may be understood as synonyms. As we shall see shortly, when we discuss the problem of synonymity, writers such as Matthews (1922) and Doob (1990) regard the terms as interchangeable.

Doob (1990: 97) does, however, present readers with the ingenious etymology of mediaeval scholars. They take the word "laborinthus" which, she informs us, is "the common medieval spelling" and divide it into "labor" and "intus", the former meaning (as a verb) "fall, or perish, or err, or go wrong within (or while going in)" and (as a noun) "hardship, or fatigue, or exertion, or application to work inside' emphasizes the idea of difficult

process, whether the anticipated outcome is success or failure". The word "intus" means "inside" or "within" (Kidd 1960: 179). Doob continues: "Etymologically speaking, then, the labyrinth is a process involving internal difficulty (or error, or artistry, or fatiguing effort); and what happens inside is more important than whether it is hard to get in or out".

Becker (1994: 170) notes that "[r]esearch on labyrinths was long made difficult by the fact that people did not clearly distinguish between the prison given its name by Minotaurus ... which is three-dimensional, and the older forms of labyrinths, which are flat (two-dimensional) constructions". (Of course, Becker is not correct in asserting that it was the Minotaur that named the labyrinth.) These uncertainties may be traced, at least in part, to matters of etymology or to an absence of apposite terminology. In some languages, as we are about to see, no words exist to distinguish between maze and labyrinth as constructs. This leads to the assumption that the terms are, de facto, synonyms, an assumption that creates difficulties for the definitional process itself.

In his magisterial book, Kern has the following to say:

The etymology of the term "labyrinth" remains unexplained today despite numerous attempts to trace it. The equation that is cited most often, "labyrinthos" = house of the double-headed axe (labrys) = palace of Knossos on Crete," has proven untenable for a multitude of reasons. All we can be certain of is that the suffix "-inthos" was usually employed in place in a language that the Greeks encountered upon migration (ca. 2000 BCE). At the very least, this suffix could be an indication of how long the word has been in use. An analysis of the rest of the word leads one to assume, with some reservations, that it is associated, somewhat mysteriously, with "stone".

(Kern 2000: 25)

This is all the more mysterious considering that the Greek word for "stone" is *lithos* ( $\lambda i\theta o \Box$ ) (hence lithography).

Because we cannot be sure of the etymological origins of the word "labyrinth", Berk (2005) is correct in noting: "Etymology is little help for the word's history is still in dispute". And we still have to agree on precisely what the word defines. For example, Brewer's Dictionary of Phrase & Fable (2001: 654) informs us that "labyrinth" is "[a] Greek word of unknown (but probably Egyptian) origin". This argument is detailed further in Matthews:

Down to a few decades ago [that is, prior to 1922] we were content with the bald statement of most dictionaries that it was probably correlated with the word *laura*, meaning a passage or mine, though there was also a suggestion that it might be of Egyptian origin, viz. that it was derived from the name of Labaris (= Senusret III).

(Matthews 1922: 175)

The Cambridge Ancient History (Edwards, Gadd, Hammond & Sollberger 1975: 884) states that it is "a non-Greek word", although the authors, perhaps wisely, avoid making any suggestions or speculations about its etymological evolution. But this reluctance should not surprise us; it could be a taxing undertaking, not least because, as Fernand Braudel says, "[t]he Greek language ... inherited a considerable number of local borrowings":

Place names and personal names tell us this quite forcefully: the names of cities as famous as Corinth, Tiryns or Athens, the very name of Mount Parnassus, above the oracle at Delphi, in the very heart of Hellenic civilization, "the navel of the world" – are not Greek in origin. Neither – sad to say! – are the names of Homeric heroes such as Achilles and Ulysses/Odysseus, or the Cretan names of the arbiters of the underworld, Minos and Rhadamanthus, or of the queen of those dark regions, Persephone.

(Braudel 2001:120)

Sarah P. Morris (1992: 180-181) concurs, with this example: "[t]he names of both Minos and Rhadamanthus have been associated with Egyptian etymologies", although she notes that such etymologies have been "disputed".

Kykkotis's *English-Greek/Greek-English Dictionary* (1965) compounds the labyrinth/maze confusion. The Greek word for "labyrinth" is λαβύρίυθος (1965: 148). The Greek word for "maze" is also λαβύρίυθος (1965: 166). The same confusion persists in Latin, in which "labyrinthus" means both "maze" and "labyrinth" (Kidd 1960: 516, 529), as well as in German, in which "das Labyrinth" defines both labyrinths and mazes (*Oxford-Duden* 1999: 1272, 1312).

In other European languages, too, confusion abounds. In Spanish, for example, the words, "dedalo" and "laberinto", each defines both constructs while French compounds the problem in a somewhat different way. The term "labyrinthe" is the general term for "labyrinth", although the word "dédale" is also used. For the word "maze", however, the French appear to use three words: the two just mentioned plus "méandre". Indeed, the etymological origin of the English word "meander", the Shorter Oxford English Dictionary (2007) informs us, may be traced through the French méandre which is derived from the Latin maeander and the Greek maiandros, the respective languages' names for a winding river in Phrygia (now part of modern Turkey). Again, no mention is made of earlier etymological speculation.

Considering the word "meander" (as a noun), its meanings include:

Any of the curves or bends in the course of a winding river etc.; any of the crooked or winding paths of a maze or passages of a labyrinth; a convolution

#### 2 A labyrinth, a maze

If "meander" is the definition attributable to the convoluted passageways within three-dimensional labyrinths, then we can assume the meander may be read as an integral component of such labyrinths, for reasons which will be demonstrated shortly. And we cannot fail to notice the presumed synonymity of "labyrinth" and "maze" in the second definition, where they are simply clumped together. This, in turn, means that the words "labyrinth", "maze", and "meander" become synonyms. Although this situation is singularly inconvenient as far as achieving definitional clarity goes, it is not altogether surprising, once we discover that one of the Greek words for "meander" (Kykkotis 1965: 166) is, perhaps not surprisingly at this stage, λαβύρίνθος.

Further definitions of the meander in the Shorter Oxford English Dictionary include:

- 3 A circuitous journey or movement; a deviation
- An ornamental pattern of lines winding in and out with rectangular turnings, or crossing one another at right angles

While the circuitousness depicted in the third definition evokes labyrinths as designs, while amply describing the winding way to the centre, it is the fourth definition that is of particular relevance here. Consider a double meander, then "[p]in down one end of the double meander and swing the top corners through 180 degrees in both directions and the labyrinth is formed, as if by magic" (Saward 2003: 23), as shown in Figure 1. Thus, the meander may be construed as both the initial stage of these labyrinths as well as an integral part of them. In presenting a horizontal version of Figure 1, Pennick (1994: 17) labels the labyrinth-from-meander process as a "derivation" of the former from the latter.



Figure 1: How the double meander becomes a labyrinth

Continuing the search for clarification, we find the Shorter Oxford English Dictionary tracing the origins of "daedal" (as a noun) to the name of Daedalus but noting that that use is now rare. That rarity notwithstanding, the word defines not only the skills or ingenuity of the wily artificer but also both a maze and a labyrinth. It is reasonable to speculate, then, that this general lack of separate terms for the two constructs is one possible source of the problem of synonymity.

If the non-existence of separate terms for distinguishing labyrinths from mazes constitutes the first problem, the second resides in their presumed synonymity, a problem created and/or aggravated by the ways in which writers use the terms "labyrinth" and "maze" interchangeably as if they were synonyms. To some extent, this is to be expected. Some reference works also contribute to the matter. For example, in the Penguin Dictionary of English Synonyms and Antonyms, synonyms for the word "labyrinthine" include "mazelike" and "mazy" ([1986]1992: 253) while the list of synonyms for the word "maze" begins with "labyrinth" (p. 271). Adjectives synonymous with "labyrinthine" are circuitous, tortuous, involved, intricate, complex, complicated, convoluted, tangled, knotty, confused, confusing, perplexing, puzzling ([1986]1992: 252; my italics). Nouns synonymous with "maze" include network, tangle, web, confusion, perplexity, bewilderment, complexity, intricacy (p. 271; my italics). The italicised overlap in meanings offers more evidence of the synonymity problem. In addition, we note how many of the synonyms do not describe the labyrinth or maze as designs or structures (what they are) but focus rather on how they function or what effect they create.

The vexations of synonymity are further aggravated by the existence of a profusion of models that bring with them a multiplicity of figurative meanings. There are several hundred classical designs of labyrinths (Matthews 1922: 201) and numerous mediaeval designs (Saward 2003: 81-117), to say nothing of a multitude of maze patterns, ancient and modern (Saward 2002: 38-77, 80). However, the general tendency is to group these disparate designs together under a single generic label. Our immediate task, therefore, is to attempt to identify and distinguish the salient features of labyrinths and mazes, and to separate out those features unique to each. The easiest approach is to accept Saward's distinction (2002: 8): "To qualify as a maze, a design must have choices in the pathway"; "To qualify as a labyrinth, a design should have but one path". If this were the general rule, then one would have to note that the Labyrinth at Knossos should be classified as a maze.

However, Saward then continues:

Of course, as in life, nothing is quite this simple. The dividing line between what constitutes a maze or labyrinth can sometimes become blurred and difficult to define. By and large, the differences are clear for all to see, even though occasionally a labyrinth can have more than one pathway and a maze can lead nowhere but to its goal.

(Saward 2002: 8)

Seeking to explain one possible source of confusion, Kern (2000: 23) writes: "In modern literature, the labyrinth is frequently confused with other graphic forms. The term 'labyrinth' is often incorrectly used to describe, among other things, spirals, meanders, and concentric circles, which usually

have nothing more in common with labyrinths than being linear configurations and somewhat confusing". Of course, this statement may not be entirely accurate, given that we have just seen (in Figure 1) the manner in which the double meander may evolve into a labyrinth. And one might wish to challenge Kern's assertion that concentric circles could be "somewhat confusing".

Later in his book, when dealing with church labyrinths, Kern has the following to say:

The labyrinth at Amiens [Cathedral] was styled the "house of Daedalus" in a document dating from the 14th century. By giving it that name, the cathedral architects, who had themselves immortalised in the labyrinth, are likened to Daedalus, the father of all architects. It is significant that French medieval garden labyrinths went by the same name, suggesting that they not only shared the same name and area of dissemination as church labyrinths but were also very similar in shape and content.

(Kern 2000: 148)

The use of "La maison Daedalus" as an identification of both the mediaeval church labyrinth and a garden labyrinth contributes more to confusion than to clarification.

The immortalisation of the architects of Amiens takes the form of "an octagonal medallion surrounded by an inscription that tells of the construction of the church" (Wright 2001: 59). Wright goes on to explain that effigies of these four individuals were placed in the central medallion (p. 60).

Of all the cathedrals, labyrinths, Chartres is probably the most famous. According to the anonymous author (Crystalinks 2010), "the labyrinth of Chartres has been referred to by four different names", several of which have been touched on already:

Le dedale – or Daedalus: the legendary architect who built a labyrinth for King Minos of Crete. Just as Theseus struggled against the Minotaur, so man struggles against evil, and is guided back out through the maze by Ariadne or divine grace. The labyrinth of Chartres, however, is not a complex maze but a single path with no hidden corners or dead-ends.

La lieue – league: which is a distance of about three miles. Although the length of the path is only 260 meters, in the Middle Ages some pilgrims would walk the labyrinth on their knees. This exercise would take about an hour, or the time needed to walk three miles.

Le chemin de Jerusalem - The Road to Jerusalem: By walking the labyrinth, the faithful could make a substitute pilgrimage to the Holy Land, and be united in spirit with the Crusaders. To make a pilgrimage to a sacred place such as the Holy City is part of an ancient and ongoing tradition of spiritual commitment. When long distance traveling became too dangerous during the upheavals of the Middle Ages, the cathedral labyrinths were

#### "AN ABSTRACT MODEL OF CONJECTURALITY": ...

installed and established as alternative destinations for pilgrimage. Pilgrimage is both a communal event and a private act of transformation. Walking the labyrinth with others reminds us that we are all on the path together, each in our own unique way.

Le chemin du paradis – Road to Paradise – the heavenly Jerusalem: By walking the labyrinth, the faithful trace the path of our long and laborious life on earth, beginning with birth, at the entrance, and ending with death, at the center. The way out symbolizes purgatory and resurrection.

(Crystalinks 2010)

It would seem from the first name that some confusion could well have arisen as a consequence of the daedal's two definitions (Shorter Oxford Dictionary): "1. a skilful or ingenious artificer like Daedalus" and "2. a maze, a labyrinth". Again, we note the use of one term to identify two different entities.

In an attempt to ascertain where Saward's dividing line might be, we shall begin by deconstructing a number of definitions of labyrinths and mazes. While doing so, we should bear in mind that, more often than not, dictionaries are records of where, and to what extent, we *disagree*, rather than agree, about a word's meaning.

# Λαβύρίυθος [*Laburinthos*]: Across the Threshold of Definition

According to the Concise Oxford Dictionary, a "labyrinth" is

[a] complicated irregular structure with many passages hard to find a way through or about without guidance, a maze; intricate or tortuous arrangement.

(1982:558)

This scarcely matches Saward's idea of a single pathway. Indeed, the complexity and multiplicity of the three-dimensional labyrinth's corridors were designed as deterrents to easy exit, deterrents exacerbated by deliberate "intricacy", tortuousness, and irregularity, making fluid progress through the structure unpredictable. However, the word "guidance" does suggest that the convolutions of the labyrinth could be mastered with time.

The implications of this definition, its symbolic meanings and metaphorical potential, cannot be overlooked. Consider the word "structure" which presumes three-dimensionality. It contrasts with the idea of an "area" within which the two-dimensional labyrinth is contextualised. The "complicated" and "irregular" manner of the building's construction, to say nothing of its intricacy and tortuousness, is intended to bewilder and deceive those moving within its confines so as to disorientate them, leaving them powerless, uncertain, frustrated, even terrified by movement or stasis. Hence the literal and metaphorical relevance of the words "tortuous arrangement".

#### JLS/TLW

The Shorter Oxford English Dictionary's entry for "labyrinth" reads:

labyrinth /lab(ə)r□nθ/ noun.
[ORIGIN French labyrinthe or Latin labyrinthus from Greek laburinthos of unkn. origin.]

1 A structure consisting of a complex network of tunnels, paths, etc., through which it is difficult to find one's way, a maze; spec. (the Labyrinth) in Greek Mythology, the maze constructed by Daedalus to contain the Minotaur. b A maze formed by paths bordered by high hedges, usu. as a feature in a garden.

In acknowledging the "unknown origin" of the word, the definition corroborates the information presented earlier. While this is the first definition to mention Daedalus, its reputed builder, and the Minotaur, its fated inhabitant, it is far from the first to use the word "maze" as part of its definitional function. In section (b), the confusion of synonymity is perpetrated by the assertion that a labyrinth is a hedge maze. This seems strange when definitions of, and distinctions between, hedge and turf mazes already exist (Matthews 1922: 92-146). The subterranean nature of part, if not all, of the labyrinth's structure is established by the word "tunnel".

One wonders whether another definition of the word "labyrinth" might help our search for clarity and specificity. In this instance, it is "the name given to buildings, entirely or partly subterranean, containing a number of chambers and intricate passages, which render egress difficult" (*Encyclopaedia Britannica* 1970: 13: 567). There are a number of reasons why this definition is important. First, we learn that a labyrinth comprises "buildings", a feature totally absent in the flat, unicursal pathways that are ubiquitous in contemporary health spas and wellness centres. Secondly, these buildings consist of rooms and complex passageways that make exiting difficult. This suggests that some sort of "insider" knowledge is a prerequisite to being able to negotiate one's way through such structures. Thirdly, and of primary significance, we learn that some portions of these buildings are partly or wholly below ground level, another characteristic not manifest by unicursal designs.

Many of these identifying features are reiterated by E.C. Brewer, who offers a characteristically confused or confusing definition: "labyrinth ... a mass of buildings or garden walks, so complicated as to puzzle strangers to extricate themselves; a maze. The maze at Hampton Court, formed of high hedges, is a labyrinth on a small scale" (2001: 654). Of course, we cannot avoid noticing the intrusion, yet again, of "garden walks" or the word "maze" into the definition, to say nothing of the assertion that the Hampton Court Maze is a de facto labyrinth. We notice, too, the deftness with which "a mass of buildings" and "garden walks" are brought together as if they

shared multiple similarities when, in essence, they manifest more differences.

Writing some eighty years ago in his classic text *Mazes and Labyrinths*, Matthews entrenches the synonymity problem with a glib dismissal:

What is the difference, it may be asked, between a *maze* and a *labyrinth*? The answer is, little or none. Some writers seem to prefer to apply the word "maze" to hedge-mazes only, using the word "labyrinth" to denote the structures described by the writers of antiquity, or as a general term for any confusing arrangement of paths. Others, again, show a tendency to restrict the application of the term "maze" to cases in which the idea of a puzzle is involved.

(Matthews 1922: 1-2)

A little later, he asserts, "generally speaking, we may use the words interchangeably, regarding 'maze' as merely the northern equivalent of the classic 'labyrinth'" (1922: 2).

This assumption of synonymity carries through into recent scholarship, too. In her book, *The Idea of the Labyrinth from Classical Antiquity through the Middle Ages*, Penelope Reed Doob (1990: 1) writes that "the words [labyrinth and maze] have different etymologies but mean the same thing". It is instructive but, at the same time, regrettable to note that neither she nor Matthews before her chooses to trace those "different" etymologies.

Finally, in our quest for a definition devoid of bewilderment or outright confusion, we find Jeff Saward, one of the foremost authorities on labyrinths and mazes, noting that the literal meaning of the Greek word laburinthos is "a structure of large stones" or "big stone house" (2003: 20). This idea may be traced to Kern's argument (2000: 25) that "labor" may be traced, "somewhat mysteriously", to "stone". Three-dimensionality recurs, together with the concomitant possibility of becoming lost within it. So one has to ask: Is this the Palace at Knossos, its entire structure being described as a labyrinth? If so, then exactly what did Daedalus build for King Minos and where?

Since our exploration of definitions has not been entirely helpful, let us propose, instead, that we characterise labyrinths either as *designs* or as *structures*. In doing so, one is more than aware of the hazards and short-comings inherent in alternative forms of classification.

## Labyrinths as Designs

As designs, labyrinths may be characterised as follows:

- Two-dimensional
- Delineated on surface

- Unicursal: a single uninterrupted path
- The way in and the way out are one and the same physically
- Easy to enter and exit
- Can be temporary, even ephemeral
- Movable
- Extremely common
- Easily constructed
- Relatively inexpensive
- Day-to-day materials

Labyrinths as *designs* are *delineated* on a surface. They have been scratched, drawn, incised, dug, painted, or outlined (with stones, bricks, ropes, cement, pieces of wood, masking tape, chalk, paint, cacti, bamboo canes and paper, shoes, or even plastic eating utensils (Buchanan 2007; Rainbow-Labyrinths 2008; Renssen 2005; Saward 2002; Saward 2003). They are imprinted, whether temporarily or permanently, on a surface of some kind. Obviously, such surfaces are almost limitless in number, but would certainly include earth, sand, turf, rock, canvas, wood, gravel, marble, paper, walls, floors, and roof bosses, amongst others. One recognises immediately the complex metaphorical potential of these materials and surfaces.

This is Kern's characterisation of the labyrinth's pathway:

The layout of the path can assume numerous forms, and constitutes a labyrinth only if the path is not intersected, that is, if it does not require the walker to make any choices, and if it

- folds back on itself, continually changing direction,
- fills the entire interior space by wending its way in the most circuitous fashion possible,
- repeatedly leads the visitor past the center,
- inevitably ends at the center, and
- is the only way back to the entrance.

(Kern 2003: 23)

It is to "this *labyrinth* type, the labyrinth in its true and original sense" (2000: 23) that Kern devotes his entire pioneering book.

Other designs have been rather more ephemeral. Chris Parsons, for example, brushed a labyrinth design into the overnight dew. In the morning sun, the labyrinth evaporated, its existence perpetuated only in a photograph (Saward 2002: 139). Jim Buchanan has not only created ephemeral labyrinths, using projected light (2007: 56-62), but has also dug a temporary one into Irvine beach at low tide; in the course of the day, as the tide rose, the labyrinth was gradually washed away.

Delineated labyrinths consist of two major patterns: the classical and the mediaeval. Both display a single, unicursal path leading, unimpeded, to the centre – and nowhere else. In other words, "there is no possibility of going astray" (Kern 2000: 23) on a delineated labyrinth. Exiting the labyrinth is achieved simply by following the same path from the centre outwards. While the classical design most commonly reveals the so-called seven-path design, other designs have as few as three paths or as many as eleven.

Mediaeval labyrinths were embedded in the floors of various European churches and cathedrals. Although their designs were intended to be permanent, some have subsequently been defaced or entirely destroyed. These models are modifications and adaptations of the seven-path classical design (Saward 2003: 84), encompassing circular (Bayeux, Chartres), hexagonal (Amiens), square (Abbey of St Bertine), and ovoid (Poitiers) designs, amongst others (Matthews 1922: 54-70).

As we have already noted, the way in and the way out in delineated labyrinths are one and the same because of their unicursal pathways. However, some exceptions exist: Poitiers Cathedral, for example, has two entrances and exits (Matthews 1922: 64).

#### Labyrinths as Structures

Labyrinths as structures may be characterised as:

- Three-dimensional
- Constructed (partially below ground)
- Usually meandering, bewildering, multicursal
- Difficult/impossible to exit
- Permanent
- Immovable
- Rare
- Complex building process
- Extremely costly
- Building materials

Almost all the examples of labyrinths as structures belong to the ancient world when labour was readily and cheaply available. Pliny records four of them:

The Egyptian, of which a description is given by Herodotus and Strabo, was situated to the east of the Lake of Moeris, opposite the ancient site of Arsinoë or Crocodilopolis. According to Egyptologists, the word means "the temple at the entrance of the lake." According to Herodotus, the entire building, surrounded by a single wall, contained 12 courts and 3000 chambers, 1500 above and 1500 below ground. The roofs were wholly of

stone and the walls covered with sculpture .... In 1888 Flinders Petrie discovered its foundation, the extent of which is about 1000 ft. long by 800 ft. wide.

(Encyclopaedia Britannica 1970, 13: 567)

Brewster dates the Egyptian labyrinth from about 1800 BCE.

The Cretan, said to have been built by Daedalus on the plan of the Egyptian, is famous for its connection with the legend [not "myth", we note] of the Minotaur. It is doubtful whether it ever had any real existence. The older writers placed it near Knossos, and it is represented on coins, but nothing corresponding to it has been found during recent excavations, unless the royal palace was intended.

The Cretan palaces were constructed some two centuries before the Egyptian labyrinth: "The first palaces in Crete were built soon after the turn of the millennium [2000 BCE] .... The palaces stood for about 600 years. After their destruction in about 1400 B.C., they were not rebuilt" (Edwards et al. 1973: 141). The coins Brewer refers to were excavated between 300 BCE and 40 BCE, almost 1000 years or more after Knossos had been devastated by earthquakes. There is no reason to presume the labyrinths depicted on these coins represent the palace's (in)famous Labyrinth; their designs depict the classical and square labyrinth designs (Saward 2003: 44). It is useful to recall here that the Labyrinth at Knossos was created as a place of confinement, and comprised above-ground and below-ground levels. These features alone do not indicate that it cannot be classified as a unicursal design.

Kern is unequivocally forthright in the opening sentence of his chapter on "Ancient 'Labyrinths'" (2000: 57): "None of the buildings discussed here contained mazes, and only the tholos [a dome-shaped tomb, esp. of the Mycenaean period] in Epidaurus concealed labyrinthine passageways within its walls. He includes them in his book 'because they were characterized as labyrinths in antiquity, and, therefore, are invaluable in documenting the history of the labyrinth concept'". These structures feature in this article for the same reason.

Braudel offers an informative nuance to the periodisation just mentioned: "There were, broadly speaking, two generations of palaces: the first from 2000 to 1700 [BCE]; the second, from 1700 to 1400 [BCE] ... they were destroyed and rebuilt on the same site more than once".

- 3 The Lemnian was similar in construction to the Egyptian with 150 columns.
- The Italian was a highly intricate series of chambers in the lower part of the tomb of Porsena at Clusium. This tomb is said to be recognisable in the mound named Poggio Gajella, near Chiusi.

#### "AN ABSTRACT MODEL OF CONJECTURALITY": ...

Lastly, Pliny applies the word to a rude [in the sense of rough rather than vulgar] drawing on the ground or pavement.

(Braudel 2001: 113)

The last eight words of this extract constitute a rudimentary definition of the delineated labyrinth. In passing, we note that some writers, including Matthews, prefer to use the adjective "pavement", to my "delineated" when describing labyrinths as designs. I would argue that the use of "pavement" suggests that such designs are to be found in only a very limited environment, when the converse is more accurate.

E.C. Brewer, whose rather confusing definition of a labyrinth we encountered earlier, not only lists the structures already mentioned, but also adds the following:

- The Cretan conduit, which had 1000 branches or turnings
- The Samian, [designed] by Theodorus (540 BC)
- The labyrinth at Woodstock, built by Henry II to protect the Fair Rosamond

(Brewer 2001: 654)

To these lists, Kern (2000: 64) adds the Tholos of Epidaurus, Didyma where "two skilfully crafted staircases were erected" which "are repeatedly referred to as 'labyrinths'" in the extant building records, and the Labyrinth near Nauplia.

Almost all of the established features of labyrinths as structures are to be found, if only implicitly, in each entry of the first extract above. However, it is only in the first of these that the subterranean aspect of such labyrinths is stated overtly. Brewer refers to Rosamond's "fair bower" as a labyrinth, despite its also being defined elsewhere (Pullen n.d.) as a hedge maze. Henry II (c1133-1189) built a hunting lodge within which to hide Rosamond de Clifford (c1140 or 1150-c1176), his mistress, from his wife, Eleanor, Queen of Aquitaine. Then he surrounded the lodge with a labyrinth or maze. Eventually, according to legend, the Queen solved the puzzle (which suggests it was a maze, or, alternatively, that the creators of the legend did not know how to distinguish between labyrinth and maze and presumed, like many others, that they were synonymous), and offered Rosamond the choice of poison or a dagger with which to kill herself. Legend asserts that Rosamond drank the poison. However, more probable versions of the tale reject the suicide theory, saying she retired to a nunnery where she lived out the rest of her life. The lack of hard facts, together with the creative imagination of storytellers, serves to explain such variations.

For our present purposes, the importance of Rosamond's bower lies in its symbolic meaning. Initially, it is a place of hiding and deceit where the king may abandon his duties, monarchical and marital alike, to indulge in his passion. The bower also constitutes a place of safety for Rosamond, at first,

while it becomes a puzzle for the Queen to solve. Once Her Majesty has mastered the bower's complex pathways, it ceases to be a place of deception, passion, and safety instead becoming a place of danger to the now-vulnerable Rosamond. In entering the nunnery, Rosamond retreats from the deceit and her vulnerability into a sacred place of safety, one beyond the lascivious grasp of King Henry and the reputedly murderous intent of Queen Eleanor. Although the metaphorical meaning of the structure alters as circumstances and the maze's function change, its structural form remains constant. In this instance, form does not follow function.

Of the labyrinths recorded by Pliny and Brewster, the most famous is the Cretan, reputedly built by Daedalus. That no archaeological evidence of its existence has been found is hardly surprising, given the earthquake of 1700 BCE, which destroyed large portions of the Palace that were subsequently rebuilt, and the tremors that followed some three centuries later. The Cretan Labyrinth at Knossos remains the best known, largely as the setting for the myth of Daedalus and Icarus, as well as for the associated characters and events surrounding the Minotaur, Theseus and Ariadne. The myth has inspired artists and writers from classical times through to the present day, not least because of the enigma of its very existence and its powerful mythic associations.

This comparison between labyrinths as designs and as structures provides us with one more distinction: the size of the space occupied by each. Generally speaking, labyrinths as designs are substantially smaller than their structural counterparts, not only because of the latter's three-dimensionality but also because of the vast areas they subsumed. The measurements of the Egyptian Labyrinth's foundations, for example, suggest that it covered some 800 000 square feet (almost 75 000 square metres) and may have comprised more than one level.

While talking of size, mazes, too, tend to be larger generally than labyrinths as designs. Some of the so-called maize mazes (because they are cut into cornfields) cover as much as 12 hectares (Saward 2002: 58) so that their designs can be fully appreciated only from the air. As one might expect, there are also exceptions at the other extreme, including the floral maze and the dwarf-shrub maze which are small enough to fit into flower pots and to serve as garden edges (Matthews 1922: 100-109).

# Defining Mazes: Very Like a Labyrinth

The Concise Oxford Dictionary (1982: 627) defines a "maze" as a

complex network of paths and hedges designed as puzzle for those who try to penetrate it; a labyrinth.

(1982:627)

#### "AN ABSTRACT MODEL OF CONJECTURALITY": ...

Rather quaintly, the definition of a labyrinth relies on the word "maze", while the definition of a maze relies on the word "labyrinth". Defining each entity in terms of the other is, definitionally, singularly unhelpful, doing little more than perpetuate the belief that the two terms are synonymous.

More helpfully, the *Shorter Oxford English Dictionary*'s entry for "maze" manages to avoid the use of the actual word "labyrinth"; the fourth meaning reads:

A structure consisting of a network of winding and intercommunicating paths and passages arranged in bewildering complexity (freq. with a correct path concealed by blind alleys), esp. formed by hedges in a garden or represented on paper by a pattern of lines, and designed as a puzzle or as a device to study intelligence and learning. Also, a structure with a single winding path much greater in distance from beginning to end than the direct line.

However, the final sentence of this definition introduces a bewildering labyrinth-like image, evoking the two-dimensionality of the unicursal pathway (characteristic of labyrinths as designs) and the three-dimensionality characteristic of labyrinths as structures.

In a fifth definition, the maze is typified as

a. Any confusing or complex network, route, or mass. b. A winding movement, esp. in a dance.

The reference to "a dance" points readers to Ariadne's floor built by Daedalus (and recorded in the *Iliad*, XVIII.590-592)(1966: 391) as well as to the configurations of the so-called Geranos Dance, γερανός being the Greek word for crane (bird) (Kykkotis 1965: 56). The precise movements of this dance as well as their origins remain the topic of much speculation and concomitant debate. Kern devotes a section of Chapter II to "interpreting the Labyrinth Dance" (2000: 46-47). It is worth noting that this discussion abounds in words suggesting or conveying speculation, assumption, possibility, and generalisation.

Michael Ayrton argues that Ariadne's dancing floor was designed for an intricate dance "imitating the mating ceremony of either the crane (the most familiar version) or the partridge" (Nyenhuis 2003: 147). Ayrton then provides another version: "Eustathius of Thessalonika, writing about 1100 A.D. relates that Theseus learnt Ariadne's dance from Daedalus and danced it to represent his passage through the labyrinth to kill the Minotaur" (in Nyenhuis 2003: 147). Dance has long been an integral part of ceremonials and rituals, including those preceding a sacrifice or a killing.

Self-evidently from the various definitions we have considered, the very three-dimensionality of mazes precludes them from being two-dimensional

designs. (I am excluding here representations on paper.) Thus, as structures, some of their characteristic features may be catalogued thus:

- Three-dimensional
- Constructed (at ground level)
- Multicursal: meandering, bewildering
- May have multiple entrances and exits
- The way in and the way out may differ
- Arriving at the centre demands problem-solving skills, and may be very challenging
- Exit may be difficult
- Permanent (more recently, impermanent)
- Immovable (more recently, movable)
- Common
- Complex planting and growing process for hedge mazes
- Costly maintenance of hedges and pathways damaged mainly by "lost" walkers
- Built of various materials (more recently, wood, maize fields, mirrors, water jets forming barriers and "walls")

For obvious reasons, hedge mazes are always constructed at ground level as are their more recent non-hedge cousins, although the latter may have several levels. Comprising a "complex network of paths and hedges", some mazes have multiple entrances and exits.

Perhaps the best-known modern maze was designed by the English artist, Michael Ayrton, and built in 1966 on Armand G. Erpf's 500-acre private estate at Arkville in the Catskill Mountains. Instead of using hedges (or other plant materials), the basic structure consists of more than two hundred thousand bricks, and has two polished copper-lined "centres" or goals, one housing a large sculpture of Daedalus and Icarus, the other, an equally large sculpture of the Minotaur, both Ayrton's work.

A maze is an experiential puzzle that may or may not be solved only by entering it in search of its centre, one's arrival at which constitutes the first half of the solution to the puzzle. The second half consists of extricating oneself from the centre and exiting the maze. (Thus it shares the tripartite process – inward, centre, and outward – with delineated labyrinths but not their unicursal simplicity.) Mazes are intended as a challenge, primarily to the brain's left hemisphere. Their intention is not to confine maze-walkers within their intricacies but to frustrate easy access to the centre, while providing entertainment in the process.

Getting to the "centre" and being at the very heart of the puzzle both have profound metaphorical implications. At the threshold, one may enter the maze or choose not to. Once over the threshold, however, one is confronted

with a choice of pathways, each choice laden with its own particular consequences, whether for facilitating progress toward the centre or for obstructing one's progress there. An initial correct choice may be followed by one or more incorrect decisions and vice versa, neither with any sense of predictability. Maze-walking produces an erratic combination of movement and stasis as well as of uncertainty regarding one's position within the space of the maze itself and in relation to the centre. And there is no assurance that the centre will be reached. However, should we arrive at the centre, what are we meant to discover there? In what ways might our experience there be congruent with Daniel Keyes's words from his novel, Flowers for Algernon? "Although we know the end of the maze holds death (and it is something I have not always known - not long ago the adolescent in me thought death could happen only to other people), I see now that the path I choose through that maze makes me what I am" (1989: 155). If arriving at the centre provides similar insights for us, what experiences should we anticipate for the outward journey from the centre? What literal and metaphorical meanings could or should we attach to this journey?

# A Respite from Perambulation

Let us pause now to consider briefly some of the – perhaps obvious – general aspects and meanings of labyrinths that have the potential to serve as components of metaphors. Again, we revert to the design/structure dichotomy as context. Labyrinths as designs possess an unambiguous, unobstructed pathway, an inward process, a nominal centre (albeit one that is not necessarily at the geometric centre), which may be construed as either the halfway point of the journey or its ultimate destination, and an outward process. Together, these create a tripartite itinerary to which a variety of metaphoric labels have been, and can be, attached.

That said, we cannot ignore Matthews's caveat: "As to the actual origin and primary purpose of these devices we cannot be dogmatic on the evidence before us, and herein, perhaps, lies a good deal of their charm" (Matthews 1992: 5). In the case of classical labyrinths, the commonplace that form follows function aggravates the problem of meaning. With these labyrinths, whose original meanings (purpose or function) have been obscured or lost, it appears that function has been attributed to form *ex post facto* for a variety of reasons, a number of them spiritual. The attributed meaning depends on the form of labyrinth to which we are referring, the attribution process itself being a metaphorical one.

As I have noted elsewhere:

Walking a delineated labyrinth may be perceived as a tripartite process. In terms of motion, it may be expressed simplistically as Movement > Stasis > Movement, which is overlaid by an Inward > Centre > Outward directional

pattern. In 1909, writing about rites of passage (of which labyrinth walking may be seen as one), Van Gennop (in La Shure, 2010) proposed three phases for these processes: separation, liminal period, and reassimilation, phases corresponding to the motional and directional patterns just outlined. Numerous alternative symbolic "readings" of this tripartite process have also been proposed. Here are three examples.

Jaskolski's book, *The Labyrinth* (1997), is subtitled "Symbol of Fear, Rebirth, and Liberation". Here, we have three possibilities for understanding some of the meanings inherent in labyrinths both as designs and as structures, for Jaskolski incorporates both forms into the development of his book. Although he does not specifically articulate a tripartite process *per se*, the three predominant perspectives on labyrinths would, if conjoined, engender a tripartite model: Fear > Rebirth > Liberation. Corbett (http://www.gracecom.org/enrichment/features/fea\_19981120\_txt.shtml) suggests Purgation > Illumination > Union, while Artress (2000: 9) proposes Releasing, Receiving, and Returning as appropriate labels. As these exempla show, whatever functions are attributed to the delineated labyrinth, each part of the process is couched in distinctly religious diction.

(Ullyatt 2010: 12)

Despite their predominantly, but not exclusively, circular design, some mediaeval labyrinths are presumed to be symbolic replications of less congenial pilgrimages, bearing names such as "Chemin de Jérusalem" (The Road to Jerusalem) (Matthews 1922: 60; Kern 2000: 148; Saward 2003: 96). Such labyrinths are also reputed to have served various penitential purposes, with believers following the path to the centre on their knees while praying. However, this "is probably no more than a romantic antiquarian fantasy" (Saward 2003: 98). Whether fantasy or not, the centre of these labyrinths bore names such as "ciel" (heaven) or "Jérusalem" (Matthews 1922: 60), both desirable destinations for Christian pilgrims. When penitents had reached that centre, they had arrived at their destination, apparently. Consequently, their journey out of the labyrinth (and their return "home") seems to have been of lesser import, thus reinforcing the greater significance to the inner journey and the centre.

Labyrinths as structures are three-dimensional conglomerations of rooms and corridors built above, below, and at ground level, and are thus devoid of a single unifying pathway. The multiple layering of the Knossos Palace – in some places three floors deep; at others, five – adds an inevitable literal and symbolic darkness to those chambers below ground, characterising descent, evil, and hell, as well as threat, confusion, loss of direction, terror, the afterlife, and more.

The fact that the way in and the way out are one and the same in the threedimensional labyrinth adds a paradoxical dimension; "The labyrinth is simultaneously inextricable and impenetrable. Those inside cannot get out and those outside cannot get in" (Lamb 2008: 385). These obstacles to entry and exit establish several figurative dimensions to the labyrinth. It is a place of confinement, whether to protect the world from its inhabitant (as in the Minotaur's case) or whether to protect the inhabitant from the world (as in the case of Rosamond's bower). Thus, it acquires metaphorical overtones of both constraint and sanctuary. The labyrinth's inextricability makes it a place of imprisonment from which escape is extremely problematic, if not impossible. This inextricability also means that the labyrinth may become a place of death (literal or metaphorical), if its inhabitant is neglected or abandoned within its confines.

On the other hand, the labyrinth's impenetrability also means that the intervention of a possible saviour, whether Ariadne, Theseus or another, is made inordinately difficult, if not impossible. Further, combining inextricability and impenetrability means that the person wishing to get *in* remains imprisoned in the *outside* world while the person wishing to get *out* is imprisoned in the *inside* world. It is an exquisite double bind epitomising stasis.

Of course, if the combination of impenetrability and inextricability is regarded as an absolute rather than a relative condition, then some awkward logistical questions arise. For example, how was the Minotaur placed within the Labyrinth, and by whom? From this, the next question is: How did those escorting the Minotaur into the Labyrinth extricate themselves from it? Alternatively, were they, too, simply abandoned, destined to be the main course of its cannibalistic diet?

The relative approach allows more scope. The Labyrinth is impenetrable only to those who, for whatever reasons, have not mastered its complicated structure. Thus the partially bovine Minotaur – an obvious example of hybridity – would be unable to work out an escape route while the sacrificial Athenian youths and girls, being foreign newcomers to Crete, would have no knowledge of the Labyrinth's structure. However, as the Labyrinth's builder, the shrewdly cunning Daedalus would possess that crucial information, and would hence be able to pass it on to Ariadne, together with the clew of thread trick.

In parenthesis, one wonders why, in metaphors drawing on the Cretan myth, the Minotaur appears so rarely? The creature hardly lacks metaphorical potential, as Picasso's etching entitled "Minotauromachy" amply demonstrates.

Fortunately, no Minotaur awaits those attempting to achieve the centre of mazes, which are, in some ways, similar but not identical to the Knossos Labyrinth. They are three-dimensional structures (occasionally more than one storey high) embodying spatial puzzles designed to distract and disorient walkers from their goal of arriving at the centre. The terror of the maze lies not in what it houses or hides but in what individual uncertainty or anxiety it provokes. Its threat, then, is psychological rather than physical.

At this juncture, one might query the relevance of this vast welter of information about labyrinths and mazes apropos their use as metaphors. One response suggests that deciphering routes to the centre of a maze or three-

dimensional labyrinth becomes significantly easier if one has had a comprehensive understanding of the structures themselves. So the initial purpose of being able to draw on this substantial corpus of information is to perceive whether the ways in which authors use labyrinths and mazes to create metaphors correspond with, or deviate from, the various models. Secondly, we can assess the pertinence and/or effectiveness of the labyrinth or maze's metaphorical use and even its validity or appropriateness in context. Thirdly, if readers become more fully aware of the range of meanings inherent in the words "labyrinth" and "maze" (as well as their implications), their understanding of both the literal and symbolic meanings of any labyrinth- or maze-based trope will be enormously enriched. Readers will then come more fully equipped to interrogate these topoi with greater nuance and subtlety.

# Going Back to the Threshold

Nearing the exit of our serpentine route, we are, at last, in a position to begin interrogating the opening quotation from Zafón's novel: "The female heart is a labyrinth of subtleties". Does the author make it clear for the reader whether he is referring to the labyrinth as design or the labyrinth as structure? Is this structure of subtleties temporary or permanent? Is he, as a Spanish writer, assuming that "labyrinth" and "maze" are synonymous, especially if we understand the word "labyrinth" here to mean some sort of bewildering, multilayered complex of intersecting nuances? Is the Knossos Labyrinth the exemplar? How will we find our way through the dark subterranean chambers? Ought we to assume there is a symbolic Minotaur secreted somewhere within these subtle convolutions, some pathology exemplifying a bloodthirsty, cannibalistic aspect to the female heart? Or are we to assume that the subtle meandering but uninterrupted path of the labyrinth as design will allow us unhindered access to the centre of the female heart? If or when we arrive at the centre, what or who shall we find there? How precisely or comfortably do the complexities of the metaphor sit with the female characters in the novel? Is the metaphor an integral part of the storytelling, or is it no more than a generalisation in search of the reader's approbation? Could considered reflection on the metaphor turn out to be little more than a maze-like puzzle with an enigmatic centre?

A second quotation from Zafón's novel reads: "Womankind is an indecipherable maze" (2005: 195). To interrogate this assertion, we might begin by asking whether this "maze" is different and/or distinguishable from the earlier "labyrinth". Are they presumed to be synonyms, or does the author shy away entirely from the issue? We might enquire in what ways the "maze" becomes "indecipherable", and for whom. And, if it is "indecipherable", does it constitute an insoluble puzzle from which there is no

escape, or for which the centre remains perennially elusive? Is it futile to attempt to tackle the "maze" of womankind? If not, how does one find the entrance to this enigmatic maze in the first place? Or is the author simply proposing that womankind – however one understands that word – is simply incomprehensible, and anyone daring to enter that maze is doomed to failure? What are the obstacles, hindrances, and u-turns along the path, and by whom are they constructed? Does womankind constitute an indecipherable maze to women themselves? The number of questions these metaphors raise suggests that they are either profound, complex, multi-layered rhetorical tropes or somewhat dysfunctional metaphors. They could even be presenting the author's own experiences of bewilderment in the guise of universal truth. However they are viewed, the sort of detailed knowledge of mazes and labyrinths outlined above enables readers to seek answers for themselves.

Of course, as Ezra Pound points out in his usual blunt manner: "The reader's ambition may be mediocre, and the ambitions of no two readers will be identical. The teacher can only aim his instruction at those who most want to learn, but he can at any rate start them with an 'appetizer'" (1961: 35).

\* The title quotation is taken from Umberto Eco's Reflections on the Name of the Rose. 1985. London: Secker & Warburg, p. 57.

#### References

Anon.

2010 Labyrinths. Online: <a href="http://www.crystalinks.com/labyrinths.html">http://www.crystalinks.com/labyrinths.html</a>. 26 March 2010.

Artress, L.

2000 The Sand Labyrinth. Boston: Journey Editions.

Becker, U.

The Continuum Encyclopedia of Symbols. New York & London: Continuum. First published in German in 1992.

Berk, A.

The Dance of the Labyrinth. Online: <a href="http://www.endicott-studio.com/rdrm/rrLabyrinths.html">http://www.endicott-studio.com/rdrm/rrLabyrinths.html</a>>. 29 October 2009.

Braudel, F.

2001 Memory and the Mediterranean. New York: Knopf.

Brewer, E.C.

[1870]2001 The Wordsworth Dictionary of Phrase & Fable. Hertfordshire, England: Wordsworth Editions.

Buchanan, J.

2007 Labyrinths for the Spirit. London: Gaia.

Concise Oxford Dictionary

1982 Oxford: Oxford University Press.

#### JLS/TLW

Corbett, P.

2009 Pathfinders: Walking Medieval Labyrinths in a Modern World. Online: <a href="http://www.gracecom.org/enrichment/features-fea\_199811-20">http://www.gracecom.org/enrichment/features-fea\_199811-20</a> txt.shtml>. 5 July 2009.

Doob, P.R.

1990 The Idea of the Labyrinth from Classical Antiquity through the Middle Ages. Ithaca & London: Cornell University Press.

Eco, U.

2003 Mouse or Rat?: Translation as Negotiation. London: Weidenfeld & Nicholson.

Edwards, I.E.S., Gadd, C.J., Hammond, N.G.L. & Sollberger, E. (eds)

1973 The Cambridge Ancient History, Vol. II, Part 1. Cambridge: Cambridge University Press.

1975 The Cambridge Ancient History, Vol. II, Part 2B. Cambridge: Cambridge University Press.

Encyclopedia Britannica

1970 Vol. 13. London: Encyclopaedia Britannica, Inc.

Homer

[1951]1969 The Iliad, translated by Richmond Lattimore. Chicago & London: University of Chicago Press. 1951.

Jaskolski, H.

1997 The Labyrinth: Symbol of Fear, Rebirth, and Liberation. Boston & London: Shambhala.

Kern, H.

2000 Through the Labyrinth: Designs and Meanings over 5000 years. Munich/London/New York: Prestel.

Keyes, D.

1989 Flowers for Algernon. London: Heinemann.

Kidd, D.A.

1960 Collins Latin Gem Dictionary. London/Glasgow: Collins.

Kykkotis, L.

1965 English-Greek/Greek-English Dictionary. 2nd edition. London: Percy Lund Humphries.

Lamb, W.

2008 The Hour I First Believed. London: HarperCollins.

La Shure, C.

2010 "What is Liminality?" Online:

<a href="http://www.liminality.org/about/whatislimi-nality/">http://www.liminality.org/about/whatislimi-nality/</a>. 7 April 2010.

Matthews, W.H.

Mazes and Labyrinths: A General Account of their History and Development. London: Longmans, Green.

Morris, S.P.

Daidalos and the Origins of Greek Art. Princeton, New Jersey: Princeton University Press.

Nyenhuis, J.E.

2003 Myth and the Creative Process: Michael Ayrton and the Myth of Daedalus, the Maze Maker. Detroit: Wayne State University Press.

Oxford-Duden German-English/English-German Dictionary

1999 Oxford: Oxford University Press.

#### "AN ABSTRACT MODEL OF CONJECTURALITY": ...

Penguin Dictionary of English Synonyms and Antonyms

[1986]1992 London: Penguin.

Pennick, N.

[1990]1994 Mazes and Labyrinths. London: Robert Hale.

Pound, E.

1961 ABC of Reading. London: Faber.

Pullen, W.D.

n.d. Online: <a href="http://www/astrolog.org/labyrinth/Glossary.htm">http://www/astrolog.org/labyrinth/Glossary.htm</a>. 14 October 2009.

Rainbow-Labyrinths

n.d. Online: <a href="http://www.rainbow-labyrinths.co.za">http://www.rainbow-labyrinths.co.za</a>. 5 July 2009.

Renssen, M.

2005 Labyrinths & Mazes of South Africa. Gardenview, South Africa: Zytek.

Saward, J.

2002 Magical Paths: Labyrinths & Mazes in the 21st Century. London: Mitchell Beazley.

2003 Labyrinths and Mazes: The Definitive Guide to Ancient & Modern Traditions. London: Gaia.

Shorter Oxford English Dictionary

2007 6th edition. CD-ROM. Oxford: Oxford University Press.

Ullyatt, A.G.

2010 "Gestures of Approach": Some Aspects of Liminality and Labyrinths. Unpublished paper.

Wright, C.

The Maze and the Warrior: Symbols in Architecture, Theology, and Music. Cambridge, Mass.: Harvard University Press.

Zafón, C.R.

2005 The Shadow of the Wind. London: Phoenix.

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