

Narrative has a wonderful power to organise. The capacity to perform a role seems to be a 'given' in human life, and by identification with a hero in a narrative, anyone can assume a heroic personality. Biological narratives in our unconscious could have been our first use of story, taking form to meet our need early in our history, and the time when this need arose might have been when the stress of our evolution was becoming particularly severe. One of the hazards of our evolved state is that we dream to feel differently about our problems: we have to reset the baseline of our emotional landscape.

The thought in a biological narrative uses magic, which summons up power out of nothing to invest where we need it. Magical narratives perform a function in the mind which is almost structural in nature. They are regular re-runs of long-past but major psycho-sexual stages which have become part of the 'structure' of the mind. Magical narratives are a kind of housekeeping algorithm, operating at the edge between things staying the same and things changing. The human body aims to achieve emotional homeostasis, a state of balance never actually realised.

The biological narrative lives, as it has always lived, in our unconscious, but it can be attracted to our folktales and romances occasionally, where it plays a powerful and sometimes disruptive role. The different levels of thought share some similarities but will not be aware of each other.

Why have we neglected this vital force in our lives? But we haven't really neglected it. It is still in service, while it remains in our unconscious. Our conscious lives developed with our 'new brain', and it is in our 'new brain' that we now reside, regarding our 'old brain' as a potentially crazy part of ourselves surplus to requirements. We may still invest power in things when we wish, but our 'new brain' can discover its own powers to see the world beyond ourselves and our wishes.

John Cummins, my scientific advisor for twenty years, collaborated with me on this final paper shortly before he died suddenly in December 2015.

29 October, 2016.

THE BIOLOGICAL NARRATIVE

Anne Wilson

When we come across ancient forms of thought, we tend to accommodate them within our own thought without attempting to understand their strangeness. The classical Greeks did much the same thing, failing to grasp the significance of the symbols they had inherited and were merely reinterpreting. The original function of all gods and goddesses was to represent the sun and create water: the people needed to influence

the yearly waning and strengthening of the sun and the coming of the winter rain (1). Those will have been the kind of concerns lying behind the birth of all mythologies.

But stories will have given us long service in our early history, before the arrival of mythology. What evidence do we have for their earlier roles in our ancestors' lives? When I found myself struggling many years ago with the narratives preserved in a collection of medieval romances, I had chanced upon the very texts which could provide information on these earlier roles. An unheard-of situation existed in many of these romances, and this fact was to reveal itself slowly over many years. There were two entirely separate narratives occupying each of these affected texts without knowing about each other. I could only see the situation as I studied the evidence that two narratives were conflicting with each other within the text. Some affected texts were distinguished and admired in spite of their conflicts, and their quality could make it easier to see what had happened to them. They would have an 'upper storey' carrying the author's new writing. Meanwhile, there would be an invading narrative causing all the trouble which would always be the more powerful, because we have depended on its power to survive since our early, stressful evolution. I want to make my first illustration that great bugbear of English departments, 'King Horn'. 'King Horn' (early 13th century) should have the honour of introducing us to 'the biological narrative' without too much of a second storey to hide it.

CHART I THE HORN PLOT

SEE MY WEBSITE ('Anne Wilson: investigating hidden structures in narrative texts') FOR A CHART OF 'KING HORN'.

This is the plot of the famous 'King Horn', the Middle English version of c. 1225 (2). My present position is that this Middle English romance 'King Horn' attracted the plot I call the Horn plot from our unconscious. This tightly constructed plot is not present in the Anglo-Norman 'Romance of Horn' (3). I see this deep plot as belonging to a type of great importance from our early history. It would have taken various forms as we underwent our stressful evolution, while remaining a plot in which the hero will win. The attraction could be mutual, even while the two levels of narrative in progress could not be aware of each other.

The Horn plot from the unconscious can have only one point of view, that of the hero of the narrative, as in a dream. Other characters are figures in the sequence of rituals which forms the plot. The brain is narrating something to itself, something about its own victories, its own goodness and purification. Audiences can become identified with the unconscious plot, while remaining aware only of the medieval overlay, the work of our much more recently acquired imagination. The two levels, sharing the same characters, can conflict with each other, and our first clues to the presence of a biological narrative can lie in the uneasy fit in a text between the primitive sequence of arranged figures and the moral themes and characterisation in the overlay.

My use of the word 'primitive' does not imply my contempt for the 'unconscious mind'. Our unconscious is an important part of our mental equipment. In his book 'The Unconscious before Freud', L.L. Whyte (4) emphasises that in our unawareness of the importance of the unconscious, we have exaggerated the importance of our exact science and other intellectual triumphs of the past few centuries, and will now

have a hard task restoring human dignity. He tells us that the 'unconscious mind is the expression of the organic in the individual' and that Freud's conception of it is not adequately organic: 'the conscious mind will enjoy no peace until it can rejoice in a fuller understanding of its own unconscious sources'. The Greek physician Galen recognised that we make unconscious inferences from perceptions, and the Neoplatonist Plotinus apparently took it for granted that feelings can be present without our being aware of them. Whyte thought that Freud's greatness lay not in any of his particular ideas but in the fact that he compelled us to face the problem of finding an adequate concept of the unconscious mind. He showed, once and for all, that the unconscious is so powerful that this task cannot be neglected. Before Freud, we lived with a brain which had undergone an amazing evolution taking us from a once unthinking species to a rational one and beyond. Many thinkers gave their lives to understanding the human mind with limited success, and in Freud's own lifetime a remarkable Spanish artist, Francisco de Goya (1746-1828) was aware of how deeply thought was rooted in unreasoning fantasy. He thought there was no remedy for the unreason and aggression which people carried inside them. Goya's reaction to violence meant more than anything else of its kind in art because he understood the springs of it. He knew them in himself (5).

I have been asked what I would do about those who 'can't see these things'. My answer is that these things will be going on in our unconscious automatically, only surfacing occasionally when attracted to do so. What attracts our unconscious? I think it might be when our conscious and unconscious minds draw near to each other and become like-minded, perhaps in a powerful creative act – as when Charlotte Bronte was writing 'Jane Eyre' and gave us one of the finest magical texts in literature. This unconscious narrative system may well have got under way during our steep evolution, and protected us from stress: it is very likely a reason why our species of hominid survived, while our contemporaries did not. The sequence of arranged figures would have been moved around by a single point of view as happens in our dreams. When a romance such as King Horn was eventually performed before an audience, the audience might have enjoyed two narratives, one conscious and the other unconscious, although the unconscious narrative sometimes dropped out later. An author's imagination will have created the text without being aware of the presence of the biological plot, and so neither narrative -- the plot or the author's overlay -- would be aware of the presence of the other.

Seeing these things demands a great deal more concentration than we normally use. Unsuspecting scholars might read too fast for a text of this kind, expecting something much more familiar than what I have found. Moreover, we have a locked door created by our fear of what we might find beyond it. This inconvenient truth has made my project particularly difficult. The intense reading and analysis of so many medieval texts – not all of which turned out to be relevant to my inquiry-- added enormously to the length of time I had to spend on this research. But it was all worth it. So many riches came to light, such as the real nature of magic (which is restricted to the unconscious, but very important to human life). Magic works effectively for us in our unconscious, where we invest power in things and there is no critical intelligence to dismiss this power. What I did myself during my research was to think harder and do so over a longer period of time. I was by nature an intense thinker and I increased my intensity without being entirely aware of what I was doing, and found myself seeing more and more. Some of the most interesting material came to light

only after many years, and some of our finest and most popular texts revealed great examples of the extraordinary underlying narratives I had come to see.

Among the most striking features of 'King Horn' are the apparent weaknesses in the character of the hero, which had to be overcome step by step before he could win his kingdom [See Chart 1 for the Horn Plot] . Fleeing the pirates who killed his father, he would have done better to introduce himself truthfully as a king's son, rather than as a slave, when he arrived at the court of King Aylmer. But this is where the work of the plot begins. He apparently fails to seize opportunities and puts obstacles in his own way, but the obstacles are strategically placed: his companion, Fikenild, makes an accusation that Horn will kill King Aylmer and marry the princess, and Horn is exiled to the court of King Thurston. At the court of King Thurston, he calls himself 'Goodmind' (in some texts 'Cutbeard') and saves the king from an invader, refusing the reward of the king's daughter and kingdom. He returns from exile highly effective, wins King Aylmer's daughter, Rymenild, from her suitor and is betrothed. He declares his innocence and plans to win his father's kingdom. He then recovers his father's kingdom and becomes king. There is only one more thing to be done: to demolish Fikenild's accusation that Horn will kill the king and marry the king's daughter. This is done with a final reversal where Fikenild, Horn's accuser, is set up as threatening King Aylmer and seizing Princess Rymenild. Horn defeats him.

The Horn plot is a ritual narrative, as are all biological narratives, and it progresses in steps which I call moves, each move depending on the performance of the previous move. The plot is in fact an algorithm, a series of steps used to find the solution to a specific problem. One of the most important things to notice about this particular move sequence is that the action in move 3 reverses the accusation in the preceding move. Fikenild's accusation (that Horn will kill the king and marry the king's daughter) is reversed when Horn saves a king from an invader and turns down the offer of the princess (using the name Goodmind - or Cutbeard, an equally significant name in some texts, while doing so). There is also a strategic relationship between the two moves in italics (moves 3 and 6). In the first, surrogates are used, while, in the second, we find a parallel action using the exact situation: the accusation is reversed using King Thurston in another kingdom, and finally it is reversed again using the accuser Fikenild himself and the exact king and princess of the second move (Aylmer and Rymenild).

Why do we find this very tight organisation in what is clearly a quite primitive narration? The reason is that the biological narrative uses magic. Organisation with a serious purpose lies at the heart of magic, and this practical magic may have begun to take form when our ancestors ceased to live only in the present as do their fellow animals and begun to anticipate a future. They would have experienced more fear and their mounting stress could have prevented further development. They needed to find in themselves the wherewithal to succeed, the power to win: they needed to build themselves up. This could have been the time when we became narrative beings, and began to create worlds in our minds in which we were supreme. We also became magicians, investing power in narrative where we needed it. Magic involves an investment of power in emerging narrative which would dispense that power effectively. A magical structure would seal the power, giving it shape and form and providing a sense of control over the fear. A seven-year-old child, Martin, demonstrated this to me on the morning after he made a stronghold in his dream

insuperable. He was summoning up power out of nothing in order to deal with a desperate need, and he could feel the desired power by pressing down his folded arms.

While many adult people only see magic in trivial terms, children can get a much better idea of what magic really is by remembering their dreams. In another dream, this seven-year-old child and his friends killed a king in battle who was so powerful that when they touched his blood they would be the strongest in the world; so they touched his blood and so they were the strongest in the world. A third dream took Martin to a more critical situation following a car crash. 'The girl peeped through a small little door and called us all to come because a man wanted our heads'. Martin went on to narrate very seriously, 'The boys went into a house and I followed them in. I saw a pair of shoes and a pair of hands and a head. In his hands was an axe, and above the axe, on the wall, was written EM and two letters after that; I called the word EMIN. The man made us vanish and then he took us all and put us on two blocks with our necks over the gap between them. He chopped off our heads, and then he made us all come back to life again without any heads. He put our heads back on us and stood us up. There was a line round our necks, but the axe had no blood on it. We walked down the corridor very slowly so that our heads wouldn't fall off. When we were quite far I remembered the magic word EMIN, so I said EMIN to make our heads come back to life again. Then our heads were fixed on again so that we could run back to the place where Daddy had a new car. And then we went home with Daddy.' Where did Martin get his magic word from? It came from himself, from his own second name 'Emmet'.

Real magic is functional. Its power comes from humanity as they invest it in some chosen place in the mind for instant use. This investment is unconscious, because its source is unconscious, but those involved can experience some uplift of feelings when investing power in a chosen place. A lifelong automatic storytelling process might be essential for the balance of the human brain, but this whole process takes place in the unconscious: that is where it evolved and belongs. At our conscious level, nothing we call magic can work as magic – it can only be some kind of game our conscious minds have invented, something just for fun. Our conscious minds cannot create the real magic which could dispel terror and bring us back to life: our conscious minds have invented other ways of coping during our lives and they usually have low expectations of our unconscious minds. Yet I think we might also feel that our unconscious should be guarded, and this feeling could be a reason for our silence about it. It was long ago our survival kit.

Biological narratives are not literature and they are not designed to have an audience: their history is probably that they were needed by our biology to help control its stress responses during our steep evolution.

Accomplishing my work has demanded intense thought and unlimited time. I formulated my questions and then had to wait years for answers to appear and then they would often appear suddenly. I can see now that this was because there was a very highly organised system at work deep in the text I was working on and deep in the minds of the audience, independent from other business the brain might have, and this was what I had to catch hold of. This system had nothing to do with anything else the brain was doing. My attempts to understand the great romance 'Sir Gawain and the Green Knight' needed fifteen years of rumination, while I got on with my research

into other texts, and then, one morning, I suddenly saw the structure of the 'Green Knight' narrative afresh, in my mind's eye, when walking across my study to find something else. I saw it as an immensely powerful arrangement of defences, from the Green Knight's initial challenge of the beheading game, which gives permission for the adventure, down to the final redemption supplied by the confession and absolution. These defences are to keep Gawain safe during his all-important bedchamber adventures with the lady of the castle.

Why should such defences be set up around bedroom adventures? My fellow medievalists – and I myself originally – accepted that the Green Knight plot was a chivalric plot where knights were bold and needed challenges through which they proved their honour and courage. This was a culture which produced some of the world's most famous stories. But below the chivalric plot there was a story designed to heal deep, hidden desires and fears.

What kind of things can help us to acquire an extraordinary degree of insight? This insight would be a penetration into an actual situation which otherwise would not be seen. Being an intense and persistent thinker by nature must be a key, especially where unconscious material is concerned. Such thinkers tend not to be popular: many people feel uncomfortable when faced with intensity, with its heightened concentration and its questions, and the effort can be expensive for the thinker (7). But having glimpsed so large a creative force deep in the mind and still unexplored, I wanted to know it to its limits, and have given the rest of my life to finding out all I can. The narrative texts concerned, edited from manuscript by my fellow scholars, have been ideal subjects for study, but my work has still taken almost half a century, being grindingly slow, and taking me well beyond my own professional area, which has been English literature, particularly medieval.

Once I could get inside these invading, unconscious narratives with some confidence I found that much of my work had become by comparison like galloping on horseback.

CHART 2 THE JANE EYRE PLOT

SEE MY WEBSITE FOR A CHART OF 'JANE EYRE': www.annewilson.co.uk.

Only a limited number of medieval romances turned out to contain a 'magical plot' so I looked elsewhere for further examples. Our Anglo-Saxon period before the Norman Conquest was still in the heroic age, which did not attract unconscious biological narratives, and 'Beowulf' is a heroic narrative. C.M. Bowra in his 'Heroic Poetry' (8) tells us that the peoples who have had the most clearly defined heroic age in their past belong to parts of Europe and Central Asia, and I myself found the heroic age still alive in 2004 among the Kirghiz, who centre their epics round the great figures of Manas, his son and grandson. We in the west know most about the heroic age from the Greeks, whose Homeric epics developed over time through the communal use of the oral-formulaic technique studied by Milman Parry (9). Later Greeks looked back on their heroic age with pride as a time when there was a superior class of men who lived for honour, rather than for profit or the gratification of the senses, and who won it through human action, not superhuman help, through self-assertion and risk.

With the Norman Conquest came the Anglo-Norman romances, including a version of 'Horn', composed around 1170 by a clerk known as Thomas. The English version of 'Horn' belongs to about 1225, and it is this version which contains the magical plot I have found. Thomas's version did not attract the use of magic. Nevertheless, the kind of plot I call magical appeared in three of Shakespeare's plays, 'Hamlet', 'Pericles' and 'All's Well that Ends Well'. Shakespeare tended to borrow stories for his plots rather than invent his own, and, unknown to him, a magical plot had accompanied three of his borrowed stories. Romance and folktale can attract magic already active in the brain and this is beyond the conscious control of the author, so it could occasionally be a nuisance, as I think it is in 'All's Well that Ends Well' (10). After Shakespeare, I found that magical plots all but disappeared before reappearing in a few interesting nineteenth century texts. The eighteenth century age of reason had not attracted magic.

The advent of Charlotte Bronte was when the magical plot reappeared. The Bronte sisters, who lived in the first half of the 19th century, have attracted enormous worldwide interest in our own time. The presence of a magical plot in just one of their works cannot be the sole reason. The sheer power of their storytelling, coming as it does from three young sisters in a moorland parsonage at a time when women still lived very restricted lives everywhere in the world, will be the reason. Charlotte Bronte could not know that she had a powerful magical plot at her disposal, of course. Like Horn who becomes Goodmind, Jane Eyre puts her purification before her sovereignty, leaving Rochester for St John Rivers in the cause of service and sacrifice. Horn, as 'Goodmind', saves the king from an invader and refuses the reward of the king's daughter and kingdom. It was fascinating to find ancient narrative devices turning up in nineteenth century narrative plots.

Structurally I see this text as containing two entirely separate levels of narrative which do not know about each other, the primitive plot and the author's work as a novelist. The plot has come unbidden from somewhere else in the mind and has its own agenda over which the author has no control, yet it may have been triggered by the extent of the author's personal involvement in her subject. Her work as an author will have the status of an overlay, sharing story material with the plot but creating a quite different narrative. Since the author's work cannot change the course of the biological plot, texts of this kind usually show some conflict, but in 'Jane Eyre' the two levels of narration co-exist harmoniously even while raising questions.

The chief of the evidence for the textual situation in 'Jane Eyre' lies in the way in which the plot culminates in the Moor House and Ferndean episodes towards the end of the novel. The heroine arrives at Moor House to a famous coincidence: she has escaped from Mr Rochester and wandered destitute in country new to her until she calls at a lone house where it turns out that unknown cousins are living. These cousins, St John Rivers and his two sisters, appear to be connected by name (Reed/Rivers) and by family structure with John Reed and his two sisters, the cousins in Jane Eyre's home at the beginning of the novel.

There has been some academic exploration of the problems in the plotting of this novel and in its departures from realism to fantasy. It is at the later stages of a novel invaded by a biological plot that such anomalies become clear. The biological plot is reaching its climax, dealing with crises in its magical way, its power capable of

crushing any charity or realism attempted by the novelist. In 'Jane Eyre', I noticed early that the events at Moor House had the appearance of a replay of those at Thornfield, reversing the vision of marriage with Rochester so that it was a vision of a loveless union with St John in the cause of service and sacrifice. Such a relationship, reminiscent of Horn's 'Goodmind' move, was suggestive of a move structure. Charlotte Bronte, of course, could know nothing about this. She got on with her creation, while her deep mind got on with its job.

In time I also realised that the Moor House and Ferndean moves were once again that pair of moves relating to each other as steps to a solution. The St John situation was a surrogate one, while the final return to Rochester was to the exact situation. The plot is finally ruthless, as only a biological narrative can be: the Rochester figure is no longer at Thornfield, but at Ferndean, his house and marriage destroyed by fire and he himself violently reduced in power. These last events in a biological narrative would finally remove a fear of dominance and also a fear of incest. While Charlotte Bronte's overlay can be concerned with a marriage of loving equals achieved by mature means, her biological plot accomplishes marriage by means of the ritual removal of fear and guilt, and the biological marriage represents a sense of sovereignty, all desires achieved.

CHART 3 THE DEFENDED NARRATIVE OF 'SIR GAWAIN AND THE GREEN KNIGHT'

SEE MY WEBSITE FOR A CHART OF 'SIR GAWAIN AND THE GREEN KNIGHT'.

Some of my plots have turned out to be entirely concerned with defence, and they set up narrative structures for this defence. 'Sir Gawain and the Green Knight' (11) is my best example, and it was also my first 'defended narrative' – which I was unable to recognise at the time. Thinking I already knew what kind of structure a magical plot in this text would have, and looking for a move structure, I made a pig's ear of it, and only saw my mistake many years later.

I would have needed those many years anyway. These biological structures do make themselves known in the course of time, but they do so pictorially, and where there is no move structure as in the case of 'Sir Gawain and the Green Knight', we could miss the structure altogether. I saw the structure pictorially quite suddenly one morning as a fortification surrounding the adventure with the lady of the castle: I saw that Sir Gawain's adventure was heavily defended with a bastion at either end, each designed to protect the hero.

As a defended narrative uses outer defences rather than a move structure, this plot is more difficult to investigate than are the steps created by the moves of the sovereignty plots I find in 'King Horn' and 'Jane Eyre'. The outer defence of the beheading bargain, which the plot employs as supplying an impregnable defence, is a piece of narrative taken from the unconscious which could be wrapped around a terrifying adventure. The beheading game safeguards this adventure because it is a bargain which will be honoured. The reason for the terror must be that the Green Knight and

his lady will be parent figures at this level, parent figures as in a childhood fantasy, and the lady will belong to the lord; the lord would be a rival and the hero a thief facing his execution (or castration?) on the green mound called the Green Chapel, which represents the lady. The language of the biological narrative is fundamentally pictorial. Outer defences in these narratives would include an additional granting of permission for an adventure, and in this particular adventure, this means accepting the Green Knight's challenge and striking the first blow.

A year later, while Gawain is travelling to the Green Chapel for the tryst, he stays at Sir Bertilak's castle, and another bargain is struck. This second bargain safeguarding the adventure with the lady is the inner bargain of the exchanges of winnings.

Never was there an adventure so protected. On the first day, while the lord is hunting deer in the forest, his wife visits Gawain while he lies in bed and she makes amorous advances. Gawain resists but accepts a kiss from her, which he exchanges for the flesh of a dismembered deer when the lord returns at the end of the day. The next day, the lord hunts a boar and Gawain accepts two kisses from the lady which he exchanges for the boar's head. On the third day, the lord hunts a fox, which is pursued with cries of 'thief', and Gawain accepts three kisses which he exchanges for the skin of the fox, flayed alive. The lady has also given him a green girdle which he does not declare. At the end of each day, the lord receives tokens that Gawain has not been a traitor, and the lord's own gifts show Gawain what would happen to him should he be one.

The next morning, Gawain turns up at the appointed meeting place to honour the bargain of the beheading game. The honouring of the inner bargain of the exchanges of winnings is also not yet complete as Gawain has not declared the green girdle, but it is now to turn out that the Green Knight is one and the same as the lord of the castle. Safeguards making a 'dangerous adventure' possible have to be piled on in these biological plots because of the extent of the guilt and fear with which the narrative has to deal. The plot has to make the 'dangerous' adventure possible, by removing threats or by providing excuses or permission for an adventure, and by closing the plot with the use of powerful devices such as confession and absolution. Gawain's honouring of the bargains might seem to be enough, but there also has to be a full confession before the secular character – the Green Knight – who alone can absolve him.

The narrative at its deeper levels will have followed our evolution and our history as we needed it to do: the beheading game must long have been a childhood nightmare. The 'dangerous' adventure will have its origins in a child's fantasies of sex where the lover is still confused with a mother, who belongs to someone else. Nature has left humankind with some problems, and biological narrative has helped us to resolve them.

Of course there is also the Gawain-poet's magnificent overlay in this text, with the forbidden adventure involving a lady at its heart. The adventure is forbidden because the lady belongs to someone else – Sir Bertilak, alias the Green Knight. As Sir Bertilak's lady she comes into Gawain's bedchamber because she is testing him; in the biological plot she is there because the hero (the audience identified with the plot) has summoned her up. The biological level knows nothing about the courtly world of

the test, and the sophisticated, artificial world of the medieval court would probably not want to know anything about irrational guilt.

At the level of conscious art, the author uses what he finds in his plot without penetrating the deeper level consciously, and he adapts the primitive material into the favourite medieval theme, the test. The overlay has been created at an entirely different level of thought, and the language of the bedroom scenes is the language of courtly love and courtesy.

But the role of great storytelling in human life can be much more real than the notion of it in conscious art. And the Gawain-poet (whose true name is unknown) has given this to us too, plumbing the depths of human desires and fears.

CHART 4 THE LADY OF THE FOUNTAIN

THE OLD FRENCH, ENGLISH AND WELSH VERSIONS OF THE YWAIN ROMANCES

Literary people expect to find a moral value in a narrative and they are puzzled when they find it absent in otherwise distinguished texts. But where a magical plot has joined a text, the text is divided against itself. Moral themes can only belong to an author's writing. They are absent in the deep unconscious, and, meanwhile, the unconscious plot is more powerful than the author's writing.

There is a group of texts based on the Old French romance 'Yvain' of Chrétien de Troyes (12), where a ritual story with its four moves has a dominant position from the beginning, and it is about how a young knight, Yvain, usurps a dominion [See Chart 4]. He seems to have a novel way of cancelling out his guilt, but cancelling out is something magic can do. The plot employs exorcism, using reversal, to remove the accusations of theft and treason. Chrétien's narrative is set at King Arthur's court, where the knight Calogrenant tells the story of his fountain adventure to his fellow guards at the door of the sleeping king's bedchamber, and the queen joins them. Taunted by Sir Kay and encouraged by the queen, Calogrenant tells how he set out in search of a testing adventure, and after a night with a hospitable host met a monstrous herdsman, who directed him to a fountain where he performed a rain-making ritual. This ritual raised a terrifying storm, and after the storm a knight came galloping up to accuse him of making war on him. They fought and Calogrenant was defeated. The fountain knight took his horse, and Calogrenant returned on foot ashamed, but on his way he was welcomed by the hospitable host with undiminished kindness. At the end of the tale, Yvain says he wishes to undertake the adventure to avenge Calogrenant's shame. Sir Kay jeers his disbelief that he would dare to do so and the queen rebukes Kay.

CHART 4 THE YWAIN PLOT

Move 1	Move 2
At Arthur's court	Ywain secretly undertakes the adventure
Calogrenant tells of his journey to the Fountain dominion and his fight with its lord	He kills the Fountain lord and marries the widow
Arthur is pleased by this adventure	Arthur's approval is won
THE MAGIC FORMULA FOR GAINING A DOMINION IS PREPARED	THE MAGIC FORMULA IS SUCCESSFULLY USED
Move 3	Move 4
<i>The Fountain lady denounces Ywain as a thief and traitor</i>	<i>Ywain returns to the Fountain and clears Lunete (his assistant in winning his dominion) of the charge of treason</i>
<i>In the wilderness</i>	
<i>Healed by the lady of Noroison</i>	
<i>Ywain stops Count Alier's thefts from her dominion and then refuses her offer of marriage</i>	
PENANCE FOLLOWED BY EXORCISM OF THE ACCUSATION OF THEFT	EXORCISM OF THE CHARGE OF TREASON

Calogrenant's tale consists of traditional, familiar elements, the hospitable host, the monstrous herdsman, and a fountain where he performs a rain-making ritual. When King Arthur wakes, the queen retells Calogrenant's tale to him and the king plans to undertake the fountain adventure himself. The king's approval of the adventure is essential in this magical plot. Yvain sets off secretly on the adventure and his encounter with the fountain knight is a violent one. He pursues the mortally wounded knight back to his castle gate, where the descending portcullis shaves off his spurs and kills his horse, and he is trapped. The fountain lady's companion, Lunete, saves him from retribution by making him invisible with a ring. He falls in love with the grief-stricken lady of the fountain, and Lunete persuades the lady to marry Yvain as she needs a defender of her land.

Calogrenant's tale is a formula, a recipe, for the seizure of a kingdom, and it is enthusiastically received by the king, who also undertakes 'the adventure'. He has essentially expressed his approval of it, and he and his company are entertained at the fountain castle while Yvain immediately sets off secretly on the adventure.

Essentially, the fountain adventure disguises what is happening: a dominion is being seized from a 'king', who is killed, while there is also reassurance and support from a king and a queen. In a magical plot, multiple king and queen figures represent a single king and queen at different stages of the narrative. There are no characters in a magical plot, only figures in a sequence of narrative rituals.

Great fear surrounds these subversive events. Kings are parent figures in these deep plots, and this plot is enormously powerful. It is a formula made up of visions and rituals, these being invested with a special magical power to propel the hero to the acquisition of a dominion. In the author's narrative, there is no need to do more than defeat the fountain knight in the same way that the fountain knight defeats Calogrenant, but in the magical plot the hero who rushes off to get to the fountain before King Arthur is in pursuit of his desire for sovereignty.

The third and fourth moves of the plot are there to remove the guilt, the third to remove the accusation of theft and the fourth to remove the charge of treason. The removal of the guilt is essential in these 'sovereignty' plots. At the beginning of the third move, the fountain lady denounces Yvain as a thief and a traitor when he fails to return on time from a holiday at Arthur's court. He undergoes a penance in the wilderness, and then he is healed by the lady of Noroison. He stops Count Alier's thefts from her dominion and then refuses her offer of marriage. In this way, the charge of theft is removed. In the fourth move, Yvain returns to the fountain and clears Lunete (his assistant in winning his dominion) of the charge of treason. The plot uses Lunete as a surrogate for the removal of the charge of treason. This is the end of the magical plot I find in this text, and it does actually come at the end of the narrative, which culminates in reconciliation between Yvain and his wife. In its later part the text adds fresh narrative material from different sources which are not part of the magical plot.

There is a Middle English version of Chrétien's text, *Yvain and Gawain*, published for The Early English Text Society in 1964 (13), which, typically, discards all Chrétien's courtly love and chivalric material, belonging to the French court of Marie de Champagne for which Chrétien wrote. Otherwise its text might be regarded as quite faithful to Chrétien's story of love and adventure. The magical plot beneath remains unchanged, setting up its formula for gaining a dominion and removing all guilt and fear.

There is also a Welsh version, 'Owein', which is not a translation of Chrétien's Yvain, but may be a composition proceeding from the same ancient traditions, oral or written, which provided Chrétien with the outline of his story (14). The fountain adventure in the upper storey here has a different appearance from Chrétien's account because it is Welsh and has its own history as a tale, but otherwise it is the same story. The unconscious narrative below would not alter in its purpose, even where it varies in its detail from the material in the French and English versions. It is not until the ideas of theft and treachery are dispelled that the hero can take the lady of the fountain with him to Arthur's court as his wife.

THE FOLKTALES 'THE GOLDEN BIRD' AND SAXO GRAMMATICUS' HAMLET STORY

The biological narrative is particularly likely to be attracted to the genres of romance and folktale. There are linkages between the levels of the mind, and thought from deeper levels could surface under a strong stimulus: the feeling aroused in some kinds of storytelling situations might be such a stimulus.

Medieval romances have been affected by these intrusions and nineteenth century romances, like 'Jane Eyre', have sometimes followed suit. Folktales have also given us some interesting examples. The Grimm tale 'THE GOLDEN BIRD' has a remarkable and puzzling biological plot which uses ritual punishment: I have placed it on my website. Briefly, the hero – who represents those of us identified with the story -- steals sovereignty from the king in a swift, flowing act of trickery, riding on the craft of a fox. Sovereignty is the king's daughter. There are two final moves for the removal of guilt, and these work together as the two steps commonly found in these biological plots. In the first, the fox, who has organised the hero's thefts from the king, wants to take the punishment, but the hero sets up his two brothers as the thieves instead, having them steal his winnings, and these surrogates are punished instead. The king then gives the princess to the hero, who becomes his heir. The final move then completes this process with the fox once more wanting to take the punishment, and begging the hero to release him from his suffering by cutting off his head and his feet. The hero does so and the fox turns into the brother of the princess. There is no concern with abstract ideas of right or wrong in a biological plot: nature's concern is only with survival. The final two steps to a solution expunge ideas of theft using the brothers and the fox, and do not point a finger at the hero.

Perhaps the most remarkable example of the biological plots available to us is SAXO GRAMMATICUS'S HAMLET STORY, Shakespeare's source for his famous play. The Hamlet biological plot has been a very difficult plot to study, and it is too formidable to play a useful part in this present paper, but it has stunning features which I have found nowhere else. It is preserved because Saxo Grammaticus uses it in his 13th century 'History of the Danes', which is known as a 'partly mythical Latin history'.

Shakespeare's famous delay is absent in Saxo Grammaticus, for it is Shakespeare's development of story material that does not provide the concerted advance towards revenge demanded by a true revenge story. It is given the theme of lack of resolution in Shakespeare's revenge story, and it draws on the biological plot for its preoccupations with usurpation and death. The biological necessity that the hero's vengeance be carried out against himself deeply informs this drama of hesitation and intense reflection on death. (15)

The biological narrative made itself known to me when I came across it in its strange role of intruder in a body of English narrative texts known as the medieval romances. I was later to find it in other texts, most of them medieval, but occasionally nineteenth century. A few of the affected texts are famous, such as the Hamlet texts, which

include the origin of Shakespeare's version. Most of them belong to a distinguished collection of romances in university libraries silently preserving some of humankind's oldest stories. We can know when invading narratives are there because there will be characteristic and persistent problems in an affected text. The biological intruder will have invaded the text from its own part of the brain because it wanted to do so, and we haven't been able to explain the peculiar narrative it contributes to the text.

As a literary specialist, I could only think about the problems as a literary specialist. In the early days, I never thought that it could have been a scientific matter too. My investigation made no sense to the literary community because they were trained essentially in critical approaches to literature, which had to do with rich responses to a great literature. Literary criticism is inevitably totally subjective (p. 338, Guerin, 1999) and it can also be horrified by the idea of an irrational system of thought apparently invading from outer darkness. Science, by contrast, has been confronting mind-blowing truths for millennia. For me, making the leap to a contact with scientists would be formidable, and only a miracle could make that leap for me. The miracle came when an inspired publication of my second book with The Thimble Press, outside academe, found its way to a second hand bookshop on the Walls of Chester: there science could find it and contact me in 1995. (16)

It was Oliver Sacks, in his book *The Man who Mistook his Wife for a Hat and Other Clinical Tales*, New York, 1970, page 186, who observed the power of narrative to organise where abstract and other schematic forms of organisation fail.

2. See Adrian Bailey, *The Caves of the Sun*, London, 1997, Chapter 18.

3. *King Horn*, ed. George H. McKnight, The Early English Text Society, OUP, 1901, pages 1-69.

King Horn, ed. Donald B. Sands, *Middle English Verse Romances*, (1966), 1986, pages 15-54.

4. *The Romance of Horn*, translated from Anglo-Norman, with an introduction and notes, by Judith Weiss, in *The Birth of Romance, an Anthology*, (1992), pages 1-120.

5. L.L. Whyte, *The Unconscious before Freud*, 1960, Chapter 1, page 10.

6. Sir Lawrence Gowing, in a TV interview on Goya, c. 1990.

7. See David R. Hawkins, in *Power vs. Force: The Hidden Determinants of Human Behaviour*, 1995, Hay House, Inc, pages 217-223. 'The values that one lives by are more definitive of genius than IQ. From our studies, it appears that the alignment of one's goals and values with high-energy attractors is more closely associated with genius than anything else. Genius can be more accurately identified by perseverance, courage, concentration, enormous drive, and absolute integrity. Talent is not enough.'

8. C.M. Bowra, *Heroic Poetry*, London, 1952.

9. Albert B. Lord, *The Singer of Tales*, Harvard, 1960.
10. For my view of the plot of *All's Well that Ends Well*, see my website, Anne Wilson: Investigating Hidden Structures in Narrative Texts.
11. *Sir Gawain and the Green Knight*, such a great favourite among the medieval romances, has presented the modern reader with considerable difficulty owing to the extreme inconsistency of the scribe's spelling in the single surviving manuscript. But there is an edition prepared and introduced by R.T. Jones, *Sir Gawain and the Grene Gome*, (University of Natal Press, 1962 and Heinemann, 1972) which has selected one spelling for each word used by the scribe and then retained throughout the work. This enables readers who can enjoy Chaucer to enjoy *Sir Gawain and the Green Knight* in the original. Magical plots disappear in translation because the translator is not aware of the underlying level of narrative in the text.
12. Chrétien de Troyes, *Yvain (Le Chevalier au Lion)*, edited by T.B.W. Reid, Manchester, 1942; *Les Romans de Chrétien de Troyes IV, Le Chevalier au Lion (Yvain)*, publié par Mario Roques, Paris, 1980.
13. *Ywain and Gawain*, edited by Albert B. Friedman and Norman T. Harrington, published for The Early English Text Society, Oxford, 1964.
14. See *The Mabinogion*, translated by Gwyn Jones and Thomas Jones, Everyman's Library, revised 1974, *The Lady of the Fountain*, pages 155-82.
15. I study the Hamlet stories in my last book, *Plots and Powers*, University Press of Florida, 2001.
16. My leap to a productive contact with science was made in 1995, when John Cummins, a young lawyer pursuing a scientific inquiry into how our species survived its evolution, discovered a copy of my second book 'Magical Thought in Creative Writing' in a second hand bookshop. The problem he was trying to solve was how our species was able to evolve from a non-human primate living only 'in the moment' into one which could anticipate the future, prospecting about future outcomes. Forethought and planning could lead to stress with an adverse impact on health, longevity and reproductive fitness. These adverse impacts in turn could restrict further increases in intelligence. In a paper given at an international scientific conference at Stirling in 2011, John Cummins argued that nature has partly resolved the problem by means of a variation of the primate stress response systems, while, during his years of research, he had also explored other ways in which nature might have made it more difficult for a stress response to occur. One of these was a use of narrative. John Cummins contacted me in 1995, when my final book 'Plots and Powers' was completed and still looking for a publisher. It had more years of searching to do, and the years of searching were fruitful because John Cummins and I could share the wealth of information culled by our researches in two very different fields of study. We began to explore John's notion of there having been 'below consciousness narratives' deep in the brain since the time of our evolution. I was liberated by having found a colleague who could creatively share thoughts with me, and made it possible for me to venture forth into a wealth of scientific thought. I could not have dared to do

so alone. We also argued over my use of the word 'magical', but I had arrived at definitions of magic which made me confident about keeping the word: I felt that future readers would have to grasp its true meaning. It made an enormous difference to me to be able to discuss my findings with someone as intelligent as John, and I think he enjoyed getting to know some of the raw material involved in my research. I also enjoyed the contacts he made with scientists around the world.

Both John Cummins and I were free-lance researchers, keeping in contact with academics in our own fields, and we could make a contribution of a unique kind. Cross-disciplinary work is a valuable experience. Sadly, John died after a short illness in December, 2015. I know my results would have been much less interesting without him.