

WESTMINSTER THEOLOGICAL SEMINARY

“THE BIMODAL PARABLES & MIRACLES OF JESUS AND HIS USE OF RECURSION”
JOHN 2:1-11

Submitted to Dr. Vern S. Poythress
In partial fulfillment of NT 721: Parables and Miracles in the Gospels

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(First Draft)

The Bimodal Parables and Miracles of Jesus and his use of recursion.

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Introduction

The parables of Jesus are widely accepted as being “two-level” stories,¹ with a plain and simple meaning on the first level, and a pointed, polemical, hidden, or allegorical meaning on the second level.² Madeleine Boucher says “*every parable has two levels of meaning; ...The double-meaning effect is a sine qua non of the parable.*”³ In his recent comprehensive work, Klyne Snodgrass says that “parable” has this 2-level meaning in English, but a more subtle definition in both NT and OT scriptures, and after criticizing numerous other definitions, says “Parables are indirect communication. ...they are stories with an intent;”⁴

Many schemes have been composed to permit the hearer to understand or appreciate this second level, including the background of the audience, the context within Jesus’ ministry, the use for which the

¹ Klyne R. Snodgrass *Stories with Intent: A Comprehensive Guide to the Parables of Jesus 2*, Grand Rapids: Eerdmans 2008.

² Vern S. Poythress, “Review of Stein on Parables” *Westminster Theological Journal* 44/1 (spring 1982): 158-160.

³ Madeleine Boucher, *The Mysterious Parable* 22, Washington: The Catholic Bible Association 1977.

⁴ Snodgrass, “Stories” 8.

gospel writer assigned the parable, even the later allegorizing of the Church. So common had these schemes become, that even as early as Origen, one talked about the four meanings of Scripture: the literal, the moral, the spiritual (allegorical) and the anagogical.⁵

Because the allegorical permitted the widest latitude of interpretation, it became the favorite of both ancient and medieval theologians, with increasingly complicated and wild symbolic schemes, due no doubt, to the widespread influence of Augustine and his allegorizing. The Reformers spoke against such practices, yet apparently could not abandon such a useful tool themselves. Not until the 19th century efforts of Jülicher, did allegory receive the death-blow.⁶ If it is true that allegorizing is an unacceptable method of exegesis, then it is particularly disturbing that what replaced it was a progressive, liberal, tepid sort of moralizing that was as distasteful as it was bland. If allegorizing is not the meat of exegesis, at least it is the spice.

The evangelical reaction has been a cautious return to limited allegory,⁷ with Poythress suggesting several maxims for proper exegesis, including the “two evidences” rule. While moderation has been wise counsel since the Delphic Oracle, it will be only a matter of time before creative persons can find support for their particular interpretation, whether we demand two or more evidences. That is, despite many efforts to find “the” meaning, it appears that a fixed sense of a parable will continually elude us.⁸ In some didactic sense then, this is one of the purposes of teaching in parables, to leave open the interpretation. Similarly, the Socratic method of teaching with questions does not give answers, but probes the ability to think, to process. It may work equally well whether the student answers “yes” or “no”. If so, it is independent of the first layer of meaning, operating on a second layer, that of choices. That is to say, a parable is a more dynamic way of teaching than reciting Torah,⁹ and has many parallels in both modern and ancient pedagogy.

In this sense, there are many parallels between Post-Modernism and parables. If the 1st layer of plot be unimportant to the meaning, requiring only the 2nd layer of directions, of choices, then I argue we are dealing with a derivative, a change, a hedge-fund and not the market itself. In algebraic terms, we are interested in the slope but not the magnitude. In navigation terms, we are engaging in “dead-reckoning”, knowing only our speed but not our position. In aeronautic terms, we are doing ballistics with gyroscopes and not GPS. In computational terms, we are using explicit integration methods. And in all these examples, the errors propagate linearly if not exponentially. Lacking any absolute measure of our deviation from the “true meaning”, our exegesis can rapidly depart from the text, all the while giving the appearance of steady progress.¹⁰ Did Jesus really mean for his parables to be so prone to misunderstanding? I think the answer is “yes”, with some important consequences.

Once we recognize the dynamic nature of the parable, we can ask questions about the kind of dynamic. Is it a give-and-take, a progression to a fixed position, or even an oscillation with no fixed endpoint? For example, in the American form of government, the relationship of the judicial, legislative and executive branches is intended to be oscillatory, with no single branch possessing sufficient power to suppress the other two. Is this how Jesus intended the parables, that any static understanding of the meaning will become stale and certain to be overturned by future generations? How then do we find the meaning for us?

⁵ Robert H. Stein “An Introduction to the Parables of Jesus”, 47, Philadelphia: Westminster, 1981.

⁶ Snodgrass quotes Funk “Jülicher’s legacy is a trap because he was never able to escape from the allegory he so fervently rejected.” (Snodgrass, “Stories” footnote 80, 587.)

⁷ Snodgrass “Stories” 33.

⁸ Vern S. Poythress “Review of Kistemaker on Parables” Westminster Theological Journal, 43/2 Spring 1981 at http://www.frame-poythress.org/poythress_articles/1981ReviewKistemakerParables.htm accessed 11/5/08.

⁹ “Rabbis spoke of parables as handles for understanding Torah, but when Solomon and others created parables, then people understood” (Snodgrass, “Stories” 8).

¹⁰ Snodgrass warns about this problem, saying that a parable extracted from the context of the gospels is nearly meaningless. See his interpretive points 5, 6, 10 especially. (Snodgrass, “Stories” 26-35)

Perhaps that analogy was insufficiently grounded in two evidences. If we are going to develop a universal way to interpret parables,¹¹ it will have to be supported by the text itself, as in Jesus' own words to his disciples (Luke 8:9-10). But in so doing, we are looping back on ourselves, with the text interpreting itself. This feedback, this recursion, is not just a feature of parabolic interpretation, but of the parables themselves. For we can see how the parable of the mustard seed is precisely about itself, a remarkably short parable (Luke 13:18-19). Or the parable of the sower is about a man telling parables (8:4-8). So then, even when we are looking for evidences, our evidences are looking for us. We cannot be assured of an acceptable outcome, we cannot be convinced that we have found *the* meaning of a parable, because the parable is interpreting us, judging us worthy.

We may be comfortable with this conclusion, but do we really want to be reading to our children, say, the three little pigs and have a wolf appear at the door? Do we really want to read Hansel and Gretel only to have a little boy dropping breadcrumbs up our driveway? In order to escape these Hitchcock scenarios, we engage in all sorts of amelioration techniques. By some foolproof method, we discover the "real" meaning of the story, and it is invariably less disconcerting than the original. Hence Jülicher's bland reconstruction of Jesus' frightening language, or the conversion of the parable of talents into a Joel Osteen pep talk. Yes, "cast into outer darkness where there is weeping and gnashing of teeth" (Matt 25:30) is easily as frightening as anything in Hansel and Gretel. And when we were children, we too were frightened by a world that was filled with mysterious, death-invoking taboos.

Without diving too deeply into pop-psychologizing, it would appear that parables cause us to behave as we usually do when confronted with disturbing observations or cognitive dissonance--analyzing the scary situation until we think we understand it, and by understanding, feeling we can control it. Or when that fails, we analyze our own response, parsing our panic until we feel rational again, or at least, rationalizing our fear. But those fears that are the least rational, the most resistant to our treatment, the fears that are scariest are those that are hardest to control.

For most us, who survived childhood and education, we have calmed those fears. Heaven's rewards and Earth's temptations are neatly boxed and catalogued. We no longer fear sudden death or reversal of fortunes because we are insulated with rules that prohibit irrational acts. Foremost among these insulations is money and wealth, the power to stop the scariest demons of our childhood. Like fairy tales then, Jesus' parables operate in these subterranean realms, stirring up old ghosts, connecting behaviors and outcomes that do not match our rules. They provoke, disturb, invert, and always surprise. And not surprisingly, many of them have to do with wealth.

Yet even in my saying that, I have ruined the surprise, I have protected my soul, I have staved off the fear that I too might be cast into outer darkness. So in some sense exegesis of parables is triage, an exercise in damage control, in taming these wild stories of Jesus that threaten to undo us. I don't want this paper to be another example of that. If anything, I would like to heighten the drama, to enhance the surprise.

Some have attempted this by elaborating background information about Jesus' culture, others by translating the parables into modern settings. But alas, there is only so much background material that hasn't been plowed over many times before, and while paraphrase can be fresh and invigorating, it also is hopelessly dated and potentially heretical, but most assuredly not inspired. And how can uninspired stories frighten or encourage us, if it lack the authority of Jesus?

That leads me to a two-pronged analysis of parables where I hope to recover some of the excitement. First, I analyze our analyses, trying to demonstrate a method of interaction with parables that does justice to their surprising endings and provoking character. Like the parables themselves, it is a self-referential analysis, showing how a parable is a mirror, and indeed, a hall of mirrors revealing many hidden sides of us. Secondly, I use this parabolic analysis on a non-parable, on the first miracle of John's gospel, to surprise us with the relevance of self-reference, to surprise us with the profundity of miracles, to frighten us again with their power.

¹¹ Origen gave 4 methods, Jeremias 10, now highly disputed, and Snodgrass gives 11. (Snodgrass, "Stories" 24-31.)

The Parable: An Analysis of Analyses

Genre / Definition

There has been an historic effort to classify the genre of parables, as if giving them a name will corral the content. Parables are often, but not always, called *παροβολή* in the NT, and compare favorable with “*mashal*” in the OT. They are all stories, often extended metaphors, occasionally allegories. Trying to group them more critically with sharper boundaries produces as many outliers as it includes, and has generally been abandoned. Conversely, attempting to subdivide them into similes, metaphors, example stories has likewise produced a confused jumble. Snodgrass critically reviews the literature and concludes that it is not the content that defines the category, but the intent of the author combined with the reception “stories with intent...to move to action”¹² Agreeing with Snodgrass, we take these failed attempts as symptoms revealing something deeper, concluding that the rhetorical or grammatical form of the parable is not what distinguishes it from other stories.

This is not an easy thing to believe, since most textual criticism is based on the idea that the text is classifiable. If a sample of text cannot be classified by reading the text, what possible other methods are there?

Let’s give a few examples and perhaps we can generalize. The collection of “state-of-the-union” addresses cannot be distinguished by their content from, say, foreign policy speeches unless we happen to know who gave it and when they were given (and whether the text claimed to be a SOTU address). In this case, it is the presenter that defines the genre. Likewise, the genre of “scariest camping ghost stories” will depend a lot on the audience, and whether they thought the story was scary. Perhaps one generation’s fear-tingling story is a yawner for the next generation, despite being exactly the same text.

Generalizing then, a genre may include information only known by the presenter, or only known by the audience, as well as information included in the text itself. Since these parables are stories embedded inside a larger text in the “gospel” genre, we do have information on both presenter and audience. Is it possible that lurking in there is a criterion more precise than the text itself?

We have pieces of evidence. The disciples ask Jesus, “Why do you speak in parables?” (Luke 8:9) from which we gather that this is an unusual approach. We might surmise then, that parables are a genre of “Jesus stories”. If we examine the NT, this appears true, none of the other characters in the NT tell parables. John’s Apocalypse is full of fanciful stories, but again, no one calls them parables. James uses hypothetical stories with a moral (Ja 1:23ff, 2:2ff), but again, no one calls them parables. Paul uses extended similes of Sarah and Hagar (Gal 4:21-31), but they are never called parables. When we look at the OT, however, we find many examples of parables, usually associated with prophets. Since the NT world was very familiar with the OT, it would probably be more accurate to say a parable was a “prophet story”. But now our analysis becomes vague again, for prophets told many stories, and only some were parables. How can we tell when a story is a prophecy and when it is a parable?

That is easy, a prophecy is meant to be literal (1st level meaning) whereas a parable is meant to be analogical (2nd level meaning). But what do we do then, with analogical prophecy, Zechariah for example? Well, we could continue this line of questioning, but I’m afraid we are bogging down in the same sorts of textual distinctions that caused us to abandon the textual approach in the first place. But we have a second piece of evidence.

Jesus answers the disciple’s question as to why he uses parables by quoting Isaiah 6:9-10, “in order that seeing they might not see, and hearing they might not understand” (Luke 8:10b). In other words, the reception of a parable is critical to the definition of a parable, it would appear to be a nearly incomprehensible story. But Jesus doesn’t leave it there, he says to his disciples “To you it has been given to know the secrets of the kingdom of God” (8:10a). But it isn’t a secret for the disciples. *So a parable is a story, told by a prophet, whose meaning is bimodal--hidden from bright and interested people but revealed to uneducated fishermen.*

¹² Snodgrass “Stories” 7-24

Testing this definition out, we can see then that Paul and James did not use parables because they wanted their audience to immediately grasp the meaning. John's use of fanciful stories in Revelation are not immediately obvious, but there is no indication that they were bimodal, with separate meanings for believers and unbelievers. Hebrew "*mashal*" appear to be bimodal in a different sense, with David being tricked by Nathan¹³ to committing himself to one interpretation before being enlightened as to the other. They appear temporally bimodal (before and after) rather than spatially (us and them). We might refine this definition some more with further examples, but it is rough enough to continue the analysis.¹⁴

Recursion

With that definition, it is not too surprising that parables were taken as an invitation to allegorize, for certainly an allegory contains hidden information, is in the form of a story, and was usually told by a prophet. Thus over the centuries, many commentators have chosen this way of exegeting parables. I would argue that they missed the point of parables, because they viewed the text as static.

That is, once the key was given, the meaning is no longer secret, and it no longer functions as a parable. It becomes, like the letter of James, a morality story. If all of these commentators are right, then a parable can be translated into "plain language" and there is no further information to be gained from the original story. Read Augustine's commentary on the Good Samaritan, read Jülicher's commentary on the talents, they are unambiguous. But if you say to me that no commentary can replace the original parable, then you come back to the mystery of what makes a parable more than a morality story, more than a call to action. If a parable is a prophetic story whose reception is bimodal, then no matter how many commentaries, no matter how many centuries, how matter how many bright PhD's have written about it, it remains bimodally received.

How can this be? Surely one can learn from one's betters, if not all the saints? Because it is not a matter of knowledge, it is a matter of will, a matter of faith. Just because St Ambrose found it easy to fast makes it no easier on his disciples, likewise with the reception of parables.

But how can a text exercise the will? This was one of Jesus' major themes; unbelief was not a matter of ignorance, it was not a matter of additional evidence, or of insufficient proof, unbelief was a sin (Mark 16:14).

But surely, if the facts are clear, everyone with a decent intellect would come to the same conclusion? Paul explains that just the opposite occurs (Rom 1:18ff). For when the facts go against our cherished dreams and our darkest deeds, we rationalize, we suppress the truth. Bahnsen's PhD thesis¹⁵ looked at the way in which the human mind can believe A and not-A simultaneously, what psychologists call a cognitive dissonance. He found that intermediate steps are inserted such that B implies not-A, so that the sinner can state A and B. And if the clash be still too great, then several more intermediate statements can be inserted, until enough logical distance weakens the dissonance. Jesus parables, then, challenge the will by introducing a dissonance.

But how can a text challenge the will, as if reading Nietzsche will turn me into the superman? The simplest way to challenge the will is to state a bald-faced lie. Then the audience will react by asking "is this true?" The acceptance or rejection of a text as truth involves the will. But clearly there is more involved than this simple operation, since in point of fact, we generally go on accepted opinion when we decide to believe, say, a New York Times article on foreign affairs. Yet if a parable merely judges a culture or people group, we can find safety in escaping by time or circumstance to a new association. "I'm not Pharisee!" For a parable to really challenge us, it has to close off avenues of escape, it has to be personal.

How can a text challenge our will directly, how does it become personal? By recursion. The text must involve my will in evaluating itself. The text must say more than "Obama will be a transformational

¹³ 2 Sam 12:1-7

¹⁴ Note how our definition distinguishes more sharply than Snodgrass without disagreeing with his analysis. Perhaps a combination would be even better.

¹⁵ Gregory Lyle Bahsen, "A conditional resolution of the apparent paradox of self-deception" 1979, PhD USC.

president,” but “Obama will transform your view of the presidency.” You can easily see how you could agree with this second statement while holding very different views of the nature of the “transformation”.

Now we might try to escape the implied recursion by re-defining terms, which would “flatten” or remove the recursion, say, by taking “your view” to mean “the view of the New York Times”. This would, of course, remove the bimodal nature of the statement, since everyone might agree to what view the New York Times holds. So to make it truly recursive, to make it impossible to flatten out the meaning, the recursion must be strengthened by direct reference to itself: “this text will change the meaning of this text.” It can be stated even more rigorously using the electronics analogy of op-amps as we do a bit later, but first we look at some human attempts to slip out of the noose.

Bimodality Requires Recursion

We have made the argument that Jesus traps us into a bimodal response by clever use of recursion. But now I want to make the more stringent argument that it is only recursion that can accomplish this task, and therefore Jesus must use recursion if he wants to insure a bimodal response. The problem is as straightforward as it is ancient. “Adam, have you eaten of the tree of which I commanded you not to eat?” (Gen 3:11) The answer expected is “yes” or “no”, a bimodal response. But this is not what Adam answers. The story of philosophy, if one listens to Hegel, is about avoided dualities, a dialectic of syntheses replacing yes/no answers. Poythress himself points out the slipperiness of language, and the futility of demanding black and white responses from a fluid, fuzzy boundary, language game, ambiguous tool like language.¹⁶

Yet yes/no is what God expects of us, since apparently, our eternal destinies no longer have ambiguous options like Sheol or Limbo,¹⁷ but are bimodal: heaven or hell. Poythress calls such things “natural classes”,¹⁸ but it would seem perverse of God to give us a communication tool that recognizes few if any “natural classes” and then hold over us in judgment our inability to distinguish between them! (“It depends on what the meaning of ‘is’ is.”)

The answer to this moral and epistemological dilemma is recursion.

That is, when a language term is involved in its own interpretation, it rapidly migrates to one of two meanings. Why two? Well, if it merely reinforced one meaning, then the word didn’t actually define anything. A recursive definition that includes everything or excludes everything isn’t really a definition since nothing has changed since before the definition was given. Alternatively a recursive definition that tries to do three things at once will inevitably do two of them better than one, and hence can be viewed as two successive definitions. Trinities are unstable to dualities, unless there be a sort of inner tension (or as we will say a bit later in the section on electronics, an active element) that further modifies the definition. So ignoring for now the active elements, it is nigh inevitable that recursion produce a bimodal response.

In summary, recursion supplies the key to understanding the bimodality of the reception. More than anything else, it is recursion that makes a parable distinctly a parable and not just an example or a morality story. In this sense, Jesus’ parables are distinct from Aesop, distinct from Hebrew “*mashal*” because they are designed to do more than carry a “secret” meaning, but to carry a bimodal meaning.

Implications of Recursion

I don’t want to leave the mistaken impression that this definition is “yet another dreary method to find hidden meaning in parables”. Instead, this feisty definition is rather intolerant and incompatible with many other approaches. For example, Jülicher adopts a genre for parables that assumes they can only say one thing, and thus *a priori* excludes any recursive interpretation.¹⁹ Not surprisingly, his “one thing” turns out to be blandly liberal and faintly nauseating.

¹⁶ Vern S. Poythress *Symphonic Theology* 64-65, Philipsburg: P&R 2001.

¹⁷ Nicole Winfield *Time magazine*, April 21, 2007 at <http://www.time.com/time/world/article/0,8599,1613390,00.html> accessed 11/12/08.

¹⁸ V. Poythress *Symphonic Theology*, 80.

¹⁹ Stein “*Parables*” 53.

Jeremias assumes that the parables were morality stories told by Jesus without much allegorization,²⁰ so that all the bits he finds hard to swallow were later additions. In other words, he uses his preconceptions to modify the parable to make it say what he wants, thereby proving the bimodality of the parable to begin with. The seed has indeed fallen on stony ground, and as G.K. Chesterton said about skinning the cat,²¹ Jeremias solves his problem by denying the seed.²²

Even should Jeremias be right about all his textual emendations,²³ he cannot but admit that he is behaving in precisely the way Jesus said his parables were designed to provoke. And if the message be about our reception, all efforts at emendation become a rejection of the message. But shooting the messenger does not make the message go away; there is no escaping the recursive trap Jesus has set for us.

Nor can we agree with the Church Fathers that the parables have an allegorical key that unlocks their riches for the church. This would assume that Jesus' parables are temporally and diachronically bimodal, so that we who live in the church age no longer find them double takes, a view which may have been true of Hebrew "*mashal*" but not of Jesus'. For during Jesus' ministry and up through the lifetime of both Paul and John, the Pharisees remained implacable foes, despite the "secret" of the church's existence being known for decades! So in these 70 years after his resurrection, while the remainder of the NT was being written, the bimodal nature of the parables remained synchronic and spatial, even if later on the Church claimed them as revealed and monomodal.

For even if we apply to the parables Paul's admonition that the mystery of the gospel was now revealed (Eph 1:9; 3:6), there remains the stubborn historical data that no single interpretation dominated. The parables were subjected to allegorical interpretation as early as Marcion, Irenaeus, Tertullian and Clement up through Origen, Ambrose and Augustine without any consensus. Even as esteemed an exegete as Augustine had his allegories constantly reworked throughout the medieval period, with many of the Reformers rejecting them outright, culminating in Jülicher's *pièce de la resistance*.²⁴ Why after 500 years of critical treatment, are there still textbooks written on the meaning of the parables? If then these secrets are so obvious, why is there neither historical nor critical agreement as to their meaning?

Whenever we encounter a stubborn question, a question eluding the brightest and best minds of several generations, we have to ask, as they say in mathematics, "Is it a well-posed problem?" I think looking for the secret meaning of a parable is an impossible task because it avoids the synchronic bimodality of its essential nature, it ignores recursion. We have been trained since the Enlightenment to believe that knowledge is objective, independent of the knower. Yet a recent theorem in theoretical physics,²⁵ which generalizes to parables as well (based on Georg Cantor's diagonalization method) argues that no more than one such objective truth-knower can exist. About 70 years ago, Kurt Gödel used recursion to make the same argument for math.²⁶ Any system that is complicated enough to have recursion, cannot have only fixed answers.

Ever since the Enlightenment, we have been ignoring recursion, insisting on positive creedal statements of faith, insisting on simple explications of Scripture, insisting on single meanings of parables,

²⁰ Joachim Jeremias "The Parables of Jesus" 89-96, Upper Saddle River: Prentice-Hall, 1954.

²¹ "The strongest saints and the strongest sceptics alike took positive evil as the starting-point of their argument. If it be true (as it certainly is) that a man can feel exquisite happiness in skinning a cat, then the religious philosopher can only draw one of two deductions. He must either deny the existence of God, as all atheists do; or he must deny the present union between God and man, as all Christians do. The new theologians seem to think it a highly rationalistic solution to deny the cat." (G. K. Chesterton "Orthodoxy" chap 2, 1908) at <http://www.leaderu.com/cyber/books/orthodoxy/orthodoxy.html> accessed 11/5/08.

²² Jeremias "Parables" 77.

²³ Jeremias "Parables" 113.

²⁴ Stein, "Parables" 42-54.

²⁵ P.-M. Binder, "Philosophy of science: Theories of almost everything" *Nature*, 455, 884-885 (16 October 2008) | doi:10.1038/455884a; 2008, at <http://www.nature.com/nature/journal/v455/n7215/full/455884a.html> accessed 11/5/08.

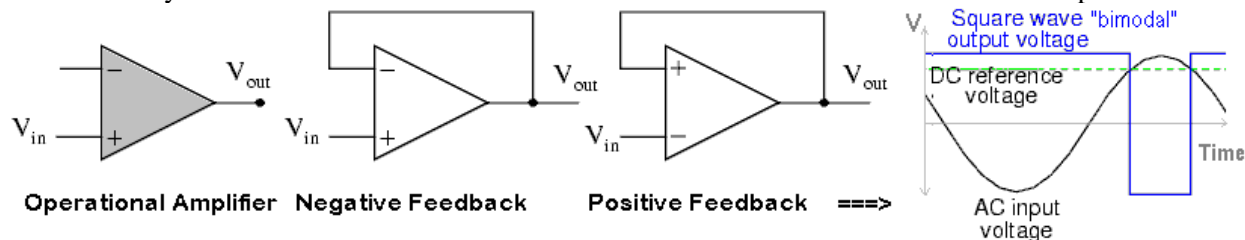
²⁶ Ernest Nagel & James R. Newman *Gödel's Proof*, New York: NYU Press, 1958.

which by definition, leave the knower out of the loop of knowledge. And the Modernist century of bloody atheist revolutions and Christian martyrs is the result of such ignorance of the basics of faith.

Van Til has cogently argued that the circularity of reason requires presuppositions.²⁷ In effect, he puts the knower back into the loop, claiming that only a Christian can reason toward Christian conclusions. (Imagine a scholarly journal on the Bible requiring all authors to acknowledge they were baptized Christians!) Michael Polanyi makes the same argument for science in his 1958 ground-breaking work “Personal Knowledge”, that only a scientist with proper internalized scientific rules can make scientific observations.²⁸ Jesus makes this the central method of his teaching, adapting the Hebrew diachronically bimodal “*mashal*” into his synchronically bimodal “*παροβολη*”.

Electronic analogues

This may not be the best way to introduce the topic of recursion and logic, but as even a brief scan of Gödel’s incompleteness theorem will demonstrate,²⁹ both math and logic have a steep learning curve before enlightenment. In contrast, one can purchase \$10 worth of computer chips and wires, plug them into the soundcard of a PC (or purchase an oscilloscope card) and quickly verify the following results visually. So here are a few electronic schematics and illustrations of the results of experiment.³⁰



An op-amp is short for “operational amplifier” and consists of five or ten transistors arranged with a battery to be a “perfect amplifier” (within the bounds of the battery voltage). If we put in a one volt signal at the input, we will get a much higher volt signal at the output. (You have all seen cars with over-amplified speakers that jump with the drum beats.) Now like Van Til, an op-amp must have a reference or ground to measure the signal against, so our op-amp has two inputs and a single output. The inputs are labeled + and -, and normally the signal goes into +, the ground reference into -, and the output is amplified by some specified amount. The minus side does the opposite, amplifying the signal in the negative direction. Now there are two ways to add recursion or “feedback” to our system, we can hook up the output to the + or to the -.

If we hook it up to the plus, called *positive feedback* then whatever little bit of signal comes out stronger and stronger until finally the op-amp “saturates” at the maximum voltage our battery provides. If we put in a downward signal, the output saturates at negative battery voltage, while if we put in an upward signal the output saturates at positive battery voltage. Contrariwise, if we hook up our recursion to the minus side, called *negative feedback* then any upward trend is reversed by the amplifier, forcing it back to zero. So negative feedback will keep the output very close to zero no matter what is being fed in. This is even quieter than unplugging it!

So making the analogy to the parables, Jesus is putting in positive feedback into his parables, so that the result is saturated at either +battery or –battery voltage. In contrast, Jeremias is putting in negative feedback, so that whatever Jesus says comes out pretty much the same bland result.

²⁷ Cornelius Van Til “*Apologetics*” 62, Philipsburg: Presbyterian and Reformed Pub Co, 1976.

²⁸ Michael Polanyi “*Personal Knowledge*” Chicago: U of Chicago Press, 1958.

²⁹ Kurt Godel 1931, “Über formal unentscheidbare Sätze der Principia Mathematica und verwandter Systeme, I.” *Monatshfte für Mathematik und Physik* 38: 173-98. see also http://en.wikipedia.org/wiki/Gödel's_incompleteness_theorems accessed 11/7/08.

³⁰ Tony R. Kuphardt *Lessons In Electric Circuits* chapter 8 “Operational Amplifiers” 2002 at http://www.opamp-electronics.com/tutorials/semiconductor_theory.htm accessed 11/9/08.

Continuing with this analogy, the human body and human psyche is designed for “homeostasis”, keeping itself running despite wide variations in food, temperature and external stimuli. This is clearly a negative feedback operation. Natural theology, or perhaps what Paul would call the “fleshly mind”, is homeostatic, negative feedback regulated. For example, if a tsunami should annihilate 250,000 people, our fleshly nature wants to rationalize our fear that God has our number, so we say soothing things to ourselves to avoid trembling under the blankets like children. Likewise, the book of Job has many examples where his three friends engage in negative feedback. Jesus’ goal then, is to use a positive feedback parable as a tool to break through our homeostatic natural religion.

For the sake of completeness, there are a few more tricks that feedback can accomplish. So far we have discussed “passive” electronic elements, things that produce an unvarying output. But if we put in our feedback an “active” electronic element, something that is dynamic, then we can cause our op-amp to begin “oscillating” like the annoying whistle when the microphone is held too close to the speaker. Let us consider only three.

A **time-delay** means that a blip on the input will take a while to register on the output, which gets fed back to the input, so that one blip becomes a long chain of blips whose frequency is that annoying whistle. With respect to parables it might mean that a certain motif keeps recurring at longer or wider scales, so for example, finding a lost sheep refers to a sinner, to a nation, to a world, and to the whole creation. Or the thief in the night refers to a recent, future and eschatological disaster. A **capacitor** is a bit like a rechargeable battery, and adds up all the electricity coming in or out, it integrates the current. Like shock absorbers in a car, it smoothes out all the bumps and wiggles in the input. With respect to parables, it would be like ignoring “colorful details” and going for the “general meaning” of the parable. An **inductor** is the opposite of a capacitor, responding to the derivative of the electricity. It will do nothing if the signal is smooth enough, but every bump or wiggle causes it to respond dramatically. With respect to parables it would be like emphasizing the small differences between synoptic gospels as indicative of hidden meaning. Very significantly, combining a capacitor with an inductor creates an internal struggle or what engineers call a **resonance**, producing an internal oscillator that will whistle without any input at all.

So in conclusion, the fact that Jesus uses recursion in his parables is guaranteed to produce either a bimodal response or a uniform mush depending on how the feedback is hooked up. Natural religion engages primarily in negative feedback, whereas several dynamic changes to the negative feedback can cause it to oscillate or “go unstable.”

Application

Positive Feedback

Now that we have defined some characteristics of recursion or feedback, we can analyze the parables to demonstrate their presence. Immediately we recognize “to him who has shall more be given” (Luke 19:26, Matt 25:29) to be an even clearer exposition of positive feedback than mine! Jesus makes it the punchline to the parable, and it gets repeated in two separate synoptics, despite Jeremias’ insistence that it is a later addition. Likewise organic growth can be seen as a natural description of positive feedback, for life leads to more and greater life, but death never does. So the parables about sower (Mark 4:2ff), seed (Mark 4:26ff), mustard seed (Mark 4:30ff), leaven (Matt 13:33) all involve positive feedback. Even when life appears dead, it causes even greater death (Luke 13:6ff). There are also mechanical analogues to positive feedback, where an action leads to a greater form of the same action. A patch sown on a small hole causes a bigger hole (Mark 2:21ff). Light expands to fill its surroundings (Mark 4:21ff). A measuring cup used to meter flour will result in even more in return (Mark 4:24ff). A blind man leading a blind man will cause even greater harm (Luke 6:39).

In contrast, some parables have the opposite “negative feedback” result: a profligate son rises from the pig trough to be dressed in finery (Luke 14:11ff); the collection of a fishnet is sorted (Matt 13:47ff). But for the most part, those that have a negative-feedback outcome usually involve a person who has made a choice, so that the bimodal lesson is incorporated into the character of the story, where

usually the person has made the wrong choice. This begins to look like negative feedback with an active element, which is capable of unstable or bimodal output, so we will call this category “relational” since it involves a human interaction in the story. Nevertheless, it should be apparent that Jesus is not only seeking a bimodal response through feedback, but in some cases, he is explicitly talking about positive feedback.

Statistics

We are now ready to collect some statistics on this tool. Numbering the parable list of Stein,³¹ we have 30 distinct parables (not counting synoptic parables twice) that are introduced in the gospels as parable. Another 17, he says, are clearly parables though not identified as such. As a control on our method, we also include whether there is a surprise “twist” on the parable, and whether the Pharisees would probably like or dislike the parable.

Table 1. Explicitly named Parables

| Explicit Parable | Twist | Pharisee | Feedback |
|------------------------|-------|----------|----------------------------|
| 1. Patch | + | - | + Mechanical |
| 2. Divided house | + | - | + Relational |
| 3. Sower | - | - | + Biological (- too) |
| 4. Light under bushel | + | - | + Physical |
| 5. Measure for measure | + | - | + Physical (or relational) |
| 6. Seed sown secretly | - | + | + Biological |
| 7. Mustard seed | + | + | + Biological |
| 8. What defiles | + | - | + Biological (microbial) |
| 9. Evil tenants | + | - | + Relational |
| 10. Fig tree | - | + | + Biological |
| 11. Wheat + tares | + | - | + Biological (Livelihood) |
| 12. Leaven | - | + | + Biological |
| 13. Hidden treasure | - | + | + Financial |
| 14. Pearl | - | + | + Financial |
| 15. Great net | - | + | - Livelihood |
| 16. Householder | - | + | + Financial |
| 17. Marriage feast | + | - | -/+ Relational |
| 18. Wedding garment | + | - | + Relational |
| 19. Talents | + | - | + Financial |
| 20. Physician heal | - | - | + Livelihood |
| 21. Blind + blind | - | - | + Relational |
| 22. Rich fool | + | + | -/+ Livelihood |
| 23. Watchful servant | - | + | -/+ Relational |
| 24. Thief breakin | - | + | -/+ Relational |
| 25. Barren fig tree | + | + | + Biological |
| 26. Place at feast | + | - | - Relational |
| 27. Lost sheep | - | + | - Relational |
| 28. Unjust judge | + | + | - Relational |
| 29. Pharisee+publican | + | - | - Relational |
| 30. Pounds | + | + | + Financial |

So we see from these parables that excepting “relational” parables, nearly every one of the parables contain an element of positive feedback intending to produce a bimodal response. Even the exceptions, the negative feedback “relational” parables, usually involve a human actor whose behavior is bimodal,

³¹ Stein “Parables” 22-24.

and who usually makes a bad choice. So in being a negative feedback parable about a positive feedback person, it remains a bimodal outcome. Also note that neither the “twist” nor the “anti-Pharisee” columns are nearly as consistent, though it would appear Jesus often uses a twist to disturb the Pharisees.

Now these were the parables that in at least one of the synoptics, was called a parable. There are an additional 17 where the word “parable” is not used, but where Stein considers it an obvious parable.

Table 2. Implicitly named Parables

| Implied Parable | Twist | Pharisee | Feedback |
|--------------------------|-------|----------|---------------------------|
| 31 Watchful doorkeeper | - | + | - Relational |
| 32 Unforgiving servant | - | + | -/+Relational |
| 33 Vineyard workers | + | - | - Relational |
| 34 Two sons | + | - | - Relational |
| 35 Wise/foolish servants | - | + | +/- Relational |
| 36 Wise/foolish virgins | - | + | +/- Relational |
| 37 Sheep and goats | + | + | + Relational |
| 38 Two debtors | - | + | + Relational |
| 39 Good Samaritan | + | - | - Relational |
| 40 Friend at midnight | - | + | + Relational |
| 41 The shut door | + | + | + Relational |
| 42 Great supper | + | - | +/- Relational |
| 43 Lost coin | - | + | + Finance / - Relational |
| 44 Prodigal son | + | - | -/+ Relational |
| 45 Unjust steward | + | - | + Financial / -Relational |
| 46 Rich man + Lazarus | + | + | + Eternal / - Relational |
| 47 Servants duties | - | - | - Relational |

The first thing we notice is that these all involve people in the story with a bimodal response. A slightly closer look shows that when an external variable is also introduced, such as a financial motive, or eschatological motive, it is invariably a positive feedback. But I think it significant that the implicitly named parables contain a less consistent positive feedback than the explicitly named parables, suggesting that our definition may be closer to the gospel writer’s intent.

Resonances

We have briefly mentioned how natural theology is negative feedback, homeostatic, and that Jülicher and Jeremias appear to use this method. There is another failure mode that bears mention. When we use feedback of either flavor, but invoke both a capacitor and an inductor, averaging and particularizing at the same time, we create an internal resonance. When Jeremias ignores some details because he believes the parable to have a single point, while simultaneously focusing on greek words that may or may not be found, say, in the gospel of Thomas, then he is inserting two active mechanisms in his feedback and it must go unstable. His analysis will give him all sorts of interesting output, but it is all an internal resonance, a product of the interaction of his tools. Random chunks of Homer would produce identical results because they are dominated by his method. The warning is that we cannot insert more than one active method in the feedback or else we have created a lot of exciting noise. If Jeremias wants to focus on word differences, he cannot gloss over or delete the text. And if he is going to gloss over or delete text, he cannot focus on minute differences. Doing both is simply unstable.

Parabolic Conclusions

So in conclusion, we argue that the defining characteristic of a parable is a bimodal reception. To insure bimodal reception with ambiguous language necessitates positive feedback recursion, either directly in the content of the parable, or through a bimodal character in the parable.

Miracles

Having developed all this apparatus, we now apply it to John's gospel. As is well known, John has no parables in his gospel, though early in his gospel he writes "This, the first of his signs, Jesus did at Cana in Galilee, and manifested his glory." (John 2:11a). So the first miracle was identified by John as a "sign". He identifies seven miracles in this probably last written of the gospels, five of which are unique to John, so it would appear he is trying to complement the synoptic gospels.³² And like the parables of the synoptics, the signs are intended for the disciple's instruction. "And his disciples believed in him" (John 2:11b).

Even earlier, John seems to be telling his inexperienced disciples that they will observe (not hear!) miracles "Because I said to you, 'I saw you under the fig tree.' Do you believe? You will see greater things than these." (John 1:50). So it appears that in John's gospel, the instrument of teaching the disciples is not the parable, not words, but the visible sign, the miracle.

This introduces one of many paradoxes in John's gospel that have plagued the modern analyses. Why is it that if the apostle John is the author, he never names himself in the entire gospel? Or if he is so concerned with baptism, he never has Jesus instituting that sacrament? Or if he is so concerned with bread and wine, he leaves out the Eucharist section of the Last Supper? Or if he introduces Jesus as the divine Word, he leaves out all parables as means of teaching and focuses on visible signs? It is almost as if John teaches obliquely, by omission.

Has this ever been done before or since? Of course. In the Song of Songs, the S-word is completely absent. Or in Hemingway's short story about abortion, the A-word never appears.³³ In both of these examples, we discuss the center of attention without mentioning it, perhaps because of societal taboos. But why would John do this to his gospel? What purpose is served in talking around the sacraments, or the authorship, or the parables? Why does he visually present a symbol when he could talk directly?

And in posing the question, we have answered it. Visible symbols are indirect speech in exactly the same manner that parables are indirect speech.³⁴ They require an interpretation, and in so doing, they are received bimodally. This is because there is some subtle positive feedback involved in symbols, which would be removed if the text were plain. What I would like to demonstrate is that in the all-important respect of the reception of the miracles, Jesus uses the same bimodal, positive feedback characteristic of parables. There are some obvious differences, the most obvious being that a parable can talk about itself, which a miracle, being silent, cannot do. Thus recursion is a little harder to understand, but there is no doubt that the bimodal response is the same, which I hope to demonstrate is also due to recursion. Thus, much of the insights gained from the more numerous parables can be applied to miracles. But the first big hurdle, is finding a definition of a miracle.

Genre / Definition

This may seem a silly exercise, attempting to put an action into a textual category. But if it is possible to use reception as a textual category, then it should be possible to define a miracle, or at least, a miracle story. Unlike parables, we have many examples of miracle stories done by the NT apostles in the book of Acts. Both major figures, Peter and Paul, as well as minor figures, Philip, Ananias, Stephen are all recorded as performing miracles. The OT also has numerous examples of miracles, particularly Moses, Elijah and Elishah, though Samuel, Isaiah, and many minor prophets are recorded as prophesying miracles even if they were less directly involved. With so many examples, defining a miracle ought to be an easy task.

³² Much scholarly debate on whether John knew of the synoptics or not when he wrote his gospel.@@@

³³ Ernest Hemingway "Hills Like White Elephants" in *The Complete Short Stories of Ernest Hemingway*, New York: Scribner 1998. review at <http://www.cliffsnotes.com/WileyCDA/LitNote/Hemingway-s-Short-Stories-Summaries-and-Commentaries-Hills-Like-White-Elephants-.id-10.pageNum-50.html> accessed 11/12/08.

³⁴ Recall Snodgrass' definition of parables as "indirect communication".

As Poythress analyzes, defining miracles turns out to be a lot harder today than it was 300 years ago.³⁵ The Enlightenment changed the view from “visible manifestations of God’s power” to “extraordinary acts of nature”.³⁶ Then Hume got to work on “extraordinary” and concluded it was a set that excluded all members.³⁷ Hume argues that all of science is inductive, or generalizations built up from many observations. Therefore the supernatural or miraculous or extraordinary were events that had no previous observations. But then by definition the set of miracles for today had no members because we have excluded all previous observed events. So what previous generations called a miracle was either repeated and therefore not miraculous, or was a one-time event more probably attributed to deluded witnesses.³⁸

As Whately, Berkouwer, Van Til, Poythress, Geisler and most theists respond,³⁹ Hume’s problem is that his definition excludes the phenomena he is trying to describe! In our terminology, his definition is an example of negative feedback, characteristic of homeostatic natural religion. Whitehead, Lewis, Barbour and Jaki go further,⁴⁰ arguing that Hume’s dogmatic exclusion of miracles actually destroys science, since science needs a law behind the law in order to make progress. (That is, if the regularity observed is an ironclad law with no exceptions, there is nothing for experiment to do.) This view is given credence by historian Brooke who argues that the explosion of science in the West came from the ability to formulate hypotheses in an atmosphere of possibility enhanced by the Ban of Paris of 1245.⁴¹

These critiques have led modern atheists to propose numerous alternatives to Hume’s “hard” dogmatic assertions, suggesting a “soft” improbability definition of miracles.⁴² We will expand the consequences of this approach in the next section, but first we want to look at the opposite problem of some Christians who argue all of life is miraculous. Everything is a miracle. This position is sometimes called occasionalism, and it results in the same difficulties as Hume’s “hard” definition—science is banned and faith diminished. After all, how could the disciples put their faith in Christ if Cana’s wine was no different than any other wine from Galilee?

As an intermediate position, Poythress suggests replacing this definition with one that puts all acts of nature under the direct control of the Creator, in which case miracles are those acts that demonstrate more intensely the power of God.⁴³ This definition is headed the right direction, recognizing that we must be a true theist to see miracles, we must be a Christian to see the actions of a Christian God, for an atheist will not see the miracle. It is also a recognition of recursion, and implicitly a bimodal definition. But at the same time, it is a vague definition in danger of making everything miraculous, and thereby destroying the excitement of naming miracles. To his credit, Poythress recognizes this, when he uses vagueness to his advantage in the next chapter, where he talks about reconciling the two extremes of Charismatic and anti-Charismatic Christians.⁴⁴ While ambiguity is an advantage to a reconciler, it is a disadvantage to a scholar, which causes Poythress to posit two “maxims” criticizing definitions that are too vague.⁴⁵ So he is aware of the difficulties caused by a vague description, he just sees no purpose in refining it.

³⁵ Vern S. Poythress *Symphonic Theology*, 101-108, Philipsburg: P&R 2001.

³⁶ For example, see Spinoza @@@

³⁷ David Hume *Essays and Treatises on Several Subjects vol. II*. London: Caddel 1777 at <http://ebooks.adelaide.edu.au/h/hume/david/h92e/> accessed 11/7/08.

³⁸ Christopher Hitchens in debate at Westminster seminary, 10/30/08 repeated nearly verbatim the same argument at http://procrustes.blogtownhall.com/2008/10/31/hitchens_vs_wilson_debate.thtml accessed 11/5/08.

³⁹ Whately, Berkouwer, Van Til, Poythress, Geisler

⁴⁰ Whitehead, Lewis, Barbour, Jaki

⁴¹ Brooke

⁴² Geisler

⁴³ Vern S. Poythress “Symphonic Theology” 105, Philipsburg: P&R, 2001.

⁴⁴ *Ibid*, 111.

⁴⁵ *Ibid* 69-79.

That is, if a miracle points us to God, then what does it matter if it is spectacular or humdrum, whether it is walking on water, or receiving a cup of cold water? To whom are we proving that something thought ordinary was actually extraordinary?

St John tells us.

“Now Jesus did many other signs in the presence of the disciples, which are not written in this book; but these are written so that you may believe that Jesus is the Christ.” (John 20:30-31a) The purpose of the miraculous sign, like that of teaching the disciples, is for our faith.

Perhaps parables expanded or explained faith, whereas as miracles compelled faith, so that they are intended for different purposes; perhaps one might become a Christian because of a miracle, and grow as a Christian because of a parable, but not the other way around? St Paul explains that they are nearly the same thing. “For Jews demand signs and Greeks seek wisdom, but we preach Christ crucified...” (I Cor 1:22-23a). Paul says that the reception varies between Jew and Greek as to what they are looking for, whether wisdom or signs, parables or miracles, and he isn’t going to do either. Significantly Jesus did, giving both groups what they searched for, but bimodally. Even today, it is never clear which approach will reach a man, some respond to logic, others to miracle. But neither approach can “prove” or “force” a man into the kingdom, they are bimodal.

So to answer Poythress’ restraint, a better definition of miracle is needed for both apologetic and didactic purposes. As evangelists, we need to recognize the power of miracles to convince men to believe in Christ, just as the Christ did at Cana. As pastors, we need to use the power of miracles to build the faith of the church. As a church we need the power of miracles to proclaim the coming of the kingdom to an apostate nation. And as a nation, we need to harness the power of miracles to transform a fallen world. All of these tasks then, will require a better definition of the miraculous.

David Hume

David Hume, the apostate son of a Presbyterian minister, wrote an analysis that has been so very dominant over the past 200 years⁴⁶ that we need to examine it carefully. His argument is based on probabilities with respect to natural law.⁴⁷

“A miracle is a violation of the laws of nature; and as a firm and unalterable experience has established these laws, the proof against a miracle, from the very nature of the fact, is as entire as any argument from experience can possibly be imagined. Why is it more than probable, that all men must die; that lead cannot, of itself, remain suspended in the air; that fire consumes wood, and is extinguished by water; unless it be, that these events are found agreeable to the laws of nature, and there is required a violation of these laws, or in other words, a miracle to prevent them? Nothing is esteemed a miracle, if it ever happen in the common course of nature. It is no miracle that a man, seemingly in good health, should die on a sudden: because such a kind of death, though more unusual than any other, has yet been frequently observed to happen. But it is a miracle, that a dead man should come to life; because that has never been observed in any age or country. There must, therefore, be a uniform experience against every miraculous event, otherwise the event would not merit that appellation. And as a uniform experience amounts to a proof, there is here a direct and full proof, from the nature of the fact, against the existence of any miracle; nor can such a proof be destroyed, or the miracle rendered credible, but by an opposite proof, which is superior.”

We note here how smoothly Hume goes from establishing a law by induction, and then demanding that no exceptions to it be allowed, which is a deduction! Logically speaking, an inductive law is merely a probability of occurrence, something along the lines of “I have observed 5000 men die who never came to life again, therefore the probability of a resurrection is less than 1:5000.” Clearly, an

⁴⁶ Even that great philosopher of the 19th century, Immanuel Kant, writes of Hume, “*David Hume* was the very thing that many years ago first interrupted my dogmatic slumber...” (Immanuel Kant “Prolegomena to Any Future Metaphysics” transl. Gary Hatfield, Cambridge: Cambridge U. Press, 2004. at <http://www.cambridge.org/catalogue/catalogue.asp?isbn=9780521535359> accessed 11/7/08.)

⁴⁷ David Hume, “Inquiry”

inductive law is only as strong as the number of examples one can adduce, and will never achieve the certainty of a deductive law.

Claiming to improve the conclusions by adding the observations of others to mine, introduces all the uncertainties Hume attributes to fallible humans! That is, if I am making angel food cake and one out of 12 egg yolks gets into the whites, my recipe fails. Adding 100 eggwhites will not make it a better cake, especially if the probability of getting yolks in it is greater than 1%.⁴⁸ For if even one of Hume's many sources lies, then the entire inductive argument fails. Any effort to improve the induction with more observers will eventually lead to less, not more certainty.

In addition to this sleight-of-hand in Hume's argument, also note that he excludes from his data any support for the opposite conclusion, stating about resurrection "because that has never been observed in any age or country." Since the gospels alone record three such resurrections (funeral at Nain, Lazarus, Jesus) with multiple attestations of each, Hume is clearly overstating his statistics. He would be better off talking only about the sun rising in the morning than resurrections. But even in the case of the dawn, there can be no proof that tomorrow the sun will rise. This is because pure induction lacks the metaphysical foundations to achieve a deductive principle; by construction, an induction cannot say anything deductive about the future, which it has never observed. So there are multiple reasons for rejecting Hume's argument as stated, though we might be able to recover a "probability" argument, what Geisler calls a "soft" argument against miracles.⁴⁹

That is, can we say that science is in the business of calculating probabilities, and if something is highly probable, it is a "law", whereas if it has low probability, it is not? Conversely, can we say a miracle would be something highly improbable, but if it is only slightly improbable it should not be treated as miraculous?

This appears to be Hume's intent, despite his polemic in the paragraph above, because he goes on to compare the probabilities of a false representation versus a miraculous event.

"The plain consequence is (and it is a general maxim worthy of our attention), 'that no testimony is sufficient to establish a miracle, unless the testimony be of such a kind, that its falsehood would be more miraculous, than the fact, which it endeavors to establish; and even in that case there is a mutual destruction of arguments, and the superior only gives us an assurance suitable to that degree of force, which remains, after deducting the inferior.' When anyone tells me, that he saw a dead man restored to life, I immediately consider with myself, whether it be more probable, that this person should either deceive or be deceived, or that the fact, which he relates, should really have happened. I weigh the one miracle against the other; and according to the superiority, which I discover, I pronounce my decision, and always reject the greater miracle. If the falsehood of his testimony would be more miraculous, than the event which he relates; then, and not till then, can he pretend to command my belief or opinion."

So Hume is proposing a test. Calculate the probability of a miracle, calculate the probability of lying testimony. Go with whichever is the greater. Following his prescription, let's try this out on, say, the resurrection at Nain. "Soon afterward he went to a town called Nain, and his disciples and a great crowd went with him." (Luke 7:11ff).

Let's suppose that Luke, as a medical doctor, has personally seen 7 patients a week die on him, and his career lasted 30 years. Then he would have observed 10,000 patients die who did not get resurrected. That puts his personal probability of witnessing a resurrection at 0.01%.

When Luke records that the man was resurrected, a "great crowd" was around Jesus, so we have multiple observations. We have no number, but I would imagine over 1000 would be a great crowd for Galilee. What is the likelihood that Luke lied given all these observers? Relatively low, especially if it were likely for him to get in trouble, so let us assume that there was a 10% chance they would contradict Luke if he lied. Then the probability that Luke got away with a lie would be $(0.1)^{1000}$, which has 96

⁴⁸ Consider the difficulties of melamine poisoning in a Chinese food exports. Adding great numbers of suppliers together is more likely to result in a poisoned product, not less.

⁴⁹ Norman Geisler. "Miracles" 27.

zeroes between the decimal point and the percent sign. Clearly it would be more likely that the man was resurrected.

Well perhaps Luke didn't lie, but the crowd agreed to make up this story and tell it to Luke. What is that probability? Again, let's use our 10% probability of a single man lying, then the probability of the entire crowd agreeing to lie, is the same astronomical number we calculated in the previous paragraph.

Well perhaps there was a mob effect, someone started a lie and everyone chimed in? Well all it would take to stop the mob, would be one truth-teller. So what is the probability that there was not a single truth teller? That is the same calculation again, astronomically small.

Well, can we say it the other way, what is the probability that all 1000 people were telling the truth? This is a bit fancier, but if lying is 10%, than truth-telling is 90%. So the probability of all of them telling the truth is only 0.9^{1000} , or 47 zeroes between the decimal point and the percent sign. Small, but not as small as everyone lying. Yet even this supposed support is irrelevant to our discussion, because we are trying to prove the likelihood of a lie, not of a true statement, which surprisingly, are not easily related.

So given the numbers we have used, it is simply not true that a miracle is much lower probability than a lie. To change our results, we would either have to assume much greater lying among the general public, or many more funerals observed by Luke, which as you can see, are hardly likely in common experience. Or we can attribute it to some conspiracy plot, a perennial favorite.⁵⁰ That is, in our discussion so far, we have assumed that an individual's decision to lie was independent of all the other individuals. We have made the assumption of uncorrelated probabilities. But what happens if they are correlated? For that analysis, we have to leave "frequentist statistics" behind, and look to a Presbyterian minister.

Thomas Bayes

Thomas Bayes was as devout as David Hume was apostate, publishing a defense of God a generation before Hume. But he is principally known for developing a calculus of probabilities and a theorem that bears his name, published posthumously in 1764. Despite some modest success, his theorem remained quite obscure until the last few decades of the 20th century, when physicist Edwin Jaynes began to develop an alternative to the "uncorrelated random statistics" approach above. Over the past 50 years, his pioneering work has changed the whole face of statistics, and made much of Hume's mathematical (in distinction from his philosophical) argument irrelevant. The key theorem can be stated as

$$P(A|B) = P(B|A) [P(A) / P(B)]$$

Where $P(A|B)$ is to be interpreted, "the probability of A given B". Using Hume's terminology, the probability of a miracle given the stories can be computed from the probability of the stories given a miracle times the ratio of probable miracles to probable stories.

The key thing about this theorem, is that it breaks a not-well understood calculation into three parts, two of which are simpler (a bit like integration by parts). One can continue this process until the problem is in terms of things one can calculate, all the while avoiding making assumptions about the correlations between the pieces. Should there be a conspiracy theory that correlates the pieces, then we can calculate its probability too, without assuming it.

Suppose that there was a plot among the disciples to fake the resurrection at Nain. With a bit of planning they could arrange a fake widow, a fake funeral, maybe even a fake doctor. Jesus shows up and *voilà*, a resurrection that 1000 people see. What is that probability of a resurrection given a nefarious plot? Pretty high it would seem.

Bayes wouldn't be so hasty. He would ask, "Given all the information on the disciples known both before and after Nain, would it be likely that they would die for an elaborate lie that they had invented? Look at the right-hand side of that theorem. What is the probability of a nefarious plot given a resurrection? Pretty low it would seem. And the ratio of probable stories to probable plots? Not enough to make up the difference." And once all the factors are worked out, one realizes that conspiracy theories

⁵⁰ Hugh J. Schonfield, *The Passover Plot*, Rockport: Element, 1996.

have their own improbabilities that can't be just assumed. This is basically the argument of modern apologists such as Josh McDowell,⁵¹ or N. T. Wright.⁵²

Let me say this one more way. A strange event can be made more probable by invoking a conspiracy, a design, a coherence bigger than the event itself. But for such a system to be more probable, the coherence must itself be explained, not assumed as Hume does. That's what Bayes theorem calculates.⁵³

Does this mean that Bayes theorem can prove the resurrection? Most certainly not. But it does mean that specious arguments like Hume's can be dismantled piece by piece and examined for consistency. In the end, however, even N. T. Wright has to make a value judgment as to whether the character of an apostle is such that he might lie about an important event. But it no longer has the heretical appeal that made David Hume the toast of Paris before *le deluge*.

C S Lewis

We need to clear up one more misconception before tackling our assigned text. We have defined a miracle as an improbable event, which also seems to be the way Hume implied it. This says nothing about the method of the improbability, whether mediated or immediate, whether violating laws of nature or not. Suppose I go into a casino and walk out with a million dollars. Or suppose the governor of Georgia prays for rain to break a drought and it rains.⁵⁴ By my definition, that would be a miracle. Unfortunately, neither Lewis nor Geisler think that this merits the moniker "miraculous", because it doesn't involve breaking any "laws of nature."⁵⁵

This reliance on "laws of nature" is primarily a philosopher's trope, rather than a practitioner's rule, as Polanyi argues.⁵⁶ For if "laws of nature" are strictly statements about probability (Hume's argument!) then the one and only criteria for a miracle is improbability, not a violation of a law. And improbable events can occur in time as well as space, they can be uncanny timing as much as they can be uncanny forces. Once we realize that a force is merely a spatial derivative of an energy, whereas timing is a temporal derivative (usually involving energy), then we can see that the modern physics emphasis on the equivalence of space and time means they are the same thing. There need be no further argument about mediation or other unnecessary qualifications that would exclude Georgia's rainfall from being a miracle because they are two aspects of the same reality. Heisenberg's Uncertainty relation for observed

⁵¹ Josh McDowell *Evidence that Demands a Verdict* San Bernardino: Here's Life, 1979.

⁵² N. T. Wright *Resurrection of the Son of God* Minneapolis: Fortress Press, 2003.

⁵³ Edwin T. Jaynes, 'A Backward Look to the Future' in *Physics and Probability*, W. T. Grandy, Jr. and P. W. Milonni, Cambridge: Cambridge U. Press, 1993, says "If one formulates all such problems by the standard Bayesian prescription, one has automatically all their useful results in improved form. The difficulties people seem to have in comprehending this are all examples of the same failure to conceptualize the relation between the abstract mathematics and the real world. As soon as we recognize that probabilities do not describe reality--only our information about reality--the gates are wide open to the optimal solution of problems of reasoning from that information." at <http://bayes.wustl.edu/etj/articles/backward.look.pdf> accessed 11/10/08.

⁵⁴ Associate Press "Ga. Governor turns to prayer to ease drought" 11/13/07 at http://www.usatoday.com/weather/news/2007-11-08-georgia-prayer_N.htm accessed 11/10/08.

⁵⁵ C.S. Lewis *Miracles* 208, London: Centenary Press, 1947. says "I find it very difficult to conceive an intermediate class of events which are neither miraculous nor merely 'ordinary'...It seems to me, therefore, that we must abandon the idea that there is any special class of events (apart from miracles) which can be distinguished as 'specially providential'." "Norman L. Geisler *Miracles and the Modern Mind* 14, Grand Rapids: Baker, 1992. says, "Theists have defined miracles in either a weak or a strong sense. Following Augustine, some define a miracle as "a portent [that] is not contrary to nature, but contrary to our knowledge of nature" Others, following Aquinas, define a miracle in the strong sense of an event that is beyond nature's power to produce, that only a supernatural power (God) can do. This latter sense is the meaning of miracle as used in this book. In brief, a miracle is a divine intervention into the natural world. It is a supernatural exception to the regular course of the world that would not have occurred otherwise."

⁵⁶ Michael Polanyi *Personal Knowledge* 1958.

quanta can be equally well expressed as a space-momentum, or an Energy-time relation, so also miracles are like Heisenberg, an expression of Improbability in whatever coordinate system is convenient.

Realizing that was a metaphysical argument with limited appeal, let me make the same point with Lewis' argument, showing that we do not need to elucidate the "force" or the "power" to demonstrate a miracle, all we need is the improbability.⁵⁷ Instead of physics, let us do physic, the science of medicine.

The human body is such a complicated thing, that all healing is only statistically understood. As David Hume said of science is actually more accurate for medicine, all we really have are the statistics of applying bandaids and waiting to see what happens. The doctor can administer medication, but he cannot heal. The gynecologist can terminate a pregnancy, but he really can't make a pregnancy (or he would be fantastically wealthy!) As sub-creators, we have the power to kill but not to give life, and thinking that the relatively high probabilities (10% or so) of pregnancies that result under the best of circumstances is a law of nature is to make Hume's error all over again. So there are no "laws of medicine", only statistical averages.

But then to turn around and say that the lack of laws of medicine, excludes miracles of healing because one cannot break a non-existent law, is invalid. Or in a similar vein, because there are so many mediated, psychosomatic, spontaneous mechanisms behind healing we don't understand, a healing need only employ one of these mechanisms to prevent it from being a miracle. This is very much like assuming conspiracies will explain resurrections, for it covers up one unknown with another unknown that is more palatable, as if closing our eyes will make monsters disappear. Once again, Bayes theorem can be fruitfully applied (and in point of fact, NIH now requires it for medical trials) to healings as well. All a healing needs to be called a miracle is a certain threshold of improbability, which is magnified if it comes in close conjunction to a prayer or spiritual event.

Any other criterion for separating miracles from the merely providential, implies a level of understanding that we do not possess. It flatters our science by elevating our ignorance to the level of laws. If Lewis struggles to know whether the weather during the Dunkirk⁵⁸ evacuation was miraculous, he need only consult a meteorologist who can tell him the probability of three consecutive days of calm at this time of the year, and then multiply by the probability that an evacuation would occur on any particular day of the year. We're doing Bayes theorem again, and if it is improbable, why then it is miraculous. Which is what Lewis says "In calling them miracles we do not mean they are contradictions or outrages; we mean that, left to her own resources, she [Nature] could never produce them."⁵⁹ And each day has its calculation of probabilistic resources.

Why am I so adamant on this point? Because if we do not insist on simple improbability, we are left with many arbitrary criteria such as those listed by Geisler, which would allow for most miracles to be dismissed for lack of some necessary evidence, when in fact, the evidence is often both clear and decisive.⁶⁰

Vern Poythress

Finally we are able to address the question Poythress raised. Can all of life be considered miraculous, or just some extraordinary events?

If God is indeed involved in every aspect of running the universe, then there are no miracles, everything is coherent and planned. Everything that happens is probable because everything is part of the conspiracy. Since, however, Christians still talk of miracles while holding to a belief in an omnipotent God, then something else must be meant by "miracle". Perhaps something like "given a universe exactly the same but without an presently active God, the probability for this event is so miniscule as to qualify as a miracle, which then the belief in God makes certain."

⁵⁷ I think Lewis is inconsistent, first adopting then abandoning improbability. (Lewis *Miracles* 165-168.)

⁵⁸ Lewis *Miracles* 208-9.

⁵⁹ Lewis *Miracles*, 75.

⁶⁰ Geisler "Miracles" 111-126.

Now there are some subtleties to this definition that may require elaboration. Let us use Poythress' example. I'm thinking of wiggling my fingers, and lo-and-behold I observe my fingers wiggling.⁶¹ Is it a miracle that my fingers wiggled just immediately after I thought about it? (Change the word from "thought" to "prayed" and you will immediately see the point.) A young Christian might reason, "No, because even in a universe without God, I would be able to wiggle my fingers." But a more mature Christian might say, "Yes, the fact that I am here watching my hands instead of dying from a drug overdose at 16 is a miracle." And the even more mature Christian might say "Yes, the miracle of self consciousness is completely beyond science, as is brain development, embryonic differentiation, cell division, fertilization, homeostasis, the first cell and the entropy of the universe. Truly what is man that you are mindful of him?" All these other smaller miracles, Bayesian statisticians call "priors". So a slightly more rigorous definition of a miracle might be "Given a universe exactly the same but without God's present interference, and excluding miracles that occur only in the priors, a sufficiently improbable event is a miracle."

We have tried to eliminate "occasionalism" from our definition⁶², the view that God is causing every single action around us, by asking what is the probability of an event now "given what we know about the past"? It is important that we invoke causality, because many events go from improbable to probable once they have happened. Buying one lottery ticket and winning the lottery is an improbable event of 1:1,000,000 before I win it, but 1:1 after I win it. Dembski explains that what makes it improbable is that it is both complex and specified information.⁶³ In other words, general prayers "God bless Aunt Susy" don't generate miracles because they are not specific. And "guide the surgeon during the surgery" aren't complex enough (every action the surgeon does is guided.) But when we pray for something both complex and specific in advance, then the probability of an answered prayer goes way down. Its answer is therefore miraculous.

And in a sense, this is what Poythress is trying to capture in his definition of miracle. If it explicitly demonstrates the power of God (because it implicitly is improbable) then it is a miracle. But what happens when it is improbable, but no one recognizes it? (If a tree falls in the forest...?) Poythress would say it was not a miracle, but I would claim otherwise. It is necessary to separate the miracle from the reception of the miracle, just as we needed to do so with parables. A miracle is a demonstration of God's power that like a parable, is bimodally received. And if it is bimodally received, we should look for the evidence of recursion, to see if the "signs" in John's gospel show evidence of positive feedback.

Statistics

Applying the same analysis to the 7 miracles of John's gospel, we note that some of the miracles were done in the privacy of his inner circle of disciples, so we have no real reading of how they would have been welcomed by the Pharisees or those John called "Jews". At the wedding feast at Cana many of them were probably present and none are recorded as rejecting the wine, so it would seem a likely positive. Of course, they may have been ignorant of the miracle until much afterwards too. Likewise the walking on the water had no Pharisees present, though the next day they responded ambiguously "Rabbi, when did you come here?" (6:25). Subsequent interaction shows that they were really upset with Jesus, so we assign that a negative in the third column.

But the real difficulty comes in assigning the feedback. Healings appear to be a reversal of something deadly, so in that sense they are negative feedback. In several cases the healing proceeded by stages, with increasing effectiveness, which would be a form of positive feedback. Compare the official's son (Jn 4:24ff) with the epileptic son (Mark 9:14-29) where belief correlates to healing. This has become such a staple of faith-healers that we may overlook its positive feedback character, that miracles become more effective, as belief in Jesus' ability to do miracles increases.

⁶¹ Vern Poythress "Symphonic Theology" 112.

⁶² Wikipedia at <http://en.wikipedia.org/wiki/Occasionalism> accessed 11/13/08.

⁶³ William Dembski "The Design Inference"

Table 3. Miracles in John's Gospel

| Miracle | Twist | Pharisee | Feedback |
|----------------------------------|-------|----------|-----------------------------|
| 1. Water into wine 2:1-11 | - | +? | + quantity, taste, relation |
| 2. Official's son healed 4:46-54 | - | - | - healing, + relation |
| 3. Invalid healed 5:1-18 | + | - | - healing, + relation |
| 4. Feeding 5000 6:1-15 | - | - | + food |
| 5. Walking on water 6:16-25 | - | - | + gravity |
| 6. Blind man healed 9:1-41 | + | - | + healing |
| 7. Lazarus raised 11:1-44 | + | - | + healing |

This table would be rather inconclusive with only 7 members if it were not for the many parables that demonstrate the principles. But we can see that nearly all of the miracles were rejected by the Pharisees, and that most of the miracles demonstrate some aspect of positive feedback.

Since the first miracle is labeled "first of his signs" and becomes the paradigm for the ones that follow, let us look at it in more detail.

The Text

¹και τη ημερα τη τριτη γαμος εγενετο εν κανα της γαλιλαιας και ην η μητηρ του ιησου εκει ²εκληθη δε και ο ιησους και οι μαθηται αυτου εις τον γαμον ³και υστερησαντος οινου λεγει η μητηρ του ιησου προς αυτον οινον ουκ εχουσιν ⁴και λεγει αυτη ο ιησους τι εμοι και σοι γυναι ουπω ηκει η ωρα μου ⁵λεγει η μητηρ αυτου τοις διακονοις ο τι αν λεγη υμιν ποιησατε ⁶ησαν δε εκει λιθιναι υδριαι εξ κατα τον καθαρισμον των ιουδαιων κειμεναι χωρουσαι ανα μετρητας δυο η τρεις ⁷λεγει αυτοις ο ιησους γεμισατε τας υδριας υδατος και εγεμισαν αυτας εως ανω ⁸και λεγει αυτοις αντλησατε νυν και φερετε τω αρχιτρικλινω οι δε ηνεγκαν ⁹ως δε εγευσατο ο αρχιτρικλινος το υδωρ οινον γεγενημενον και ουκ ηδει ποθεν εστιν οι δε διακονοι ηδεισαν οι ηντληκοτες το υδωρ φωνει τον νυμφιον ο αρχιτρικλινος ¹⁰και λεγει αυτω πας ανθρωπος πρωτον τον καλον οινον τιθησιν και οταν μεθυσθωσιν τον ελασσω συ τετηρηκας τον καλον οινον εως αρτι ¹¹ταυτην εποιησεν αρχην των σημειων ο ιησους εν κανα της γαλιλαιας και εφανερωσεν την δοξαν αυτου και επιστευσαν εις αυτον οι μαθηται αυτου

On the third day there was a wedding at Cana in Galilee, and the mother of Jesus was there. Jesus also was invited to the wedding with his disciples. When the wine ran out, the mother of Jesus said to him, "They have no wine." And Jesus said to her, "Woman, what does this have to do with me? My hour has not yet come." His mother said to the servants, "Do whatever he tells you." Now there were six stone water jars there for the Jewish rites of purification, each holding twenty or thirty gallons. Jesus said to the servants, "Fill the jars with water." And they filled them up to the brim. And he said to them, "Now draw some out and take it to the master of the feast." So they took it. When the master of the feast tasted the water now become wine, and did not know where it came from (though the servants who had drawn the water knew), the master of the feast called the bridegroom and said to him, "Everyone serves the good wine first, and when people have drunk freely, then the poor wine. But you have kept the good wine until now." This, the first of his signs, Jesus did at Cana in Galilee, and manifested his glory. And his disciples believed in him. (John 2:1-11 ESV)

Redaction Analysis (Criticism)

There has been much debate about whether John the apostle was the author of this gospel, with most continental scholars doubting it, and most evangelicals convinced of it.⁶⁴ Tradition from Clement of Alexandria quoting Polycarp attributes this gospel to John the apostle. Likewise there are numerous evidences from within the gospel that John is the author, despite the gospel never naming its author. The

⁶⁴ Morris "John" 26-35.

intimate knowledge of the inner circle suggests that it was either Peter, James or John that is the author, and by elimination, John is the only candidate left. In a similar manner, John the Baptist is addressed as simply John, which would suggest that the author didn't need to distinguish because there was no confusion. He also referred to Mary as "the mother of Jesus" as if it were the proper title, which is appropriate for the disciple who at the cross, was told to take Mary as his mother. So we have ample evidence for authorship, but it is such a different gospel from the synoptics that there is little we can do with source criticism.

The story and language are so self-consistent, that even Bultmann concluded that this story must have been lifted from a collection of miracle stories in its entirety. The evidence he adduces is primarily metaphysical (the non-existence of miracles) rather than textual. His strongest point is that John calls this the first of his signs, and calls 4:54 the second, but apparently leaves out 2:23 from the list. From this he argues that the miracles were added into the script at a later point. He also finds parallels with a festival to Dionysos where fountains ran with wine, suggesting that this was the source of the miracle story in the collection.⁶⁵ But later commentators point out that the parallels are not very strong, since water plays no part in the Dionysos rituals, there is no transformation, merely the supply of wine, which otherwise has a very different role in the pagan rituals.⁶⁶ It seems pretty thin gruel to me.

In contrast, the miracle is so closely associated with the calling of the first disciples, 1:35-51, that even Bultmann includes this travel narrative in the block of material he wants to insert. I think the general conclusion is that the entire passage 1:35-2:11 form a tightly integrated travel narrative and miracle story without evidence of later redaction.

More significant for redaction analysis is the use of symbols in the entire gospel. Was John deliberately introducing symbols into his story? Why did he select this miracle which doesn't show up in the synoptics for the first "sign"? There is no doubt that John has a specialized vocabulary that is superficially transparent, but conceals depths of profundity. We have already mentioned his singular omissions and attributed it to a form of indirect speech with analogy to parables. The difficulty of understanding what he meant makes analysis of nuance secondary, so we postpone the redaction analysis until afterwards.

Rhetorical Analysis

The miracle story must contain enough information to explain the miraculous nature. It is not enough to say "then a miracle occurred", for invariably the audience will reject it as an embellishment. Rather, the miracle has to be such an integral part of the story, that the entire story must be rejected in order to reject the miracle. I think this is the force of Lewis' and Geisler's argument that a miracle must be "natural", it must fit our understanding of the story, of the characters, of the whole picture.⁶⁷ And this requires that the miracle be a portion of a rhetorical structure, an essential component of the narrative.

So in verse 1 we find the *setting*—Cana in Galilee. Verses 1b-2 the *preliminary incident*—a wedding with Jesus, Mary, and disciples invited. Verse 3 the *occasioning incident*—no more wine. Verse 4 the *complication*—Jesus seems unhappy. Verses 4-8 is the extended *climax*—a series of instructions carried out by the servants. This can also be seen as a two-part *proposal-execution* section. By filling in the details it not only makes the tension greater, but also makes the miracle less explainable. Verse 9 is the *resolution*—the wine was replenished. Verse 10 are *additional incidents*, but they also amplify the resolution, for not only was the wine replenished, it was a secret, and a even better than the wine that ran out. Verse 11 is clearly *commentary*—an explanation of what the story meant.

Notice how the miracle is the resolution of the story, so that removing it would destroy the story. Also notice how the miracle keeps echoing for several more verses, continuing to change the wedding, change the steward, change the bridegroom, change the disciples. Then after it has changed the disciples, note how it interprets the beginning of the story, the purification jars, the trip to Galilee, the message to

⁶⁵ Bultmann "John" 114.

⁶⁶ Brown "John" 102.

⁶⁷ Lewis "Miracles" 115-120. Geisler "Miracles" 101-9.

Nathaniel. And then finally, note how calling it “the first of his signs”, the miracle echoes through the rest of the gospel to the final, and most miraculous sign, the resurrection. So clearly, the rhetorical structure doesn’t just contain and depend on the miracle, but the miracle contains and directs the rhetorical structure. They are inseparable.

Historical Analysis

If this miracle story were simply a trope, a fanciful story intended to make a point, then the miracle would lose all of its power. If a parable gains its power by being an explanation of opaque human nature using hypotheticals, then a miracle gains its power by being an inexplicable event of transparent human history. If the history be hypothetical, so also the power of the miracle. Only when a miracle really actually happened, does it jolt us with the possibility of it happening again. So we look at the story John gives us for signs of its authenticity, its historicity. What is it about this narrative that rings true?

The Setting and Dialogue

There really is a city called Cana, it is in Galilee, and it is about 3 days journey⁶⁸ from the Jordan where John places Jesus at the end of chapter 1.⁶⁹ Further, when John refers to the disciples, he uses the phrase *καὶ οἱ μαθηταὶ αὐτοῦ* “and his disciples” which is precisely how a loose association of newly recruited men would call themselves, rather than “the”, or “twelve” or “apostle” that show up later in the NT.⁷⁰

Why doesn’t John call Jesus’ mother by her given name? Well, do you call your mother by her given name? And on the cross, didn’t Jesus command John to treat her as his mother? This alone is proof enough, though we can appeal to many eastern cultures that forgo names for titles, e.g., my wife was commonly known among the graduate student wives as “Leah’s mother”. A small detail, but one that rings true.

The wine runs out. It is conceivable, since a wedding would often last 7 days. Some suggest that Mary was invited but Jesus invited himself.⁷¹ Others think it more likely that Jesus was also invited.⁷² Some have suggested that Jesus’ disciples were not expected, since they had been recruited a mere 3 days earlier, and that this may have caused the wine to run out. Various commentators have advanced or abused this notion, but there is no doubt that it is causing problems for the wedding party. Since weddings were reciprocal affairs (even in America one is asked “friend of the bride or friend of the groom?” and seated accordingly) then failing to provide for the guests could lead to legal proceedings.⁷³ Whether or not Jesus is responsible for this fiasco, Mary comes to him for help. So far, the story has been developing very plausibly and sensibly, it sounds like a real-life scenario.

Mary asks Jesus for help by stating the problem. It is similar to the way Martha sends a message to Jesus “Lord, he whom you love is ill.” (Jn 11:3).⁷⁴ Once again, it is the sort of restraint one finds in an eastern culture. A woman does not propose solutions to a man, or servant to master, they merely present the problem. This is not to say that there isn’t an implied request.⁷⁵ One cannot be a mother without having implied requests in every sentence. But in this reserve, we once again see a historically accurate dialogue that builds confidence in its veracity.

⁶⁸ About 60 miles from Jordan, 4 miles northwest of Nazareth. (B.F. Westcott “John” 80, 1908).

⁶⁹ Godet points out that there had been some confusion about Cana, since apparently there are more than one locations named Cana or else John would not have given the province as well. Robinson, evidently taken in by a less-than-truthful Arab guide, identifies the wrong one, which also makes the 3 day journey a bit difficult. (F. Godet “Commentary on the Gospel of John” 2, Edinburgh: T&T Clark 1889.)

⁷⁰ Raymond E Brown “The Gospel according to John” 98, Garden City: Doubleday 1966.

⁷¹ Godet “Commentary” 4.

⁷² Leon Morris “New International Commentary on John” 178 Grand Rapids: Eerdmans 1975.

⁷³ Morris “John” 177. quotes Derrett on this topic.

⁷⁴ Godet “Commentary” 5.

⁷⁵ Both Bultmann and Godet see Mary as making an implied request for a miracle which is rejected by Jesus.

For the first time in the story, we are given a bit of a jolt. Jesus responds curtly, unexpectedly ungraciously denying the request.⁷⁶ And why does Jesus call his own mother *γυναι*, woman; isn't it disrespectful? This seems to show up in every commentary, which also point out that this is the same word Jesus spoke with great tenderness from the cross. There are other parallels as well, Josephus' *Antiquities* 17.74 uses the phrase respectfully⁷⁷ and even Homer has Odysseus speaking to his wife Penelope this way.⁷⁸ So even though Jesus words seem inexplicable, the dialogue remains verifiably appropriate.⁷⁹

That is, the explanation for Jesus' response is usually given theologically, with emphases depending on one's presuppositions. Roman Catholics develop a lengthy theology of Mary from this interchange. Others find a great deal of eschatological importance in *οὐπω η̄κει η̄ ωρα μου*, "my hour is not yet come." Since Mary is his mother, after all, it would seem they had an understanding that went far beyond the words of the dialogue. In any case Mary is not deterred by this seeming rejection, which several commentators take to be an expression of Mary's character: humble, determined belief.⁸⁰ And while I don't go as far as the Catholic commentators, I find the few lines about Mary to be typical of what we know about her from history. She was an entirely exceptional woman, whose humility is surpassed only by her faith.⁸¹ Once again, the quiet brilliance of Mary's command to the servants carries more proof of the historicity of this dialogue.

The Miracle

Finally we come to the meat of the story, the actual miracle itself. John gives us details that at first seem extraneous, but as we more closely examine the story, suddenly reveal their importance. For a miracle story needs more than accurate historical details, it has to have accurate physical details, which we hope to demonstrate. "Six stone water jars...holding twenty or thirty gallons."

The first detail is the number six. There is much speculation about this number, whether it represents an incomplete number, or the six days of creation. I think it has a simpler explanation. When washing one's hands, one often inadvertently soils the container with dirt, even when using a dipper or tool. If this were continued for several days, the water might get quite dirty. So rather than soiling all six jars the first day, one uses one jar the first day, one the second and so forth for all the different days of the feast. That way, the jars need only be filled once a week, while remaining fresh for each day. Why not seven jars then? Well perhaps Sabbaths were special, and purifications were done in another location.

The second detail is stone. Several commentators have gone to the Rabbinic literature to show that stone was the preferred material for holding purification water.⁸² This may be because earthenware was often unglazed, like a flower-pot, and not only would the water soak into the pot, it would also be hard to clean the algae and scum that collected in it. Depending on the type of stone, the jar could be quite non-porous. But the stone has several consequences. In order to hold water, they would have to be made of a single piece of stone, and thus carved. Carving means that the walls of the pot would have to be relatively thicker than an earthenware pot. They would also have to provide access for the stonemason's arms, and hence widemouthed containers. So they would be quite unlike the earthenware amphorae used by the Greeks to ship wine all over the Mediterranean, with their bulbous middle and narrow necks, rather they would look much more like stone cylinders with straight sides, possibly flaring at the top.

⁷⁶ Morris "John" 181.

⁷⁷ George Beasley-Murray "John" Nashville: Thomas Nelson 1999.

⁷⁸ Rudolf Bultmann "The Gospel of John" transl Beasley-Murray, 116 Oxford: Basil Blackwell 1971.

⁷⁹ There is a long history of commentators beginning with Nanzianus who attempt to take the sting out of Jesus' refusal, even inverting the meaning. (Godet "John" 8) But if we recognize that Jesus and Mary had a long history, then we recognize we are eavesdropping on a conversation that we may never fully understand.

⁸⁰ Andreas Kostenberger "John" 95, Grand Rapids: Baker 2004.

⁸¹ Herman Ridderbos "Gospel according to John" transl John Vriend, 106, Grand Rapids: Eerdmans 1997.

⁸² Barret quotes Maimonides (C. K. Barret "The Gospel According to John" 191, Philadelphia: Westminster 1978) whereas Brown quotes Mishnah Betsah 2:3 (Brown "John" 100).

The third detail is their volume. ανα μετρητας δυο η τρεις “about two or three metretas” or 20-30 gallons. It is an exercise in 3rd semester calculus to demonstrate that the dimensions of a tin can are those of a right circular cylinder which maximizes the volume for a given area. So if the stone carver wants to maximize the volume of his stone jars for the same amount of material, and assuming the lid is carved separately, we get a diameter twice the height. Using these proportions, we can estimate the size of these jars. They would be a little over a foot high and two feet wide to hold 20-30 gallons. Now of course, the stonecarver could make them taller or square, but for the same volume he would need to use more stone. He could increase the volume by bulging them out in the middle, though he would have to start from a bigger block and chip more stone away. So a “tuna can” is the shape for the lightest, most economical stone jar. If he were working in limestone, or a non-porous marble, he would probably have to leave 1-2 centimeter thick walls for strength. This gives a dry weight of about 110 lbs at a minimum. Since “a pint is a pound the world around”, we have 8 lbs/gal or about 200 lbs of water for a grand total of 310 pounds of brimfull stone jars.

Now stone is strong under compression but weak under tension. A stone handle would not survive very long if it were put under 310 lbs of stress repeatedly. Nor would the two men needed to move it want to bend down to the ground and lift such a weight.⁸³ So undoubtedly these jars did not get moved often, especially when full.

So when Jesus said “Fill the jars with water”, one should not imagine that the jars were taken over to the well and filled. Rather, water was carried from the well to these jars and poured in them. Common water jars for cooking were undoubtedly used, and these typically have 2-5 gallons in them. So several trips were required to fill these 6 jars with water, all under the watchful eyes of Jesus, Mary and the disciples. One could imagine the servants glancing at Jesus to see if he thought there was enough water, and then sheepishly going back to the well for more water until the jars were absolutely brimful.

So there can be no talk about “swapping” water jars with wine jars. Nor could there have been wine stored (in such inappropriate containers) without being obvious to the onlookers. Nor could wine be substituted for well water without simultaneously distracting the disciples and Mary. Nor would one surreptitious wine jar do the trick. Nor could any addition be made to the water pots that were brimful without making a big mess. The whole procedure would have been as plain and open as the dialogue suggests. It also explains why Jesus said αντλησατε νυν “now draw” as if it were from a well. Given the size and shape of the jars that we have inferred, it would indeed be like drawing from a well.

It was only when the steward tasted the water that he realized it had become wine. Since John records the wine here first, I would imagine that no one noticed the darkening of the water until the steward pronounced the miracle. In other words, there was no dramatic light, no wand, no magician distracting the audience while he switches cups. It had become wine in transit. This is precisely the style Jesus used with all his miracles, compare with the ten lepers who also were healed in transit (Luke 17:14). Whatever we might think about the probabilities of miracles versus conspiracies, this was not a magic trick that could be easily explained.

The Echoes

There have been some who suggested that the stone jars had evaporated wine in the bottom, or dregs, so that as the water was added it changed color and gave the appearance of wine. We can dismiss all such speculation by the response of the steward, who pronounced the wine superior. John even has the steward complimenting the bridegroom on his selection! These details confirm that this was no conjuring trick of purple dye, nor a misunderstanding of the steward, or a secret plan of the bridegroom. Rather everyone who might have a stake in this miracle was innocently unaware of the miraculous transformation. Only the bucket-brigade servants, the disciples (and presumably Mary) knew. Once again, this is the style of Jesus, saving his best miracles for the lowest classes, fulfilling the prophecy Mary

⁸³ Compare with Zech 5:5ff where a basket containing a woman and lead lid were carried by two angels, presumably with handles. If it takes two angels to move a 100lb woman, it would take at least two or so men to move a full water jar.

spoke upon her pregnancy “he has scattered the proud in the thoughts of their hearts; ...he has filled the hungry with good things and the rich he has sent away empty.” (Luke 2:51-3).

It was a miracle for the inner circle, with water-drawing servants as witnesses, “and his disciples believed in him.”

Theological Analysis

Ridderbos says that this gospel doesn't let a miracle stand by itself, as a mere decoration to the text. It “does not mean exegesis can end with mere acknowledgement of miracle as such, as supernatural event. This Gospel itself explicitly opposes that notion.”⁸⁴ For John doesn't let us call these “miracles” or “wonders” *δυναμεις*, the way the synoptics do, rather he uses the word *σημειον* “sign”.⁸⁵ This specialized vocabulary in John then resonates with all the theological importance indicated by sign. Lightfoot says that a sign is greater than a symbol, because it doesn't just point, but embodies an eternal reality. The miracle at Cana is not a wonder, not a spectacular event, but a revelation.⁸⁶

So dominant has this view of the miracle become, that Ridderbos makes the comment. “Symbolic interpretation of this miracle has taken possession in such a way that the historical context is either completely ignored or totally abandoned.” Beasley-Murray writes “our evangelist goes one step further in viewing the miracles as parables of the kingdom which come through the total work of the Son of God”.⁸⁷ Parables, symbols, it would seem that John's gospel hides the meaning of the miracle in layers upon layers of indirect speech. But this is not the way to understand John, Ridderbos says, “History and divine meaning are not on different levels.”⁸⁸

On the strength of his critique, I will skip over the lengthy analogies that have been drawn between this miracle at Cana and the Eucharist, the sacrament of matrimony, the Crucifixion, the allegory of purification water representing the old covenant of Law and the wine being the new covenant of grace, or the Eschatology of “vats overflowing with new wine”. It is not that these analogies are incorrect, but they are certainly not what convinced the disciples, since they were a mere three days into their 3 year training at his feet. (And given the 60 miles covered in those first three days, I would imagine that they weren't full of chatter.) Rather, John tells us, he “manifested his glory. And his disciples believed in him.”(2:11).

What was that *δοξα* “glory”? Brown suggests that the sign (or miracle) revealed Christ who was the glory. Certainly John 1:14 says “and we have seen his glory, glory as of the only Son from the Father”. So what exactly did they see? Brown says replacement and abundance. He argues that the disciples would have been familiar with all the prophecies concerning the coming of the kingdom. Amos 9:13 “Behold, the days are coming,” declares the Lord, “when the plowman shall overtake the reaper and the treader of grapes him who sows the seed; the mountains shall drip sweet wine, and all the hills shall flow with it” Or Hos 14:7 “they shall blossom like the vine; their fame shall be like the wine of Lebanon.” Or Jer 31:12 “and they shall be radiant over the goodness of the Lord, over the grain, the wine, and the oil, and over the young of the flock and the herd; their life shall be like a watered garden, and they shall languish no more.” Therefore, Brown argues, it would have been immediately obvious to the disciples that the eschaton had arrived.⁸⁹

I would doubt this conclusion, given that Jesus spent the next 3 years teaching them about the kingdom of God. Furthermore, these verses all give an analogy to farming in which wine played a secondary role. It was not the wine that produced the harvest, but the harvest that produced the wine. The wine was evidence that the harvest was bountiful. Jesus miracle had nothing to do with grain, oil or watered gardens, and without two witnesses, why should we believe in just the wine?

⁸⁴ Herman Ridderbos “Gospel According to John” transl John Vriend 100, Grand Rapids: Eerdmans 1997.

⁸⁵ Westcott “John” 86.

⁸⁶ Robert Henry Lightfoot “St John's Gospel” 23-24, 1956.

⁸⁷ Beasley-Murray “John” 33, Nashville: Thomas Nelson 1999.

⁸⁸ Ridderbos “John” 100.

⁸⁹ Brown, “John” 103.

No, I think that this miracle was a sign that grew in meaning as the disciples grew in their understanding. But what convinced them to believe in Jesus was something else. It may have been something about the way Jesus looked or glowed. And in fact, in the Transfiguration (Luke 9:28-36) he was present when Moses and Elijah appeared in glory, and Jesus became dazzling white. But by the silence of the servants, I would imagine that this was not the glory that he manifested at Cana. Rather, we have the example of the miracle immediately preceding it. Would this not have been glory enough? But to understand the glory of this miracle we need to see why it produced such a bimodal response.

Bimodal Analysis

Invariably the commentators discuss alternative ways to explain the miracle as a natural event.

(a) Some have suggested that it was a big joke, an embarrassment that was saved by play-acting.⁹⁰ But the gravity of the occasion, and the response of the disciples not to mention the social conventions of a wedding make that suggestion dead-on-arrival.

(b) Some suggest that there was a secret merchant who supplied the wine. As we have pointed out, the innocence of the steward and the bridegroom would mitigate against it. Nor would any substitution have been easy to accomplish with all the servants and disciples watching.⁹¹

(c) Others find the miracle too “magical” to be believable, though writers of “magical” stories such as Lewis find it beautifully natural.⁹² It would seem to me that “magical” is defined as something unbelievable rather than the other way around.

(d) Still others object that the miracle is useless, luxurious, more of a Bacchanal.⁹³ To which I would reply, “Loosen up! It would seem that it is your cold and rigid morality that is useless.” As Lewis characterizes in many of his novels, it is the rationalist atheist who most often finds God too libertine. Still others point out that Jesus arrived without a wedding gift, and that this wine more than made up for him bringing 5 extra guests.

(e) Others have made the objection that the miracle was too immoral.⁹⁴ It is hard for me to understand how anyone with a straight face can accuse God of immorality. But I am told that Kant made a convincing argument along these lines,⁹⁵ which only confirms that one is convinced by one’s commitments.

(f) Many people have suggested it is a myth, a story whose symbolism is true, but not the facts. Godet’s reply is that a myth has a genre, and nothing in this story matches the mythic genre.⁹⁶

(g) The more conservative unbelievers opt for allegory, that the story is not actually true. To which Godet makes the same response, neither the genre nor the style are consistent with parables or allegory. As we have attempted to show, the historicity of the account moves it beyond such simplistic whitewash.

(h) Some redaction critics have suggested that the story is a hodgepodge of misplaced elements that give the appearance of a miracle but belong elsewhere. Godet is firm. The attention to details, the use of temporal indicators, the causal relations, the proposal-executions should remove all doubt that this was a cut-and-paste job.⁹⁷

We see in plain view here, the bimodality of the miracles. We cannot find a way to make them the inobservant stories of a gullible culture. We cannot find a way to make them the over-spiritualized product of a semiliterate church. Either they happened, or they were a fraud from the beginning. Bayes theorem would say the probability of a fraud given this story is no less than the probability of this story

⁹⁰ Morris “John” 174.

⁹¹ Godet “John” 15.

⁹² Lewis “Miracles” ?

⁹³ Godet “John” 15.

⁹⁴ *ibid*

⁹⁵ Geisler “Miracles” ?

⁹⁶ Godet “John” 15.

⁹⁷ *ibid*

given a fraud times the ratio of probable frauds to probable stories. Neither term is very large, for who would tell a story if it were suspected of fraud? And surely there are far more stories than there are frauds in this world. One has to have a deep suspicion of mankind, or this particular story to assume it is fraudulent. There are those who see it and shake their head in disbelief, while others say “My Lord and my God.” There are no other options. He did not intend there to be.

Bultmann may feel fine talking of the mythic meaning and symbolism of the miracle, but what he cannot stomach is that it might actually have occurred. In the words of GK Chesterton, “The most incredible thing about miracles is that they happen.”⁹⁸ It is this incredibility that we examine, because this is the $\delta\omicron\xi\alpha$, this is the manifestation of Christ, this is what made men believe. St Paul calls it “the offense of the gospel”, and this is indeed, what offends most about this Gospel. It is not the symbolism, it is not the bold claims to be equal with God, it is not the Jewishness of the presentation, but 6 stone jars and a dipperful of wine. This is the rock that causes men to stumble.

Conclusions

Yet even among the faithful, there is some sort of waffling, some sort of weaseling against the offense of miracle. Augustine calls it an acceleration of a natural process, something like Aaron’s rod that budded. For every year, Augustine argues, God takes the rain that showers the earth and produces the sap of the vine. Only in this instance he does it without the vine.⁹⁹ Lewis calls it a miracle of the old creation, because he uses the means lying latent in it. Walking on the water, says Lewis, was a new creation miracle because it violated the laws of the old creation.¹⁰⁰ Some have gone so far as to say that these types of miracles can’t occur today because we must wait for the parousia to experience that new creation. Others would suggest that there have never been “new creation” miracles, but Jesus through divine knowledge, broke no laws of nature, only laws of probability. A miracle, says Augustine, is only a violation of our knowledge of nature.

I would argue that these are distinctions without a difference. All our knowledge is probabilistic. All knowledge is power. If Jesus has divine foreknowledge then He has power. When the contents of six waterpots became wine, then atoms of hydrogen and oxygen were miraculously transformed into atoms of carbon and nitrogen. These kinds of transformation can occur, but only in the heart of the Sun at millions of degrees and enormous pressures, or for a few brief milliseconds in the flash of a thermonuclear bomb. If a vine can accomplish this in the garden, it is not because it transforms water, but because it absorbs carbon from the air and nitrogen from the earth to mingle it with the water. That alone is miracle enough, but the water pots did not have the machinery of chlorophyll and root hairs to do it. If there were a miracle, it was as bold or bolder a miracle as the walking on the water. And this is the recursion, the positive feedback, for the more science we know, the bigger the miracle becomes.

For like the parables, the miracles do not get more palatable with time. No amount of scholarly research can make them less miraculous. They remain a stark reminder that the Truth is bimodally received. This is the defining mark of both. If Jesus can take the atoms of our universe, the atoms of our food and drink and transform them into the blood of the grape, He can also transform our bodies to be like his glorious body. Every miracle is evidence of that power. Every miracle confronts us with the barely contained fury of a nuclear warhead. Every miracle demands that we decide.

⁹⁸ Quoted in Lewis, “Miracles”

⁹⁹ Quoted in Godet “John” 9-10.

¹⁰⁰ Lewis, “Miracles” 170?

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