HUMOR, LOGIC, AND LEWIS CARROLL[1]

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"It's a pun!" the King added in an offended tone, and everybody laughed.
-Lewis Carroll

This paper will show that much humor is based on logic (or illogic) and I try to demonstrate that, indeed, most of Lewis Carroll's humor is based on logic.

I wouldn't call the Three Stooges humorous and—I am so sorry—some you would. But I do think there is a consensus about what constitutes mor. *The Encyclopedia of Philosophy*'s article on humor provides an eresting list which will become central to this paper, so I will quote most it:

> (a) Any breach of the usual order of events, as wearing an unusual costume or eating with chopsticks when one is used to knife and fork (or with knife and fork when one is used to chopsticks). (b) Any breach of the usual order of events that is also felt to break a rule, whether of morality or etiquette. The drunkard, the glutton, the hypocrite, the miser are all stock figures of comedy, on the stage and elsewhere. (c) A special case of the second type is indecency, as in Restoration comedy or any smoking-room story . . . . (d) Introduction into one situation of what is felt to belong to another, as Bernard Shaw's reference to conventional sexual morality as "the trade unionism of married women" or Mark Twain's introduction of a Connecticut Yankee into the Court of King Arthur . . . . (e) Anything masquerading as something it is not. This has been a favorite stage device, from *Twelfth Night* to *Charley's Aunt* . . . . (f) Wordplay, of which puns are the most obvious, but not of course the only, example. (g) Nonsense, especially of the Edward Lear or Lewis Carroll type, which often turns on wordplay but is distinct from it. (h) Small misfortunes, like those provided by the banana skin, the custard pie, the thumb beneath the hammer. (i) Want of knowledge and skill, as in the schoolboy howler or the circus clown clumsily attempting to imitate the acrobat. (j) Veiled insults, as in the catty remarks in *The School for Scandal*.[2]

And, so, if the Stooges are funny I guess they fit in the categories of ineptness or small misfortunes. This list of types of humorous things seems adequately complete to me. Assuming this, we can now begin to think about whether there is a theory of humor adequate to explain why all those things are funny.

There are three most prominent theories of humor. The ancients had, it

seems, a limited idea of humor and considered it base. Humor was thought of as indecencies and the breaking of rules and was thought of by Aristotle as being the property of inferior people. Should Aristotle watch me sitting in front of a television set, he would not be inclined to change his opinion one bit. This seems to me to be largely coextensive with the theory of humor often called the relief theory. It holds that we find humor in some kind of relief from restraint or convention. Humor is found in jokes about sex or in racist stories or sexist comments.[3]

But the comic situations in writers such as Shakespeare and Chaucer may have forced new understandings of humor. Although some of their humor can be seen as "relief" there are other kinds of humor as well. Thomas Hobbes introduced what can be called the superiority or disparagement theory of humor. He does not, however, speak approvingly of it:

> 'Sudden glory' is the passion which maketh those 'grimaces' called 'laughter'; and is caused either by some sudden act of their own that pleaseth them, or by the apprehension of some deformed thing in another by comparison whereof they suddenly applaud themselves. And it is incident most to them that are conscious of the fewest abilities in themselves; who are forced to keep themselves in their own favour by observing the imperfections of other men. And therefore much laughter at the defects of others is a sign of pusillanimity. For of great minds one of the proper works is to help and free others from scorn and compare themselves only with the most able.[4]

Hobbes adds a bit to that idea when he says elsewhere that men also "laugh at the follies of themselves past, when they come suddenly to remembrance . . . ."[5] Freud maintains a similar position saying, "By making our enemy small, inferior, despicable or comic, we achieve in a roundabout way the enjoyment of overcoming him—to which the third person, who has made no efforts, bears witness by his laughter."[6]

A hundred years later James Beattie adds significantly to our understanding of humor by claiming a kind of incongruity theory of humor:

> Laughter arises from the view of two or more inconsistent, unsuitable, or incongruous parts or circumstances, considered as united in complex object or assemblage, or as acquiring a sort of mutual relation from the peculiar manner in which the mind takes notice of them.[7]

A quick review of the list of types of humorous situations at the beginning of this paper should convince us that the relief theory and the disparagement theory are inadequate to account for the entire list. The incongruity theory, however, does a fairly complete job of coverage. It can be seen to cover all the ground that the relief theory covers since the lifting of societal restraints yields an incongruous situation. Similarly, the disparagement theory's coverage can be subsumed under the incongruity theory. To see, say, a saw sawing sequentially several slices from the legs of an unstable table in the attempt to make the table stable, only to eventually turn the kitchen table into a coffee table is to create the incongruity of repair yielding disrepair. So, this is my first claim: The incongruity theory is the best of the three theories of humor since it renders the other two incomplete theories superfluous.

The recognition of incongruity is really the recognition of some kind of illogical situation, and so this leads me to try to expand on R. B. Braithwaite's claim that "nearly all Carroll's jokes are jokes either in pure or in applied logic."[8]

I want to claim that nearly all humor involves pure or applied logic. First of all, if we look at the list of types of humorous situations provided at the beginning of this paper, it is easy to see this. To have a breach of the usual order of events is to have a situation that does not seem logical. " . . . [W]hen the Rabbit actually *took a watch out of its waistcoat-pocket*, and looked at it, and then hurried on, Alice started to her feet, for it flashed across her mind that she had never before seen a rabbit with either a waistcoat-pocket, or a watch to take out of it . . . ."[9] There is even a meta-level illogicality when we think back to the previous sentence where it is said that Alice found the Rabbit's saying, "Oh dear! Oh dear! I shall be too late!" to be "quite natural." How odd of Alice to think a talking Rabbit normal but a watch-carrying Rabbit unusual. Most Rabbits I know that wear wristwatches are unable to speak English. Alice also breaks some unconventional conventions of etiquette. When she has cried the pool of tears that eventually contains her smaller self and the animals that fall into it,[10] she inadvertently but repeatedly says inappropriate things in front of the mouse. When the mouse doesn't respond to a question she asks, she thinks it may not understand English because it might be a French mouse that "came over with William the Conqueror." So she utters the first thing out of her French lesson-book, "Où est ma chatte?" scaring the mouse. Finding out the mouse is (of course!) frightened at the prospect of there being a cat around, she is sorry and hastily apologizes. She launches into an attempt to convince the mouse it would like her cat if only it understood how wonderful the cat is. She lists the cat's attributes and then includes that "she's such a capital one for catching mice." Again, ashamed of her breach of etiquette, she changes to the topic of dogs and tells of the

nice little dog near her house who is so useful to the farmer it belongs to because it "kills all the rats."

Finding connections between disparate fields or categories, instead of being a kind of illogic, is similar to the logic of sets. The humor is in the intersection of the sets. (I will also explain puns in a similar fashion, below.) It is the intersection of the Connecticut Yankee with King Arthur's Court that creates the humor. It is the intersection of the mermaid with a big city that creates much of the humor in the movie *Mermaid*. It is the intersection of the aliens with Earth society in *3rd Rock from the Sun* that is funny. In Carroll we find many such juxtapositions as Alice enters the rabbit hole and interacts with what she finds there. One of everyone's favorite scenes is of the intersection of tea-time with a host of animals, including a sleepy Dormouse in a teapot. The court scene at the end of *Alice's Adventurers in Wonderland* could be thought of as presenting a scene of a zoo in the jury box. *Through the Looking-Glass* answers the question, "What do you get if you give a little girl a trip to the reverse-land behind a mirror?" Notice that examples of these kinds of intersections adhere to a certain kind of logic. In a mirror all objects that are not superposable on their mirror images will be reversed. We see many examples of such reversals in the book—think especially about the looking-glass twins, Tweedledee and Tweedledum. The White Queen's memory works both backwards and forwards in time. She is in pain before the pin pricks her finger. An interesting juxtaposition of poetry and mathematics appears in one stanza of a poetic riddle:

> Yet what are all such gaieties to me
> Whose thoughts are full of indices and surds?
> $x^2 + 7x + 53$
> $= 11/3$[11]

The next category of humor was listed as "[a]nything masquerading as something it is not." This can be humorous because whoever makes the mistaken identification draws conclusions from the wrong premises. When the White Rabbit confused Alice with his servant-girl, Mary Ann, he of course thinks it follows that he can ask her to fetch his gloves. Even using hedgehogs for croquet balls, flamingos for mallets, and the playing-card gardeners for wickets is a kind of masquerade that is quite hilarious. And the biggest masquerade of all is the fact, hidden until the end of *Alice's Adventures in Wonderland*, that she is dreaming. If we were thinking of an account of someone's dream, we wouldn't find the story nearly as odd or funny. The Red King dreams about Alice, who is dreaming in her sleep about the Red King. Each dreams of the other creating two infinite but similar regresses.

The next category is wordplay. Martin Gardner says linguistic play can be considered a branch of combinatorics, and he points out that logical and linguistic paradoxes "pervade the second *Alice* book even more than the first."[12] One way to understand puns is to see them as resulting from the confusion of applying the logic of one situation to a different situation. This is accomplished by having a word or phrase "fit" in both situations with the word being the intersection of the two sets:

> . . . "[Y]ou never had fits, my dear, I think?" he said to the Queen.
> "Never!" said the Queen furiously, throwing an inkstand at the Lizard as she spoke
> . . . .
> "Then the words don't *fit* you," said the King, looking round the court with a smile.
> There was a dead silence.
> "It's a pun!" the King added in an offended tone, and everybody laughed.[13]

Lewis Carroll could not resist making even bad puns, some so bad that it takes a king to make one laugh at them. From our point of view this is humorous on the meta-level as we see it is funny that the king must tell people that it is funny. One of Carroll's syllogistic premises in *Symbolic Logic* is "All Uncles make bad puns."[14] I have always wondered what return Carroll expects from such bad puns. But my interest has not paid off. Maybe I should have made better notes. But I have decided one can bank on one thing: There is no principle that can be used to infallibly rate puns. A couple of Carroll's worst puns appeared in his paper in *Mind*, "What the Tortoise said to Achilles."

> The Tortoise was saying, "Have you got that last step written down? Unless I've lost count, that makes a thousand and one. There are several millions more to come. And would you mind, as a personal favour—considering what a lot of instruction this colloquy of ours will provide for the Logicians of the Nineteenth Century—would you mind adopting a pun that my cousin the Mock-Turtle will then make, and allowing yourself to be re-named Taught-Us?" "As you please!" replied the weary warrior, in the hollow tones of despair, as he buried his face in his hand. "Provided that you, for your part, will adopt a pun that the Mock-Turtle never made, and allow yourself to be renamed A Kill-Ease!"[15]

Yet Wittgenstein used to cite the "Taught-Us" pun as an example of a good grammatical joke.[16] On a more sensible note Wittgenstein is also reported to have said that "a serious and good philosophic work could be written that

would consist entirely of *jokes* (without being facetious)."[17]

Another kind of word play at which Carroll excels is parody. Parody requires a precise understanding of the internal logic of the original and then must imitate that for comic effect. It is hard for us to fully appreciate Carroll's examples today because we are familiar with so few of the originals. But to his contemporary readers, they were as funny as a good *Saturday Night Live* parody is to us. There is only a slim chance we recall Robert Southey's didactic poem that begins,

> "You are old, father William," the young man cried,
> "The few locks which are left you are grey;
> You are hale, father William, a hearty old man;
> Now tell me the reason, I pray."

Its last stanza is,

> "I am cheerful, young man," father William replied,
> "Let the cause they attention engage;
> In the days of my youth I remember'd my God!
> And He hath not forgotten my age."[18]

Carroll's irreverent parody begins,

> "You are old, Father William," the young man said,
> "And your hair has become very white;
> And yet you incessantly stand on your head—
> Do you think, at your age, it is right?"

It concludes with the annoyed Father William saying,

> "Do you think I can listen all day to such stuff?'
> Be off, or I'll kick you down-stairs!"[19]

The humor category of nonsense is where Lewis Carroll reaches perfection. "Jabberwocky" is one of the finest examples of nonsense in the English Language. But to avoid being nonsense nonsense, one must adhere strictly to the logic of sentences and so forth. Think of the first stanza of "Jabberwocky":

> "Twas brillig, and the slithy toves
> Did gyre and gimble in the wabe:
> All mimsy were the borogoves,
> And the mome raths outgrabe."[20]

This is so "logical" that if we read with careless attention, we may think we understand it. George Pitcher claims that the nonsense that Wittgenstein accused other philosophers of employing is the kind of nonsense that Carroll uses for humorous effect.[21] Sometimes Alice sounds just like Wittgenstein. He says of some philosophical nonsense, "It's an English sentence; *apparently* quite in order—that is, until one wants to do something with it . . . ."[22] Alice, similarly, "felt dreadfully puzzled. The Hatter's remark seemed to her to have no sort of meaning in it, and yet it was certainly English. 'I don't quite understand you,' she said, as politely as she could."[23]

We have covered almost all the categories of humor in the original list. I shall not try to fit the "small misfortunes" comic category or the "veiled insults" category into the logic-humor mold. But I will finish the list with the category of ineptness in knowledge or skill. This is funny because it is a breach of the expected and necessary ingredients of the situation. It parallels the impossible situation in logic or mathematics of trying to prove a conclusion without the required premises. When Alice was in the Rabbit's house and drank of the "DRINK ME" bottle, the humor of the girl filling the whole house is enhanced by the ineptness of the animals dealing with the problem. They send Bill the Lizard down the chimney, where Alice has conveniently stored her foot, in some inept attempt at a solution. Hearing noises in the chimney and "saying to herself, 'This is Bill,' she gave one sharp kick, and waited to see what would happen next. The first thing she heard was a general chorus of, 'There goes Bill!'"[24]

I would like to add a comment about humor and axiom systems. Think of the man that signs up with a computer dating service listing his ideal date as someone who likes the outdoors, enjoys water sports, is fond of formal attire, and is not too tall. The computer, of course, fixes him up with the cutest lady penguin. Here the rules or axioms are strictly followed but yield an unexpected and humorous result. This is what we find enjoyable in the Mad Hatter's famous riddle, "Why is a raven like a writing-desk?"[25] In this case we have no preconceived expectation and Carroll did not even have an answer when he published his book. But if one thinks a nonsense question should have a nonsense answer, Aldous Huxley offered two: "Because there's a *b* in both, and because there's an *n* in neither."[26] Carroll supplied an answer in the preface of the 1896 edition: "Because it can produce a few notes, though they are *very* flat . . . ." But many other answers fitting the simple axiom of being common to both objects have been offered. Among the best are ones supplied by the puzzle master, Sam Loyd: "Because the notes for which they are noted are not noted for being musical notes . . . .

Bills and tails are among their characteristics . . . . Because they both stand on their legs, conceal their steels (steals), and ought to be made to shut up." His answer that is my favorite, however, is that "Poe wrote on both."[27]

I would like to leave you with a dirty joke. It is a joke that involves small misfortune, "sudden glory," and lack of knowledge or understanding. It also stands as a criticism of this paper since it is humor that has almost nothing to do with logic. A short, fat Aggie and a tall, bald Aggie were leaving the dorm. Just then a huge grackle flew over and deposited a gift upon the bald Aggie's head. (That is the dirty part.) "Oh, how messy," the short one said. "Wait right here. I'll rush back in and get some toilet paper." "Never mind," the other said. "By the time you get back, the bird will be a mile away."

NOTES

[1] He, of course, is not as widely known by his real name, the Rev. Charles Lutwidge Dodgson (January 27, 1832 – January 14, 1898). Before he turned exclusively to writing, he taught at Oxford, holding the Christ Church Mathematical Lectureship for twenty-six years.

[2] Paul Edwards, ed., vol. 4 (New York: Macmillan and The Free Press, 1967) 90-91. The article was written by D. H. Monro.

[3] Even so-called family situation comedies like *Everybody Loves Raymond* are full of jokes about sex, and *All in the Family* may have been the best example of racist and sexist comedy in television.

[4] *Leviathan*, ch. VI.

[5] *The Elements of Law Natural and Politic*, ch. 9.

[6] *Jokes and their Relation to the Unconscious*, (New York: Norton, 1905) 103.

[7] "An Essay on Laughter and Ludicrous Composition," *Essays*, (Edinburgh: William Creech, 1776), quoted in John Allen Paulos, *Mathematics and Humor* (Chicago: Univ. of Chicago, 1980) 3.

[8] "Lewis Carroll as Logician," *Mathematical Gazette*, XVI (1932) 174–78, reprinted in the Norton Critical Edition of *Alice in Wonderland*, ed. Donald J. Gray (NY: W. W. Norton, 1971) 298-305. See p. 301 where Braithwaite provides less than a half a page in defense of this claim.

[9] *Alice's Adventures in Wonderland*, ch. I, Carroll's italics. Because this book exists in hundreds of editions, I will only identify passages by the chapter they are in. I will call this book *AW* and *Through the Looking-Glass and What Alice Found There* will be identified as *TL*.

[10] Chapter II. Among the inhabitants of the pool are "a Duck and a Dodo, a Lory and an Eaglet," so that the party that was on the outing where the Alice adventure was first told is in the pool. The Duck is Reverend Duckworth, the Lory and the Eaglet are Lorina Liddell and Edith Liddell, Alice Liddell's sisters, and the Dodo is Carroll. Apparently when Dodgson stammered in trying to say his name he would sometimes say, "Do–Do–Dodgson." Two of Carroll's sisters and an aunt were also on the outing and are the "other curious creatures" in the pool. See Martin Gardner, ed., *The Annotated Alice: the Definitive Edition*, (NY: W. W. Norton, 2000) 27.

[11] Lewis Carroll, *Rhyme? and Reason?* (1883), in Edward Guiliano, ed., *The Complete Illustrated Works of Lewis Carroll*, (NY: Gramercy, 1995) 303-304.

[12] *The Universe in a Handkerchief: Lewis Carroll's Mathematical Recreations, Games, Puzzles, and Word Plays*, (NY: Springer-Verlag, 1996) 4-5.

[13] *AW*, ch. XII.

[14] Braithwaite mentions this without attribution (301n). Although I remember the line, I have failed to find it in Carroll's *The Game of Logic*, so I conclude it must be somewhere in *Symbolic Logic*. This makes me feel like a king: "'The horror of that moment,' the King went on, 'I shall never, *never* forget!' 'You will, though,' the Queen said, 'if you don't make a memorandum of it.'" *TL*, ch. I.

[15] (1895). It can be found at <http://www.mit.edu/afs/athena.mit.edu/user/g/w/gwj/www/html_dox/Carroll.html>

[16] This claim is made by George Pitcher, "Wittgenstein, Nonsense, and Lewis Carroll," *The Massachusetts Review*, VI (1965), 591-611, reprinted in the Norton Critical Edition of *Alice in Wonderland*, ed. Donald J. Gray (NY: W. W. Norton, 1971) 389.

[17] Norman Malcolm, *Ludwig Wittgenstein: A Memoir* (London: Oxford, 1958) 29, quoted in Pitcher 389

[18] Quoted in Martin Gardner, *The Annotated Alice: the Definitive Edition*, 49.

[19] *AW*, chapter V.

[20] *TL*, chapter I.

[21] Pitcher 389.

[22] *PI*, Sec. 348.

[23] *AW*, ch. VII.

[24] *AW*, ch. IV.

[25] *AW*, ch. VII.

[26] "Ravens and Writing Desks" (*Vanity Fair*, Sept. 1928), quoted in Gardner, *The Annotated Alice: the Definitive Edition*, 72.

[27] Sam Loyd, *Cyclopedia of Puzzles* (1914), quoted in Gardner, *The Annotated Alice: the Definitive Edition*, 72.