

ALFRED HITCHCOCK'S
Mystery
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P R E S E N T S

**SOLVING
THE
"UNSOLVED"**

by
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www.themysteryplace.com

Afraid to tackle the “Unsolved” puzzle in each issue of AHMM? Reluctant to try because it seems too complicated? Actually, it’s not that difficult. You needn’t be a clairvoyant (or even a genius, for that matter) to derive the pleasure and satisfaction of the solution.

Solving is simply a matter of analyzing and systematically trying various methods of solution. Most problems yield to one or more of the following methods: simple elimination, multiple full accounting, and sequence.

The “Unsolved” puzzle (and others like it) offers certain facts—call them clues if you like—that give information on *categories* and *members*. *Categories* are the groups of persons, places, attributes, and so on that are involved in the puzzle, such as “men’s first names,” “hair color,” “height,” “profession,” “surname,” “hometown.” Each category has several *members*—individual persons or places or attributes within that category—such as “blond,” “brown,” “red,” “gray” in the category of “hair color.”

The problem in “Unsolved” is to match a particular member in one category with the corresponding member in (usually) every other category. For example, the first name of the man who has red hair, or the surname of the couple who drove the Chevrolet, or the profession of the woman from Pittsburgh.

Let us look at some very simple problems that demonstrate the different methods of solution.

SIMPLE ELIMINATION

The answer is obvious if one is told that:

- (1) Al, Bo, and Cal live in Pittsburgh, Chicago, and New York.
- (2) Cal lives in Chicago.
- (3) Bo lives in Pittsburgh.

Where does Al live?

This is an oversimplified example, of course, and you can derive the answer without even writing down the information in the categories (man and place) or the members (Al, Bo, and Cal, and Pittsburgh, New York, and Chicago). Suppose, however, that there are more cat-

egories. Then (unless you are exceptionally intelligent, which most of us are not) the “Unsolved” calls for a *grid* in which the information can be compared for each member in each category.

Let us begin with an easy problem involving four categories and four members within each category:

- (1) Helen, Mrs. Jull, and the lady from Peru are married to Abe, Bob, and Cal.
- (2) Dan, Greta, and the couple from Omaha have the surnames of Inch, Jull, and Lang.
- (3) Cal, Mr. Jull, and the gentleman from Niles are the husbands of Edith, Flora, and Greta.
- (4) Neither Helen nor Mrs. Inch is from Miami.
- (5) Greta isn’t married to Bob, and Flora isn’t married to Mr. Katz.

Who are the man and wife from Peru?

Here are four men (Abe, Bob, Cal, and Dan) with different surnames (Inch, Jull, Katz, and Lang) married to four women (Edith, Flora, Greta, and Helen). The couples reside in four different cities (Miami, Niles, Omaha, and Peru).

Construct a grid of horizontal rows and vertical columns in which each member of one category can be compared with the members in each of the other categories (fig. 1). To make the grid, start by entering all the members of one category at the left of the horizontal rows (ABE through DAN in figure 1). Above the vertical columns, write in every member of every other category (EDITH through PERU). Take a look at figure 1 to see how to continue labeling the horizontal rows. After DAN, as you will see, first list the members of the vertical-columns category on the far right, then the members of the category immediately preceding it, and so on. (Graph paper, by the way, comes in handy.)

Enter the basic information from the clues above. Eliminate any impossible relationships with an *x*, and confirm any clear relationships with a large dot. For example, in clue 1, Helen is not Mrs. Jull and is not from Peru, Mrs. Jull is not the lady from Peru, and none of the three is married to Dan (fig. 2).

Enter the information from the other clues (fig. 3). Obviously Helen must be the lady from Omaha. She is not Mrs. Inch (clue 4) or Mrs. Jull (clue 1). Now look at clue 2. Helen is from Omaha, so she cannot

FIGURE 1

	EDITH	FLORA	GRETA	HELEN	INCH	JULL	KATZ	LANG	MIAMI	NILES	OMAHA	PERU
ABE												
BOB												
CAL												
DAN												
MIAMI												
NILES												
OMAHA												
PERU												
INCH												
JULL												
KATZ												
LANG												

FIGURE 2

	EDITH	FLORA	GRETA	HELEN	INCH	JULL	KATZ	LANG	MIAMI	NILES	OMAHA	PERU
ABE												
BOB												
CAL												
DAN				x		x						x
MIAMI												
NILES												
OMAHA												
PERU				x		x						
INCH												
JULL				x								
KATZ												
LANG												

FIGURE 3

	EDITH	FLORA	GRETA	HELEN	INCH	JULL	KATZ	LANG	MIAMI	NILES	OMAHA	PERU
ABE												
BOB			x									
CAL				x		x				x		
DAN			x	x		x	x				x	x
MIAMI				x	x							
NILES				x		x						
OMAHA			x	●			x					
PERU				x		x						
INCH				x								
JULL					x							
KATZ			x	x								
LANG												

FIGURE 4

	EDITH	FLORA	GRETA	HELEN	INCH	JULL	KATZ	LANG	MIAMI	NILES	OMAHA	PERU
ABE												
BOB			x									
CAL				x		x				x		
DAN			x	x		x	x				x	x
MIAMI				x	x			x				
NILES				x		x		x				
OMAHA	x	x	x	●	x	x	x	●				
PERU				x		x		x				
INCH				x								
JULL					x							
KATZ			x	x	x							
LANG	x	x	x	●								

be Mrs. Katz and must be Mrs. Lang. See figure 4, and note that whenever you make a positive identification with a dot you should *x* out any other prior possibilities, both horizontally and vertically. For instance, if Helen Lang is from Omaha, she is not from any other city, nor is any other woman from Omaha. Put an *x* in all those squares.

Dan isn't Mr. Jull (clue 1), Mr. Katz (clue 2), or Mr. Lang (who is married to Helen, clue 1), so he is Mr. Inch (see fig. 5).

In this manner we have soon filled our grid with all the proved relationships for the four members in the four categories (fig. 6).

We have the answer! The man and wife from Peru can only be Cal and Edith Katz.

Still another kind of puzzle concerns members' being eliminated, one after another, until only one remains. The solution (at least in part) lies in the fact that once eliminated, a member cannot be present later. This sounds simple, and it is.

The following example will illustrate. Four couples, one from Peru, still remain in the mixed doubles badminton tournament. Each husband (including Mr. Jull) plays with his wife as partner.

- (1) In one semifinal, Greta and her husband (who is not Mr. Katz) were pitted against Mr. and Mrs. Inch. Abe is not Mr. Inch. This match ended with Dan and his wife defeating the couple from Miami.
- (2) Simultaneously, on another court, Cal and his wife (who isn't Flora) played against the couple from Omaha. In this semifinal, Mr. and Mrs. Lang defeated Edith and her husband (who isn't Bob). The man from Omaha isn't Abe.
- (3) In the final, Helen and her husband lost to the couple from Niles.

Who played in each semifinal? Who played in the final? Who won?

Obviously, in the two semifinal games (clues 1 and 2), Dan, Greta, the Inches, and the couple from Miami are *not* the same as Cal, Edith, the Langs, or the couple from Omaha. Edith and the couple from Miami (losers in the semifinals) cannot be Helen or the couple from Niles (who played in the final).

Greta isn't Mrs. Inch (her opponent), Mrs. Katz (clue 1), or Mrs. Lang (who played in the other semifinal game); she is Mrs. Jull. Cal isn't the man from Miami (who played in the other semifinal) or Omaha (his opponent); Dan also isn't the man from Omaha (who played in the other semifinal) or Miami (whom he defeated). Hence, the men

FIGURE 5

	EDITH	FLORA	GRETA	HELEN	INCH	JULL	KATZ	LANG	MIAMI	NILES	OMAHA	PERU
ABE					x							
BOB			x		x							
CAL				x	x	x				x		
DAN			x	x	●	x	x	x			x	x
MIAMI				x	x			x				
NILES				x		x		x				
OMAHA	x	x	x	●	x	x	x	●				
PERU				x		x		x				
INCH				x								
JULL				x								
KATZ			x	x	x							
LANG	x	x	x	●								

FIGURE 6

	EDITH	FLORA	GRETA	HELEN	INCH	JULL	KATZ	LANG	MIAMI	NILES	OMAHA	PERU
ABE	x	x	●	x	x	●	x	x	●	x	x	x
BOB	x	x	x	●	x	x	x	●	x	x	●	x
CAL	●	x	x	x	x	x	●	x	x	x	x	●
DAN	x	●	x	x	●	x	x	x	x	●	x	x
MIAMI	x	x	●	x	x	●	x	x				
NILES	x	●	x	x	●	x	x	x				
OMAHA	x	x	x	●	x	x	x	●				
PERU	●	x	x	x	x	x	●	x				
INCH	x	●	x	x								
JULL	x	x	●	x								
KATZ	●	x	x	x								
LANG	x	x	x	●								

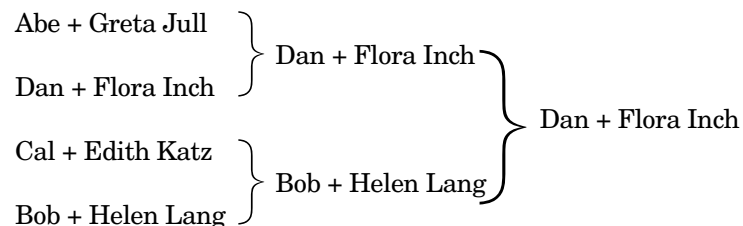
from Miami and Omaha are Abe and Bob. Since Abe isn't from Omaha (clue 2), he is from Miami, and Bob is from Omaha.

Edith isn't the wife from Miami (who played in the other semifinal) or Niles (who played in the final). Helen also isn't from Miami (loser in the semifinals) or Niles (who defeated her for the championship). Hence, Edith and Helen are, in one order or the other, from Omaha and Peru. Since Edith isn't married to Bob from Omaha (clue 2), she is the wife from Peru, and Helen is from Omaha.

With this much information, the organization of the tournament can be easily worked out. Mrs. Inch isn't Edith (in the other semifinal), Greta (her opponent), or Helen from Omaha (other semifinal), so she is Flora.

Abe from Miami isn't married to Edith from Peru, Flora Inch (clue 1), or Helen from Omaha; his wife is Greta Jull. By elimination, Bob is married to Helen, and Cal is the player from Peru. Since Edith is married to Cal, Mrs. Lang is married to Bob from Omaha. Cal can only be Mr. Katz.

The tournament was thus:



MULTIPLE FULL ACCOUNTING

In some "Unsolved" puzzles a simple grid does not yield the answer. However, all members may be accounted for more than once as they are distributed in the various categories.

Consider the following example:

- (1) Abe, Bob, and Cal include Helen's husband, Mr. Jull, and the man from Peru.
- (2) Dan, Greta's husband, and the man from Omaha have the surnames of Inch, Jull, and Lang (not necessarily in that order).

- (3) Cal, Mr. Jull, and the man from Niles are married (in one order or another) to Edith, Flora, and Greta.
- (4) Neither Bob nor Mr. Inch is from Miami.
- (5) Flora isn't Mrs. Katz, and Greta isn't from Peru.

Who is the couple from Niles?

When we enter these data in a grid, as before, no answers are forthcoming (fig. 7). Don't give up! There is information not yet extracted. Notice that clue 1 identifies a member from each category (Dan, by elimination; Helen; Jull; and Peru); clue 2 does the same (Dan, Greta, Omaha, and Katz); clue 3 does likewise (Cal, Jull, Niles, and Helen).

Construct three simple 4x4 grids so you can compare each clue against the others—see figure 8. Fill in as much information as you can, and add information from any other clues (in this case only that Greta isn't from Peru, clue 5). Using dots and x's to cover even such obvious relationships as that Helen is Helen, and working back and forth among the three grids (fig. 9 and fig. 10), we find that Cal is Mr. Katz from Peru, Dan is from Niles, Helen is from Omaha, and Greta is Mrs. Jull. We also see that Helen is not Mrs. Katz and that Greta is not married to Cal. Enter these proved relationships in the large grid (fig. 7), and the rest is easy.

FIGURE 7

	EDITH	FLORA	GRETA	HELEN	INCH	JULL	KATZ	LANG	MIAMI	NILES	OMAHA	PERU
ABE												
BOB					x				x			
CAL			x			x				x		
DAN			x	x		x	x				x	x
MIAMI					x							
NILES				x		x						
OMAHA			x				x					
PERU			x	x		x						
INCH												
JULL				x								
KATZ		x	x									
LANG												

SEQUENCE

FIGURE 8

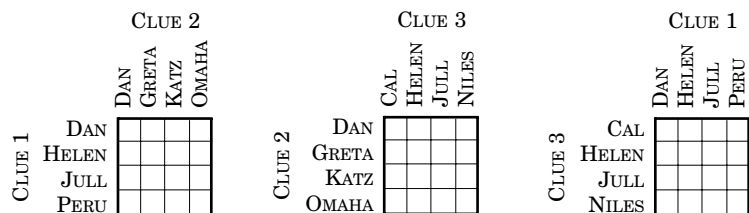


FIGURE 9

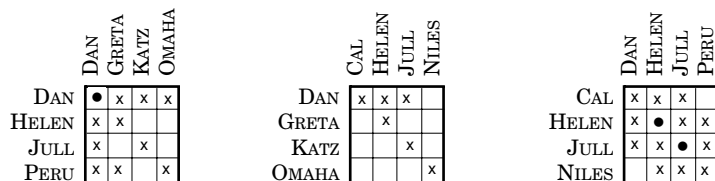
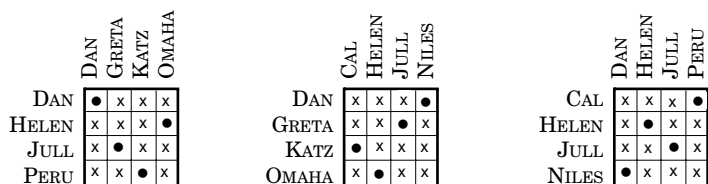


FIGURE 10



Dan	Helen	Omaha
Greta	Niles	Flora
Katz	Jull	Abe

In some puzzles members must fall into a specified sequence. At first it would seem that the solution involves no more than expansion of the grid to include numbers designating the sequence. Often, however, there is more involved than that. When the various sequences are compared, other information is revealed. In the following example the introduction mentions that one woman is Edith, one surname is Lang, and one city is Peru:

- (1) Greta and her husband arrived just after Dan and his wife and just before Mr. and Mrs. Katz.
- (2) The lady from Niles arrived just after Helen and just before Mr. Jull.
- (3) Flora arrived just after the lady from Omaha and just before Abe's wife.
- (4) The man from Miami was not the last to arrive, and Cal was not the first.
- (5) Bob is not Mr. Inch.

Who arrived first, second, third, and last?

Three separate sequences are presented: Dan–Greta–Katz (clue 1), Helen–Niles–Jull (clue 2), and Omaha–Flora–Abe (clue 3). This kind of problem can be solved by using a grid (more about that below), but it is often faster and easier to take the following approach.

Write down the three lists side by side in columns with the first arrival at the top of each:

Since there were four arrivals altogether and since there are only three possibilities in each column, at least one column must be moved up or down a slot, unless of course these three columns are completely compatible. Right away we see that columns 1 and 2 can't match (Katz cannot be Jull). If we move column 2 down one slot, we see that that won't work (Helen cannot be Greta). Therefore, the only choice is to move column 2 up one position:

	Helen
Dan	Niles
Greta	Jull
Katz	

The third column can be positioned in the same way. Since Omaha can't be Niles (nor can Flora be Greta), the only possibility is that Helen is from Omaha, thus:

1. Helen Omaha
2. Dan Niles Flora
3. Greta Jull Abe
4. Katz

At this point it is easy to fill in the empty spaces by consulting the clues. Edith must be Mrs. Katz (no other choice); Cal must be Mr. Katz (clue 4), and therefore Bob must be married to Helen; Abe and Greta must be from Miami (clue 4), and therefore the Katzes must be from Peru; Mr. Inch must be Dan (clue 5), and therefore Bob must be Mr. Lang.

If, however, you prefer to use a grid, go back to the three sequences and compare them. Abe (just after Flora) cannot be the man from Niles (just after Helen); Greta (just before Katz) cannot be from Niles (just before Jull), so Dan is not married to Helen; Katz (just after Greta) cannot be from Niles (just after Helen); Dan (just before Greta) cannot be from Omaha (just before Flora); and Abe (just after Flora) cannot be Katz (just after Greta).

Furthermore, comparison of clues 1 and 2 shows that the last arrival is either Katz or Jull. The last arrival is not Greta (clue 1), Helen (clue 2), or Flora (clue 3); she has to be Edith. The city from which the last arrival came is not Miami (clue 4), Niles (clue 2), or Omaha (clue 3); it is Peru.

Enter the information on a large grid (fig. 11). Since Flora and Greta arrived second and third (in one order or the other), Edith and Helen were first and last; since Edith was last, Helen was first.

When one member of a sequence is established, the others fall naturally into place. Thus, Helen is first, Niles is second, and Jull is third. The remainder of the grid can be completed (fig. 12) to give the answer.

	ABE	BOB	CAL	DAN	EDITH	FLORA	GRETA	HELEN	INCH	JULL	KATZ	LANG	MIAMI	NILES	OMAHA	PERU
1	x		x			x	x			x	x			x		
2	x									x	x					
3				x				x							x	
4			x		●	x	x	x					x	x	x	●
MIAMI																
NILES	x						x	x		x	x					
OMAHA	x			x		x										
PERU																
INCH		x														
JULL								x								
KATZ	x			x			x									
LANG																
EDITH																
FLORA	x															
GRETA							x									
HELEN								x								

FIGURE 11

	ABE	BOB	CAL	DAN	EDITH	FLORA	GRETA	HELEN	INCH	JULL	KATZ	LANG	MIAMI	NILES	OMAHA	PERU
1	x	●	x	x	x	x	x	●	x	x	x	●	x	x	●	x
2	x	x	x	●	x	●	x	x	●	x	x	x	x	●	x	x
3	●	x	x	x	x	x	●	x	x	●	x	x	●	x	x	x
4	x	x	●	x	●	x	x	x	x	x	●	x	x	x	x	●
MIAMI	●	x	x	x	x	x	●	x	x	●	x	x				
NILES	x	x	x	●	x	●	x	x	●	x	x	x				
OMAHA	x	●	x	x	x	x	x	●	x	x	x	●				
PERU	x	x	●	x	●	x	x	x	x	x	●	x				
INCH	x	x	x	●	x	●	x	x								
JULL	●	x	x	x	x	x	●	x								
KATZ	x	x	●	x	●	x	x	x								
LANG	x	●	x	x	x	x	x	●								
EDITH	x	x	●	x												
FLORA	x	x	x	●												
GRETA	●	x	x	x												
HELEN	x	●	x	x												

FIGURE 12

Some puzzles require trying one arrangement after another until only one satisfies *all* the clues. Several arrangements are possible from one group of clues, but all but one of them fail to accommodate all the other clues. Such puzzles do not yield solutions from a grid or partial grids. Most of them have several categories.

Here is an example. On each day of the week—Monday through Friday—a husband and wife arrive at a motel from a different state and driving a different make of car. One man is Carl; one woman is Helen; one couple's last name is Rankin; and one couple came from Nebraska. Each couple has a different last name.

- (1) Gigi and her husband arrived the day after Al and his wife and the day before the couple from Louisiana. Gigi, who is not Mrs. Queen, is not married to Bob.
- (2) The Smiths came the day after the couple in the Audi and the day before the couple from Ohio. Mr. Smith is neither Julia's husband nor the driver of the Chevrolet.
- (3) Earl arrived the day before the man from Michigan but not on Monday. Dan is not from Michigan.
- (4) The couple in the Buick (who are not from Louisiana) came the day after the Peterses and the day before Ilene and her husband.
- (5) The Queens arrived the day after the couple from Kansas.
- (6) Neither Julia nor the lady in the Dodge came on Friday. Neither Flora nor Bob's wife came in the Buick.
- (7) Both Mr. Tilman and the driver of the Ford came sometime before Dan.

It is immediately obvious from clues 1, 2, and 3 that the last three arrivals are from Michigan, Louisiana, and Ohio, in some order. Three different arrangements are possible based on these three clues:

	I	II	III
MONDAY	Al	Audi	
TUESDAY	Gigi	Al Smith	Earl-Audi
WEDNESDAY	Earl-Audi-LA	Gigi-OH	Al Smith-MI
THURSDAY	Smith-MI	Earl-LA	Gigi-OH
FRIDAY	OH	MI	LA

However, the sequence Peters-Buick-Ilene (clue 4) cannot be fitted

into arrangements II or III, so they are wrong. Arrangement I is correct, but two possibilities exist within it:

		I-A	I-B
MONDAY	Al	Peters	
TUESDAY	Gigi	Buick	
WEDNESDAY	Earl-Audi-LA	Ilene	Peters
THURSDAY	Smith-MI		Buick
FRIDAY	OH		Ilene

Since the Kansas couple (who came on Monday or Tuesday) arrived the day before the Queens (clue 5) and Gigi is not Mrs. Queen (clue 1), arrangement I-B cannot be correct. Therefore, Al is Mr. Peters, the Buick belongs to Gigi, and Earl's wife is Ilene. The Queens arrived on Wednesday, and the Kansas couple on Tuesday (clue 5).

With this much information, the rest is easy—you may not even need a grid. The following is the complete solution:

DAY	HUSBAND	WIFE	SURNAME	STATE	CAR
MONDAY	Al	Julia	Peters	Nebraska	Ford
TUESDAY	Carl	Gigi	Tilman	Kansas	Buick
WEDNESDAY	Earl	Ilene	Queen	Louisiana	Audi
THURSDAY	Bob	Helen	Smith	Michigan	Dodge
FRIDAY	Dan	Flora	Rankin	Ohio	Chevy

Endless Sequence

Some puzzles specify a certain sequence without regard to which is first or last. This is a "roundtable" form of the sequence.

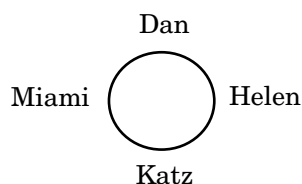
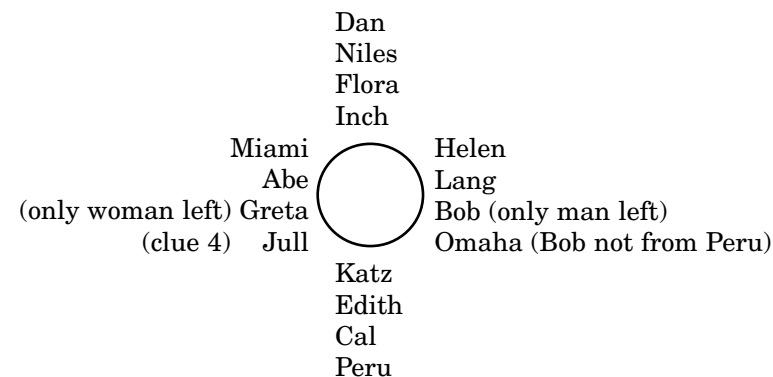
In the following example the introduction states that four men, including Mr. Jull, are locked in a showdown poker game around a circular table in the Sundown Saloon. Each man is married.

- (1) Clockwise around the table are seated Dan, Helen's husband, Mr. Katz, and the gambler from Miami.
- (2) Abe sits opposite Mr. Lang, with Edith's husband on his right and the man from Niles on his left.

- (3) Flora's husband is opposite Cal; neither is from Miami.
- (4) Bob (who is not from Peru) is not married to Greta (who is not Mrs. Inch).

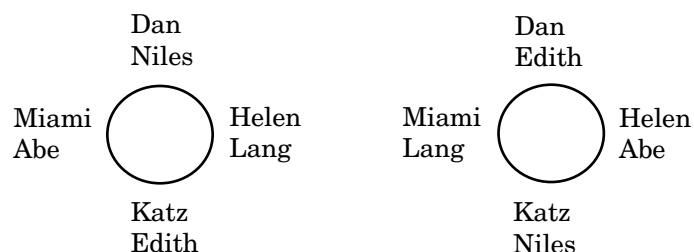
must be Flora's husband, and Mr. Katz must be Cal. By adding in those names and consulting clue 4, we get the answer:

Two clockwise sequences are stipulated: Dan–Helen–Katz–Miami and Lang–Edith–Abe–Niles. As with the preceding puzzle, a grid may be used (see below), or you can plot out the sequences in relation to one another. The latter approach will produce the following:



Now add the second sequence to the first. Lang is not Dan because Edith is not Helen. Lang is not Katz. Therefore, we have two possible combinations:

How to solve the puzzle using a grid:



In this type of puzzle, it doesn't matter which member is designated number 1. We can number the seating (clockwise) 1, 2, 3, and 4, bearing in mind that 1 comes after 4 in the sequence. For convenience, start with Dan as the man in seat 1 and enter the information (fig. 13). Flora's husband opposite Cal (clue 3) cannot be in seat 3 (Mr. Katz), and he isn't from Miami (seat 4); he must be Dan. Mr. Katz and Mr. Lang cannot be Abe or Dan (clues 1 and 2), so they are Bob and Cal; Abe and Dan are Mr. Inch and Mr. Jull.

Similarly, the husbands of Edith and Helen cannot be from Miami or Niles, so they are from Omaha and Peru; thus, the husbands of Flora and Greta are from Miami and Niles. Therefore (clue 2), Abe is in seat 4, Edith's husband is in seat 3, and Mr. Lang is in seat 2.

But clue 3 eliminates the right-hand combination: Flora's husband is opposite Cal; neither is from Miami. That means that Flora's husband must be either Dan or Mr. Katz, but Dan's wife is Edith and Cal cannot be Dan. The first combination is the only one possible; Dan

Completion of the grid is rather easy, and we find that:

SEAT	HUSBAND	WIFE	SURNAME	CITY
1	Dan	Flora	Inch	Niles
2	Bob	Helen	Lang	Omaha
3	Cal	Edith	Katz	Peru
4	Abe	Greta	Jull	Miami

	ABE	BOB	CAL	DAN	EDITH	FLORA	GRETA	HELEN	INCH	JULL	KATZ	LANG	MIAMI	NILES	OMAHA	PERU
1	x	x	x	●				x			x		x			
2				x	x	x	x	●			x		x			
3				x				x	x	x	●	x	x			
4				x				x			x		●	x	x	x
MIAMI			x	x		x		x			x					
NILES	x				x								x			
OMAHA																
PERU		x														
INCH							x									
JULL																
KATZ				x				x								
LANG	x				x											
EDITH	x															
FLORA			x													
GRETA		x														
HELEN				x												

FIGURE 13

COMBINATIONS

Want to try a slightly more difficult puzzle, one that can make use of both multiple full accounting and sequence? Try this one.

During their visit to Disney World, six couples, including Mr. and Mrs. Inman, each take a room on a different floor of the Grand Hotel —on floors 1 through 6. Each couple comes from a different state (one is from Virginia), and each husband follows a different profession (one is an architect).

- (1) No husband and wife have the same first initial, so Alfred isn't married to Anne, Bart isn't married to Becky, and so on.
- (2) Mr. Grady has a room on the floor just below Dave and just above the contractor. Their wives include Celia, Ellen, and Flora.
- (3) Neither Alfred nor Mr. Hawks is from Texas.
- (4) The salesman's wife is just below Doris and just above the lady from Wisconsin. They are married (in one order or another) to Alfred, Cedric, and Edgar.

- (5) The broker (who is not Cedric) is just below the man from South Carolina.
- (6) The bus driver is just below Fred and just above Becky. These three persons come from South Carolina, Utah, and Texas.
- (7) Cedric is not Mr. Lamar.
- (8) Mr. Kratz is just below the teacher and just above the man from Texas.
- (9) Celia is just above the lady from Tennessee.
- (10) Bart is just below Mr. Jolson and just above the man from Utah.

Ready to start? Note that *all* the couples are represented by Dave, Grady, the contractor, Anne, Becky, and Doris (clue 2); they are also represented by the salesman, Wisconsin, Doris, Bart, Dave, and Fred (clue 4); and by the bus driver, Fred, Becky, Tennessee, Virginia, and Wisconsin (clue 6). In a grid of clue 2 *vs.* clue 4, we find that Becky isn't married to Bart (clue 1), Dave (clue 2), or Fred (clue 6); she is not from Wisconsin (clue 6); and of course she isn't Doris. Therefore, Becky is the wife of the salesman (clue 4). Now we can compare the sequences of clues 4 and 6; we will see that Doris must be married to the bus driver.

We have established the following sequence:

Fred	} These include Alfred, Cedric, and Edgar (clue 4).
Doris–bus driver	
Becky–salesman	
Wisconsin	

Since there is a limit of six floors, Dave must be above Fred and the contractor must be above the bus driver (clue 2). Hence, Dave must be on floor 6. Bart is on floor 5 (only possibility). Having this start, you are on your own to finish the puzzle. The following is the solution:

FLOOR	HUSBAND	WIFE	SURNAME	PROFESSION	STATE
6	Dave	Celia	Jolson	architect	Virginia
5	Bart	Flora	Grady	teacher	Tennessee
4	Fred	Ellen	Kratz	contractor	Utah
3	Cedric	Doris	Inman	bus driver	Texas
2	Alfred	Becky	Lamar	salesman	S. Carolina
1	Edgar	Anne	Hawks	broker	Wisconsin

ODD TYPES

Some puzzles simply do not conform to any of the usual patterns. They call for a different approach (at least in part).

Liar or Liars

Actually, this is a very easy sort of puzzle—once you have determined who lies and who tells the truth. After that the puzzle practically solves itself.

Suppose the “Unsolved” stipulates that only one member lies and that one wife is named Greta:

- (1) Abe says: “Bob Lang and his wife Helen are from Omaha.”
- (2) Bob claims: “Cal and his wife Edith are from Peru.”
- (3) Cal declares: “My wife Flora and I are from Omaha. Abe is from Niles.”
- (4) Dan states: “Neither Abe Jull nor Mr. Katz is married to Flora.”

Which is the couple from Miami?

Cal’s statement disagrees with Abe’s (about who is from Omaha) and with Bob’s (about who is Cal’s wife). However, since only one person lies, that person is Cal. Thus, Cal is *not* married to Flora, *neither* Cal *nor* Flora hails from Omaha, and Abe is *not* from Niles.

Sufficient information is provided to prove:

HUSBAND	WIFE	SURNAME	CITY
Abe	Greta	Jull	Miami
Bob	Helen	Lang	Omaha
Cal	Edith	Katz	Peru
Dan	Flora	Inch	Niles

Suppose instead that the puzzle specifies that only one member is *truthful* and the others lie about everything. In this example the introduction states that one wife is Greta and one man is Mr. Jull:

- (1) Abe says: “I am Mr. Lang. Bob and his wife Flora are from Miami. Cal is not married to Edith. If you doubt me, ask Dan—he always tells the truth.”

- (2) Bob claims: “Abe never lies. He and his wife are from Peru. Dan is Mr. Lang.”
- (3) Cal declares: “Dan Inch and his wife Flora are from Niles.”
- (4) Dan states: “Mr. Lang hails from Peru. Mr. Katz is from Miami, and Abe is from Omaha.”

Abe says that Dan is truthful, so either both lie or both tell the truth. Since only one man is truthful, both Abe and Dan are liars. Bob also lies, since he claims that Abe tells the truth. Cal is the truthful one of the four, so Dan and Flora Inch *do* come from Niles (clue 3). On the other hand, Cal *is* married to Edith, neither Bob nor Flora is from Miami, and Bob is not married to Flora (clue 1). Likewise, Abe is not married to Helen, neither is from Peru, the Katzes are not from Miami, and Abe is not from Omaha (clue 4).

The relationships can easily be completed.

Arithmetic

We are told that at the county fair four brothers—Abe, Bob, Cal, and Dan—set up refreshment booths distinguished only by their colors: white, yellow, red, and blue.

- (1) All the brothers sold the same four items with the same profit on each: candy bar = 20¢, cup of coffee = 25¢, bag of peanuts = 30¢, and bag of popcorn = 35¢. The sales for each item by each brother were exactly 50, 60, 75, 90, or 100. No two brothers sold the same number of any one item, and no brother had the same number of sales for two items.
- (2) No brother sold exactly 50 candy bars or 60 bags of peanuts, and no brother made a profit on any item of exactly \$18.75 or \$26.25.
- (3) Bob, who sold the most candy, made exactly the same profit on coffee that he did on peanuts, which was exactly the same profit that the man in the red booth made on candy.
- (4) Cal, who sold the most popcorn, made exactly the same profit on coffee that he did on peanuts, which was exactly \$10.50 more than he made on candy (which was \$6.00 less than the man in the blue booth made on his candy).
- (5) Abe, who sold the most peanuts, made \$6.00 more on his popcorn than the man in the white booth made on his peanuts. Abe is not the brother in the red booth.

Seems terribly involved? Stop. Think what information is needed for the solution. The problem involves quantities compared to prices for the various items. Keeping in mind that certain quantities were *not* sold (clue 2), we have:

SALES	CANDY	COFFEE	PEANUTS	POPCORN
50	xx	12.50	15.00	17.50
60	12.00	15.00	xx	21.00
75	15.00	xx	22.50	xx
90	18.00	22.50	27.00	31.50
100	20.00	25.00	30.00	35.00

Bob (clue 3) sold 100 bars of candy, 60 cups of coffee, and 50 bags of peanuts, while the brother in the red booth sold 75 bars of candy. Cal (clue 4) sold 60 bars of candy, 90 cups of coffee, 75 bags of peanuts, and 100 bags of popcorn, while the brother in the blue booth sold 90 bars of candy. Abe (clue 5) sold 100 bags of peanuts and 60 bags of popcorn (only possible sale exactly \$6.00 more than any sale of peanuts), while the brother in the white booth sold 50 bags of peanuts. Hence, the brother in the white booth must be Bob.

The brother in the red booth must be Dan. (He isn't Abe, clue 5, or Bob, who is in the white booth, or Cal, who sold only 60 bars of candy.) Cal must be in the yellow booth, and Abe must be in the blue booth.

Dan, in the red booth, sold 75 bars of candy and (by elimination) sold the 100 cups of coffee. Bob is the one who sold 90 bags of popcorn (only possibility, clue 1). Abe, in the blue booth, sold 90 bars of candy and can only be the brother who sold 50 cups of coffee. Dan, therefore, sold the 50 bags of popcorn and the 90 bags of peanuts (only possibilities left).

Suppose the puzzle asks which two brothers made *exactly* the same total profit for the day? Which booth made the most profit?

We have already proved the distribution of sales:

NAME	BOOTH	CANDY	COFFEE	PEANUTS	POPCORN
Abe	blue	90	50	100	60
Bob	white	100	60	50	90
Cal	yellow	60	90	75	100
Dan	red	75	100	90	50

The profits were, therefore:

NAME	BOOTH	CANDY	COFFEE	PEANUTS	POPCORN	TOTAL
Abe	blue	18.00	12.50	30.00	21.00	81.50
Bob	white	20.00	15.00	15.00	31.50	81.50
Cal	yellow	12.00	22.50	22.50	35.00	92.00
Dan	red	15.00	25.00	27.00	17.50	84.50

The answer is that the blue and white booths showed the same total profit for the day, whereas the yellow booth made the most money.

Sneaky Clues

There is really nothing *wrong* with such puzzles, but I hate them anyhow. Their clues supply all sorts of extraneous information, information that is in no way essential for the solution and that is given (apparently) for the sole purpose of confusing the solver.

Here is an example. Three brothers—Art, Sr.; Bert, Sr.; and Carl, Sr.—are retired and live in the village of Orchard Hill. Their sons—Art, Jr.; Bert, Jr.; and Carl, Jr.—are all the same age and are in business as an architect, a banker, and a contractor (not necessarily in that order).

- (1) Carl, Jr., wears a tweed coat and size 8 1/2 shoes.
- (2) The architect's father resides on Peach Street, where he is an avid gardener. This summer he won first prize for his roses.
- (3) The architect lives next door to an older relative, who this spring planted exactly twice as many azaleas and three times as many tulip bulbs as did the architect.
- (4) This spring Art, Sr., planted exactly 10 rosebushes and exactly 200 tulip bulbs.
- (5) The architect's house is on Pear Avenue, which is exactly halfway between Apple Way and Peach Street.
- (6) Bert, Sr., who lives on Apple Way, planted exactly 20 rosebushes this spring. He wears size 11 shoes.
- (7) The contractor wears a blue shirt and size 9 1/2 shoes.

Who is the banker?

Let us begin by weeding out the useless information. Bert, Sr., planted 20 rosebushes (clue 6), and Art, Sr., only 10 (clue 4); however,

we already know that these two men are not the same person—out with the rosebushes! The azaleas planted by the architect and his relative next door (clue 3) likewise contribute nothing to the solution—the azaleas must also go! Carl, Jr., wears a tweed coat (clue 1), but we have no clue as to what sort of coat his cousins wear, so take away the tweed coat. Similarly, the fact that the contractor wears a blue shirt (clue 7) can be disregarded. We learn that Bert, Sr., wears size 11 shoes, but that bears no causal relation to the size of shoes worn by his son and nephews—off with Bert, Sr.’s shoes! Nor does it matter that Pear Avenue is halfway between Apple Way and Peach Street (clue 5) or that the architect’s father raised the prize roses (clue 2).

Having eliminated the unessential data from the clues, we can turn our attention to the solution.

The architect on Pear Avenue (clue 5) lives next door to an older relative, his father or one of his uncles (clue 3), who cannot be Bert, Sr., on Apple Way (clue 6) and cannot be Art, Sr., who planted 200 tulip bulbs, since the architect would hardly have planted $66\frac{2}{3}$ tulip bulbs (clue 3). The architect lives on Pear Avenue next door to Carl, Sr., who is not his father on Peach Street (clue 2). The architect is Art, Jr. Art, Sr., lives on Peach Street (clue 2). The contractor wearing size $9\frac{1}{2}$ shoes (clue 7) is not Cal, Jr., who wears size $8\frac{1}{2}$ (clue 1); he is Bert, Jr. The answer required is that the banker is Carl, Jr.

This example illustrates another exasperating point (at least to me): it leads to the essential answer called for but leaves the solver with other unanswered questions. We can discover that Bert, Sr., lives on Apple Way; Art, Sr., lives on Peach Street; and Carl, Sr., and Art, Jr., live on Pear Avenue. But where do Carl, Jr., and Bert, Jr., live? The clues do not reveal that. I suppose we’ll never know.

CONCLUSION

The above is an introduction to the various kinds of puzzles and their solutions, with an example of each. With a little practice you can pick out which is applicable to a particular puzzle.

There are, of course, variations on these methods of solution, but the essence of solving the “Unsolved” puzzles has been covered.

Good luck!