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# THE ENGINEER'S BOOKSHELF

By WILSON R. DUMBLE

**A**LTHOUGH a play is written to be acted on a stage and witnessed by an audience, it can be read with complete understanding. The reader, to be sure, must use his imagination to picture the action of the players, to visualize their entrances and exits, and to learn how to interpret character not only from what the actor does but also from what he says. In fact, if one is to become acquainted with the drama it will be necessary to learn to read plays, because revivals of good plays are few, and cannot always be witnessed.

The drama dates back to the Golden Age of Athens several centuries before the birth of Christ, and the old Greek comedies and tragedies, in part at least, are just as modern today as they were when they were first given to the world. It must not be forgotten, however, that the most brilliant period of dramatic history belongs to England at the time of Shakespeare. With these two periods for background, modern drama is generally timed from the early part of the nineteenth century, when Henrick Ibsen, the Norwegian playwright, lived and wrote.

A play, like a novel, tells a story; yet there is a great difference between the two. The work of the playwright is more concentrated than that of the novelist. Each writes about characters who say something and do something to move emotionally the reader or hearer. Yet the dramatist, in his work, must pack into a page of script what the novelist might use in an entire chapter. One might say that in some cases every page of a play has cost more care and a more severe mental strain than a fifty page chapter of a novel.

A play is little more than a story with a series of incidents, a chain of events that can be either simple or complex. The dramatist selects certain characters to act out his story against an appropriate setting. There are several ways he can tell his story in order to accomplish his end. If he takes a plot that has already been used, as Shakespeare frequently did, he can invest it with new characters and dramatize it to suit his own particular needs. Or, he can take a situation, complicate it and before the fall of the final curtain, solve it as did Scribe, the French playwright. This method employs the use of tricks and of certain properties that fall into the hands of first one character and then the other, until they right themselves for what is generally known as a happy ending. These two methods are associated with the romantic play

and stand in great favor with certain types of audiences.

There are two other means, however, that the modern dramatist may use. One way is to pit a character or a group of characters against certain applied forces. This is the method used by Eugene O'Neill in his famous seven plays of the sea, and by Somerset Maugham in *RAIN*. The other method deals with the use of a thesis or an idea, and drives its action toward the solution of the situation introduced by the author. In these two methods, not romanticism but naturalism is employed; and in them — Ibsen's *DOLL'S HOUSE* is an early example—are discovered the seeds of modern drama, with man fighting himself or battling the Universe.

Regardless of length, a play structurally consists of three parts. First of all, there is that part where the characters are introduced to the audience, when an explanation of their past history is made, and where their present relationships are explained. This part one may call the exposition, because certain conditions with which the story deals, are being exposed to the audience. It usually takes up the greater portion of the first act of the traditional three acts.

In order to explain this situation, a well known play, such as W. Somerset Maugham's *RAIN* can be used as an example. At the rise of the curtain in *RAIN* the audience learns that five passengers aboard an Australian-bound steamer have been stranded at a coaling station in the South Sea Isles, because of a case of smallpox in the ship's crew. These five passengers—a missionary and his wife, an American physician and his wife, and Sadie Thompson, an outcast from a questionable section of San Francisco—are virtually held prisoners at this forsaken outpost of civilization until the quarantine has been lifted. So, by means of this exposition, the audience becomes acquainted with the characters, learns a portion, at least, of their past, and is faced with their present relationships.

The second step of the modern drama, traditionally employing the last part of the first act and the entire second act, presents the predicament in which the past history and present relationships have placed the characters. The predicament in *RAIN* arises when Sadie Thompson meets and entertains rather unscrupulously, members of the U. S. Marine Corps who are stationed on the island. Most naturally the missionary objects to Sadie's loud parties which are

held under the very roof of the hut-hotel in which the five passengers are quartered. Thus the predicament arises when the missionary attempts Sadie's conversion. The result, not unexpected, reveals Sadie successfully exerting her wiles on the missionary.

A third step finishing the story of the plot explains the results of the predicament, always placed in the traditional third act. In *RAIN* the last step shows the seduction of the missionary and his suicide on the beach. The steamer then lifts anchor, takes its passengers aboard and sails for the Australian port of call.

These three steps have been called the exposition or introduction, the complication, and the solution. For the most part plays are so constructed, whether they are the traditional three act plays, the eight act *STRANGE INTERLUDE* by Eugene O'Neill or the one act play, such as Mr. O'Neill's *THE MOON* of the last few years.

Regardless of the length of the play, however, the art of the dramatist, as has been said, rests with his ability to tell much in as short a length of time as possible. His problems are to practice economy of words, to portray characters flawlessly, and to explain situations briefly. Here, no doubt, rests the ability of a great playwright.

The success of a play, at the same time, also depends as much on the manner in which it is produced on the stage as it does on the way it is structurally executed by the author. During the last ten or fifteen years great strides have been made in production technique. Of course in the early Nineteen Hundreds a few plays were produced with the accent resting on the spectacle angle. *BEN HUR*, for example, was conspicuous for its chariot race, run on a specially constructed treadmill placed on the stage. A real dust storm was a feature of *THE GREAT DIVIDE*, and *CREATION*, a spectacle of Biblical nature, depicted with elaborate moving scenery the creation of the Universe. These were oddities as much as anything, and some of them, alas, were far from good drama.

Recently, however, modern science has contributed advancements in setting and lighting features of the theatre. Max Rinehart, a German producer, for example, has devised a revolving circular stage which is placed on the regular stage floor. Settings divide this stage floor in half, so that when one-half of the circle is turned toward the side of the audience where a play is being acted, the other half of the circle is facing the rear of the stage and is being set or prepared for the next scene. Naturally this enables a play of many scenes to be run off with great rapidity. The revolving stage was first used in this country in 1930 with the New York production of *GRAND HOTEL*. Also in recent years Joe Milziner has made a name for himself by designing charmingly artistic interior sets for the

stage and by abolishing the old time back and side "drops" which lent the air of unreality to the setting.

In the modernly constructed theatre even the stage itself has taken on different proportions, being lower and closer to the audience than the old fashioned stage. In several recently constructed experimental theatres it is elevated only a couple steps above the floor on which the audience is seated, and the orchestra pit has been abolished. Eugene O'Neill's *MARCO MILIONS* can be produced properly only in a theatre where there are steps leading from the stage into the audience; for the acting is done not only on the stage but also on the steps and in the aisles of the theatre.

The advances along with other new ideas in stage setting, have brought equally modern innovations in lighting. Naturally with the disappearance of the orchestra pit, the old fashioned footlights have disappeared. For in the modern theatre practically all the lighting is done by means of overhead and side lights on the stage. No spot light from the gallery's edge follows the star about the stage. If such a spot light is used it is placed and operated behind the scenes. "Baby spot" lights, now used very effectively, are small spot lights that throw a concentrated ray upon the actors and are operated entirely from back stage with the result that splendid intercross lighting effects can be gained when they are properly placed and used.

Great is the pity that the availability for witnessing a legitimate stage performance has been allowed to fade and almost die in the cities throughout the country which were once considered theatrical centers. At the present time, apparently, New York is the center of the theatrical world, where all plays, good and otherwise, have their beginning and sometimes their end, sooner or later. Yet, during the past theatrical seasons a few legitimate plays have been taken to the road very successfully.

## Incinerator Turns Garbage Into Electricity

Garbage and refuse are converted into electricity in the largest incinerator in the world, now in service in New York City. After garbage trucks have piled up the refuse, giant metal jaws grab huge loads of the material, run along overhead tracks, and dump it into a concrete trough at the mouth of the incinerator. A trapdoor is then opened to let the material fall down in the incinerator furnace. The burning refuse produces heat to create steam, which in turn drives a set of turbines for the generation of electricity. Before the completion of the incinerator power plant, garbage collected in New York City was piled into scows and towed out by tugs to be dumped into the Atlantic Ocean.