MONOPOLISTIC COMPETITION, OLIGOPOLY
CHAPTERS 16, 15

Back to the CONTINUUM............

Pure competition Monopoly
Monopolistic competition…Oligopoly-Duopoly

Monopolistic (often imperfect) competition

Akin to Competition:
1. many relatively small firms
2. and are small enough to allow relative ease of entry and exit
3. firms who can ignore (properly) the actions of each other, often referred to as “a certain amount of independence” Important to note that such “independence” is a great deal less with oligopoly.

Differs from Competition:
1. product differentiation, often through BRAND NAME as much as PRODUCT differences…which raises the issue of whether or not an “identical” product is identical if consumers think there is a difference.
**BEHAVIOR AND OUTCOME**

Assuming profit maximization yields an outcome that is not all that far from the competitive outcome, BUT:

1. $P_{mc}$ greater than $P_c$, and $O_{mc}$ less than $O_c$
2. and **EXCESS CAPACITY**
3. without **EXCESS PROFIT**

This is shown with graph below, using only ATC and Demand curve….entry eliminates excess profits and yields a tangency between the demand and cost curve on the downward portion of the cost curve (this must be the case since the demand curve is downward sloping)…..that is at a point on the ATC to the left of the minimum cost area. (more detailed diagrams in text, pages 394 ff)

In the short run, excess profits are being made at the profit maximizing level of output (b), with a price of $7. With ease of entry, market supply will increase, market price will fall, and the firm’s share of the industry output will fall, from b to a. It is also possible for costs to rise. The process of entry will end when normal profits are obtained…i.e., price covers ATC (which, remember, includes normal profits). Notice also, since the firm in monopolistic competition has a downward sloping demand curve, it will be producing at the tangency with ATC. The notion of excess capacity is that a firm is producing at the most efficient level…i.e., at the LOWEST point on the ATC. In the above situation, you could have FEWER FIRMS producing the SAME OUTPUT at a LOWER PRICE. Ergo…EXCESS CAPACITY.
OLIGOPOLY a few firms, from 2 to......???

1. **CRUCIAL ASSUMPTION**…a number small enough so that each firm recognizes that its actions impact on the others, and that the other firms will react if injured...often referred to as “strategic independence,” or “interdependence” in K and W, p. 371.

2. The small number arises from existence of economies of scale, which implies that firms will be of fairly large size, with various “barriers to entry.” H and L do a good job of indicating the fuzziness of these issues, and the types of barriers—reputation, “strategic,” like showing a lot of muscle….”don’t intrude buster,” and government aided via tariffs, etc…p. 286ff)

3 Aside from the fact of more than one firm, industry is not unlike a monopoly (given the implied interdependence). This dependence generates a monopoly-like outcome. In order to MAXIMIZE PROFITS, firm(s) must MAXIMIZE MONOPOLY PROFITS collectively.

K and W use game theory….in class version of prisoner’s dilemma focuses only on output decision (which defines profits) “cooperation” is the best strategy—i.e., collude and share the monopoly profits, but game may not be played out that way   

**NOTE: K and W’s EXTENDED DISCUSSION OF GAME THEORY (pp. 371-78) IS INTERESTING IF A BIT TO DETAILED AT THIS POINT....BUT, IT DOES INDICATE ONE OF THE DIRECTIONS TAKEN BY SOME ECONOMISTS ....INCLUDING DAN FRIEDMAN HERE AT UCSC**
Under any circumstance, all students should be familiar with the basic prisoner’s dilemma—not just for Econ 1—but for general education purposes. A brief example will be discussed in class at the end of this section (time permitting).

**Model discussed in class uses 2 firms**—a DUOPOLY—but results are generalizable to some larger number….until the number is “so” large that we get back to monopolistic competition.)

Below, we use the monopoly graph with constant costs (**and for simplicity, assume costs are zero**), but now with two firms sharing the market….outcome depends on the extent to which they each recognize “strategic independence.”

In A we replicate the Monopoly outcome (profit max where Revenue—area under the demand curve is greatest). In B, as discussed in class, if the two firms IGNORE each other, they will end up splitting 2/3 of the total market, and thus have lower combined profits than the monopolist. If the recognize their mutual interdependence, they will each produce half of the monopoly output, and thus, share equally in the largest possible profits. Notice, that in case B, if the firms act as if they were in perfect competition, the total output will be 2/3 of the competitive output (co, which is where price covers cost…zero in our example); or N/N+1 of the competitive output, where N is the number of firms….the more firms, the closer the output and price come to the competitive solution.

Note:, firms must agree (IMPLICITLY OF EXPLICITLY) to produce at Monopoly output, or set the Monopoly price (which amounts to the same
thing). This in turn requires some sort of AGREEMENT on SHARE OF INDUSTRY OUTPUT. WITHOUT RESTRAINT, FIRMS WOULD THUS COLLUDE, (which they do in the real world a good bit of the time, legally or not).

Barriers to Collusion:

1. Legal
2. Situational...complex product, too many firms
3. Greed, which leads to cheating, or simply to the thought that the other guy(s) won't notice what you are doing.

ALTERNATIVES TO COLLUSION: "PEACEFUL COEXISTENCE"

1. Price leader (dominant firm, barometric firm)
2. Avoid easily visible price competition, which leads to ➔ "non-price competition" via advertising and ➔ product differentiation (MORE THAN BRAND NAME DISTINCTIONS...color, features, safety...

(BRIEF COMMENTS ON ADVERTISING)
A useful SOCIAL FUNCTION to the extent it provides INFORMATION rather than PERSUASION;

1. much of the print media advertising is informational
2. TV and magazine ads provide little information
3. "Info" provided by SELLER likely to be of poor quality.......SOLUTION: Regulation and/or "let the market do it."
4. “price” paid for the advertising per se = 0 (aside from time); i.e., advertising as a joint product....it comes with the Super Bowl, magazine, newspaper...which implies that the amount produced is probably greater than what consumers desire. Some advertising as info is paid for...e.g., Consumer’s Report
ASPECTS OF GAME THEORY

Y’s options (1st number)

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<tr>
<th></th>
<th>confess</th>
<th>deny</th>
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<tbody>
<tr>
<td>X’s options (2nd number)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>confess</td>
<td>5, 5</td>
<td>20, 0</td>
</tr>
<tr>
<td>deny</td>
<td>0, 20</td>
<td>1, 1</td>
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Years in prison for X and Y respectively, i.e., if they both confess, 5 years each—if x confesses and y denies, X goes free; and the same for Y

Confess is dominant strategy for both X and Y (each is “protected” regardless of what the other does) but notice, it would be better if they “cooperated,” in the sense of each denying.

→ Enter Nash equilibrium where each person does they can, given what the other person is likely to do:

→ If both firms have a dominant strategy, then the equilibrium is Nash. However, you can have a Nash equilibrium without a dominant strategy.  NASH AND A “BEAUTIFUL MIND”

All of the above pretty unrealistic (save for the prisoner’s dilemma). ”Games” more likely to take place over a number of periods, and then Cooperation is more likely, unless time is finite, which leads to unraveling.