primal therapy  (noun) A method of psychotherapy that treats neurosis by teaching patients to relive early traumatic experiences and to express feelings through angry screaming and other verbal or physical acts of aggression. Also called primal scream therapy

Discussion to follow devoted to what is often referred to as the source of the PRIMAL SCREAM, THAT'S A DISCUSSION OF PRODUCT AND COST CURVES!!

All in the form of the following acronyms:

TP, MP, AP, TC, FC, MC, ATC, AFC, AC, MC,

OUTPUT: WE START WITH THE SIMPLE NOTION, O = F(K,L)

1. Firm in the business to sell things, but must produce them first PRODUCTION FUNCTION: O = F(K,L),

Assuming a given state of technology (how, in an ENGINEERING sense inputs are combined to get output, an issue that becomes important in discussion of labor unions)

2. NATURE OF PRODUCTION GENERALIZED, I.E., ECONOMISTS ASSUME IT EXISTS IN ALL FIRMS, REGARDLESS OF PRODUCT

3. LONG RUN AND SHORT RUN

4. EXAMPLE OF FIRM----NICKLODIAN IN THE SHORT RUN
5. DERIVE TOTAL PRODUCT CURVE……WITH CONCEPTS OF INCREASING, DECREASING, AND NEGATIVE RETURNS

(A SIMILAR RELATIONSHIP EXIST FOR THE LONG RUN, BUT CONVENTION IS TO INTRODUCE THE LONG RUN WHEN WE TALK ABOUT COSTS)

NOTICE: As the Nick adds workers, output (admissions) increase at an increasing rate—the slope of the TP curve is concave from above from 0-a; at some point (b) efficiencies fall off, but output continues to increase from a-b; eventually, workers start to get into each other’s way, and with more workers, output actually falls from b-c; after some point, there is no room for customers (c). Obviously, only the range from 0-b is relevant, assuming the owner of the Nick has a brain.
6. DIGRESSION>>>>>Relationship between average and marginal ANYTHING

7. AVERAGE AND MARGINAL PRODUCT>>>>>BOTH EMBODIED IN TOTAL PRODUCT CURVE

Go back to the TP curve above…note, that in the range, 0-a, the total product in increasing at an increasing rate>>>MARGINAL PRODUCT IS RISING. In the range, a-b, total product is rising, but at a decreasing rate>>>MARGINAL PRODUCT IS POSITIVE, BUT FALLING. And obviously, after b, output is falling>>>MARGINAL PRODUCT must be negative

We will return to the Average/Marginal relationship with costs below. Notice, however, that is a worker is becoming more PRODUCTIVE, that’s the same has her becoming less COSTLY. That is, there is a clear relationship between PRODUCTIVITY AND COSTS
COSTS

(ESSENTIALLY THE REVERSE OF PRODUCTION, I.E., IF A WORKER IS GETTING MORE PRODUCTIVE, HE/SHE’S GETTING LESS COSTLY…..SO SHAPE OF COST CURVES ARE THE OPPOSITE OF PRODUCT CURVES…AS LONG AS ONE IMPORTANT ASSUMPTION HOLDS…..LABOR COSTS DON’T CHANGE WITH INCREASES IN EMPLOYMENT AND OUTPUT)

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SHORT RUN

1. TOTAL COSTS = COST OF LABOR AND COST OF CAPITAL

2. IN THE SHORT RUN, COST OF CAPITAL IS ASSUMED TO BE FIXED, AND LABOR IS ASSUMED TO VARY WITH OUTPUT

first assumption fine, second assumption somewhat heroic….discuss briefly the ‘fixed cost” aspect of labor…..

3. FROM THESE ASSUMPTIONS, POSSIBLE TO DERIVE ALL OF THE SHORT RUN COST CURVES: IN THE FOLLOWING ORDER

   FC, VC, TC

   AFC, AVC, ATC

and then, with previous comments about average and marginal relationships, we can derive MC……as will be seen in next chapter, MC becomes central in the output decision.

Please note: next page of graphs—representing hours of professorial effort.
COSTS  SHORT RUN WHERE CAPITAL IS FIXED

Total Fixed Cost

Total Variable Cost

Total Cost
Average Costs = Fixed, Variable, and Total Cost / Output

Notice: The ATC continues to fall, as the AVC rises….the result of rising average variable costs while average fixed costs continue to decline.
<table>
<thead>
<tr>
<th>Output</th>
<th>Total Cost</th>
<th>Marginal Cost</th>
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Notice: Marginal Cost falls as long at Total Costs are rising at a decreasing rate—up to $O_1$; after $O_1$ TC rising at an increasing rate>>>Marginal Cost increasing
Notice: The MC equals ATC and AVC at their respective low points. And, as long as the AVC and ATC are FALLING (rising), the MC is BELOW (above), as discussed above.
**LONG RUN COSTS**

1. The Long Run cost curves is simply a series of short run curves, with the size of the “fixed plant” varying.

2. General assumption about the long run curve:

   **Downward sloping** for a time because of economies of scale>>>>>Increasing returns to scale

   **Horizontal portion** of the curve assumes that after a certain point you exhaust economies of scale...Constant returns to scale

   **Rising portion** of curve problematic even though we assume that all factors are variable in the long run, the fact is that there is probably one remaining fixed factor....**MANAGEMENT COORDINATION**

3. DRAWING THE LONG RUN COST CURVE  (next page)

4. CONCEPT OF “CAPACITY”
LONG RUN COST CURVE (essentially a series of short run curves)

The “Long Run Average Total Cost curve is simply made up of the cost curves from a series of plants with fixed capacity, each getting larger, from A, to B to C.

Note: Increasing returns (scale efficiencies) to A, Constant returns from A to B, and, what is going on after B?? Issue of management inefficiencies???