

Notes on Face, Ec. 162, F84 Good

p. 19

Installment #3 for Ec. 162A, F84, by M.G.

9. Practical influences, (cont.)

e. Depreciation and Amortization, level annuity

How much of annual payment is depreciation of asset? same formula shows amortization of principal of debt.

Three approaches.

$$\begin{aligned} 1) D &= \frac{1 - I^{-n}}{i} - \frac{1 - I^{-(n-1)}}{i} \\ &= \frac{I^{1-n} - I^{-n}}{i} = \frac{I^{-n}(I-1)}{i} = I^{-n} \end{aligned} \quad (19)$$

2) Payment is divided between interest and amortization. (Amortization to the debtor means repayment of principal. He is unhappy because it is so slow. But the creditor is also unhappy it is slow: to the creditor it means recovery of his capital. Be ready to look at this from both sides.)

Interest is due at each passing year on the unrecovered principal P_u , where u is the number of years of life remaining (that is neither the original u , nor the number of years that have passed.)

$$\text{Interest} = P_i = \frac{1 - I^{-u}}{i} \cdot i = 1 - I^{-u}$$

$$\text{Deprec.} = 1 - P_i = I^{-u} \quad (20)$$

3) Graphically:

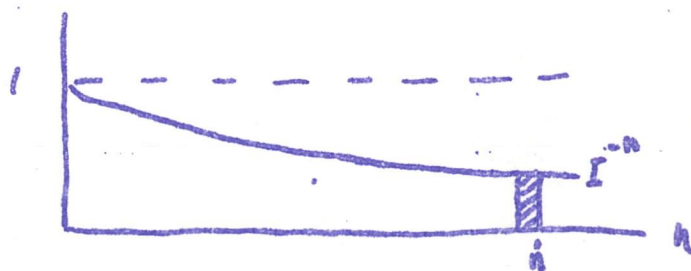


Fig. 6:
Depreciation

Shaded column is Deprec. where u is i . It is I^{-i} , where i is the number of years of life remaining.

10. Appreciation: PV of a rising cash flow

$$\text{Let C.F.} = 1 + (1+g) + (1+g)^2 + \dots + (1+g)^{\infty}$$

$$\text{Then PV} = I^{-1} + I^{-2}(1+g) + I^{-3}(1+g)^2 + \dots + \left(\frac{1+g}{I}\right)^{\infty}$$

Sum the series.

$$PV = I^{-1} \frac{1}{1 - I^{-1}(1+g)} = \frac{1}{I - 1 - g} = \frac{1}{i - g} \quad (21)$$

(Henceforth, use P alone for PV)

Solving (21) for P_i :

$$P_i = 1 + P_g \quad (22)$$

P_g is ΔP , (by obvious inference from the top line on this page, the definition of cash flow.)

I stands for a , any initial C.F. (22) may be rewritten:

$$P_i = a + \Delta P \quad (22A)$$

Thus P_i equals the sum of current cf. plus current appreciation. Note the symmetry and consistency of this with (20).

11. Periodic payments and repeating cycles.

Solve (11) for a/i

$$\frac{a}{i} = \frac{P}{1 - I^{-n}} \quad (23)$$

a , as we have discussed in class, is the n -year annuity corresponding to P .

Dividing a by i "capitalizes" it in perpetuity. It gives the present value of a perpetual flow of a . (See (7), p. 11.)

Thus the right side of (23) is the present value of a perpetual succession of P , received every n years. Label it Σ .

[If the P repeats, but not forever, we adjust Σ by subtracting the discounted value of the portion of Σ contributed by the later

years, the ones that are cut off. This is the same technique we used on p. 13 to find (11).

Let x = no. of reps. of P . Then:

$$\Sigma = \frac{P}{1 - I^{-n}} - \frac{P I^{-xn}}{1 - I^{-n}} = P \frac{1 - I^{-xn}}{1 - I^{-n}} \quad (24)$$

You need not "memorize" (24) for any exam. I just want you to see that and how it can be done.]

12. Positive NPV and Land Values

If investments normally yield positive net present values, NPV, after deducting the initial capital cost, that sounds too good to be true for long, and it is. It creates demand for the land on which these happy results can be achieved. Hence Land Values, which rise to soak up the surplus.

But Land lasts forever, so its value soaks

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up the value of not just the first cycle of investment and return, but all succeeding cycles as well. These are called "Generations".

The NPV of one Generation (G) or cycle of investment and recovery is summarized as P at the time the initial outlay is made. We have called this the "present" when dealing with one cycle, alone. In dealing with a succession of Generations, each P has its own future date.

A string of future P may be summed up as a string of periodic payments, as in (23). If a cycle repeats (in perpetuity):

$$L = \frac{P}{1 - I^{-n}} \quad (23 A)$$

where L = Land Value

Take out $\frac{1}{1 - I^{-n}}$ from that and

we have the "Land Value Multiplier".
See Table 6.

Table 6: Land Value Multipliers

$i =$	<u>.04</u>	<u>.08</u>	<u>.12</u>
n			
1	26.00	13.50	9.33
5	5.62	3.13	2.31
10	3.08	1.86	1.47
20	1.84	1.27	1.12
40	1.26	1.05	1.01

To find Land Value, multiply P from Generation #1 by the appropriate figure.

To adjust for anticipated inflation, use a real interest rate — i.e. subtract the inflation rate from the nominal i.r. Thus, .04 or .08 is more realistic than .12.

13. Maturity and Replacement

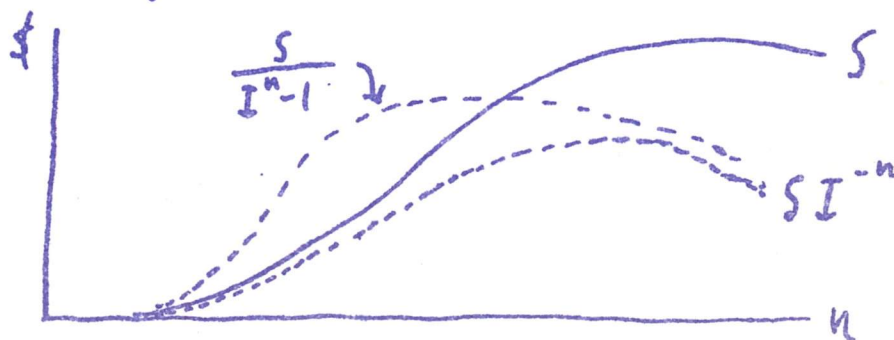


Fig. 7: Growth of Stumpage, Discounted Stumpage & Land Value

$S \equiv$ Stumpage, the market value of a tree "on the stump", before cutting.

Alternative maximizing solutions.*

- 1) Max S
- 2) Max S/n , "Mean Annual Increment"
- 3) Max $S I^{-n}$, PV of G_1
- 4) Max $\frac{S I^{-n}}{1 - I^{-n}}$, PV of all G , same as

Land Value, L .

Clearing the fraction:

$$L = \frac{S}{I^n - 1} \quad (25)$$

as shown on Fig. 7

The economic solution is to max L , using (25), known as Faustmann's Formula. This advances the date of maturity over the other 3 criteria of maturity.

* Solutions to the problem "When to cut the tree?"

[In (25) we have left unspoken the implicit assumption that all costs and revenues in the cycle are made commensurate with S by compounding them forward to year n . See p. 24, first full para, first sentence.]

Every maximizing criterion is also a marginal criterion. Let us see what marginal conditions correspond to the 4 maximizing solutions.

1) $S' = 0$ (S' is shorthand for ds/dn , or annual growth.)

$$2) \quad S'/S = \frac{1}{n}$$

$$3) \quad S'/S = i$$

4) $\frac{S'}{S} = \log$ derivative of the denominator, $(I^n - 1)$. The log derivative is:

$$\frac{i I^n}{I^n - 1} = \frac{i}{1 - I^{-n}} > i$$

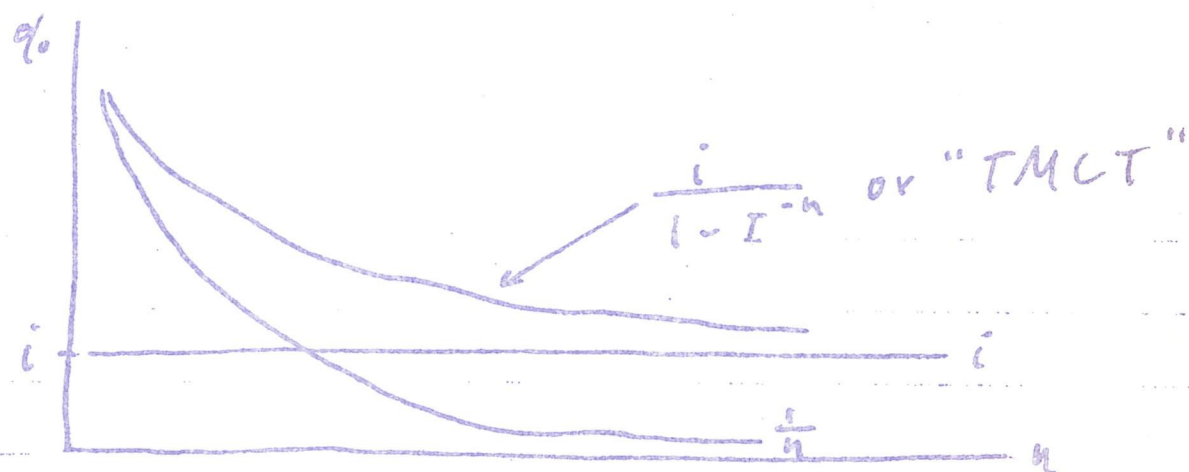


Fig. 8: Marginal Costs of Time Expressed as q .

Fig. 8 shows how the true marginal cost of time, TMCT, relates to i and to $\frac{1}{n}$.

- TMCT is always higher than either i or $\frac{1}{n}$.

- For low n , $TMCT \rightarrow \frac{1}{n}$

- For high n , $TMCT \rightarrow i$

To use Fig. 8, overlay one more curve, showing the decline of s'/s as n grows. Cut where s'/s cuts TMCT.

10/4/83

~~10/4/83~~

opulent (opya-lane), short o.

The PV Formula

Creative fuel is here to stay.

R.E. agents will sell fuel, plans w. home.

Buyers will develop ~~fast~~ much agility to understand them.

"Fuel, acumen (a-kyoo-mun) will be at a new premium in this decade, w. new opps. for those who have such acumen to sell."

(Exogamous -- marrying outside the tribe
Moiety -- part of a tribe)

10/4/83

Ec. 162 A

$$1. \quad \frac{1 - (1.135)^{-7}}{.135} = 4.354629565 \dots$$

2. Repeat proof of PV form.
 $n = 8$

If we were 8 yrs. in future, value of purp. after yr. 8 wd. be a/i .

PV of any V_8 is $V_8 (1+i)^{-8}$

$\therefore$ PV of stream after 8 is ~~a/i~~ $\frac{a}{i} (1+i)^{-8}$

3. Walk thru summation process again

4. Another table from cal. (Chunky little droid, R2-D1)

	<u>n</u>	<u>d</u>	<u>Σ</u>						
	1	.							
	2								
	3								
	$\vdots$								
at 12%	8								

4.967639767

Check:

$$\frac{1 - 1.09^{-12}}{.09} = 4.967639767 \dots$$

~~$$\frac{1 - 1.08^{-12}}{.12} = 7.536078218 \dots$$~~

5. 2d proof.

$$S = a \frac{1 - r^n}{1 - r}$$

$$a = (1+i)^{-1}$$

$$r = (1+i)^{-1}$$

$$S = (1+i)^{-1} \frac{1 - (1+i)^{-1n}}{1 - (1+i)^{-1}} = \frac{1 - (1+i)^{-n}}{1+i - 1}$$

6. Some morals or inferences from PV formula.

a. $n=0, P=0$; $n=1, P=\frac{1}{1+i}$; $n=\infty, P=\frac{1}{i}$

a. $i=0, P=n$. Not indeterminate.
Graphically obvious.

b. For higher i , most of value comes from early years.

(For \$90,000 + tax, buy Rolls R. to last 50 yrs. But not worth it to most people.)

	.01	.08	.16
PV_1^{10}	9.47	6.71	4.83
PV_1^{20}	18.05 6.71	9.82	5.93
% from PV_1^{10}	52	68	81

c. An $x\%$ $\Delta u \rightarrow \Delta P$ of less than $x\%$

E.g. at $i = .16$, the 100% Δu causes ΔP of

$$\frac{5.93}{4.83} - 1 = 23\%$$

The sensitivity of PV to n declines w. n .
Sensitivity is ϵ

Let n double, or Δ by 100%

n	$i = .05$			$i = .10$			$\frac{\Delta P}{P} = \frac{P_n}{P_{n-1}} - 1$
	P	ΔP	$\Delta P/P$	P	ΔP	$\Delta P/P$	
1	.95	—	—	.91	—	—	
2	1.86		.96	1.74		.91	
4	3.55		.91	3.17		.82	
8	6.46		.82	5.33		.68	
16	10.84		.68	7.82		.47	
32	15.80		.46	9.53		.22	
64	19.12		.21	9.98		.05	
128	19.96		.04	9.99995		.002	
∞	20.00		.002	10.00000		.000005	

Table tells us a lot about the value of durability. A good pair of shoes that lasts 4 yrs. is worth 91% more than a pr. that wears out in 2 yrs. But

But a house that lasts 64 years is worth

4 ~~3~~

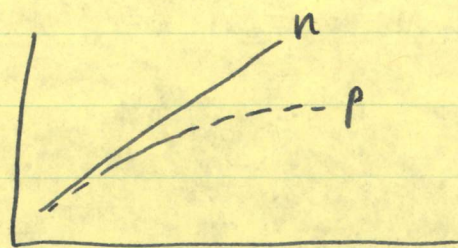
only 21% more than a 32 year home — at $i = .05$.
(At $i = .10$, worth only 5% more!)

A Rolls-Royce can last 32 yrs. So it's worth 46% more than a chunker you can use along for 16 yrs. But it costs \$95,000! 10x as much as a normal new car. So don't buy a RR to save money in the long run!

d. Int. share is Δg fr. of n

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~~But~~



This is meaning of K-intensive. Long wait. ~~What's the point of this?~~

Share of interest in c.f. over life is:

$$\frac{n - P}{n} = 1 - P/n = 1 - \frac{1 - (1+i)^{-n}}{ni}$$

n	$i = .05$	$.10$	$.15$	$.20$
5	.13	.24	.33	.40
10	.23	.39	.50	.58
20	.38	.57	.69	.76
40	.57	.76	.83	.88
80	.76	.88	.92	.94

(By state law, banks give you this info. when you borrow)

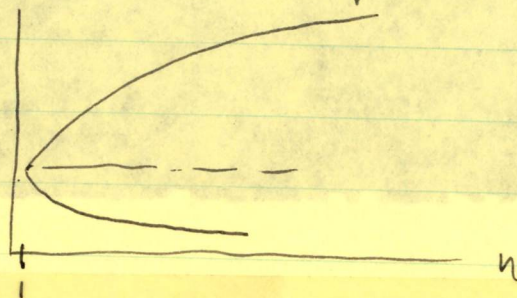
"K-intensive" means that a high share of c.f. goes for interest, over life (+ more in early years.) This results from long life, deferred payback.

e. ΔPV is a decr'g fn. of n

Obvious.

Curve shown is the derivative of PV.

PV is its Σ or integral. It is concave down.

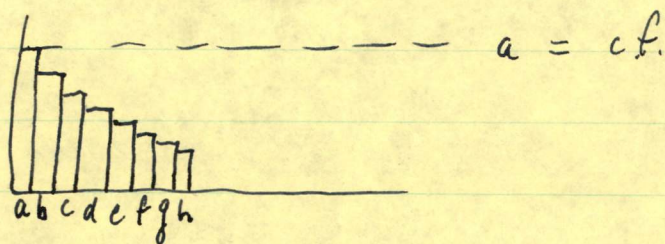


f. Mgr. can control factor propors. ^{Value is variable} If you're short on K , stay away from long waits. If i is hi, & labor cheap, go for quick payback. E.g. Housing, sensitive to i.r.; not to w.r.

g. Deprec. + cap. recovery

Decline of PV is $(1+i)^{-n}$! Most K is in cold storage.

g. deprecia. cont.



Value a is at the action edge, ^{or position 1,} provides current service flow (and/or cash flow). b-h are in cold storage, frozen.

One year later, a is gone. So is that $-\Delta V$? No, bcs. b-h all grow by $i\%$, shift left one space, grow one year riper. b replaces a, etc. b-h were

2-8, become
1-7.

But nothing replaces h; so h is net loss.

It's value is $c.f. \times (1+i)^{-8}$, where h is in 8th position. Next year, $(1+i)^{-7}$, etc.

Algebraically,

$$-\Delta P = \frac{1 - (1+i)^{-n} - (1 - (1+i)^{-(n-1)})}{i} = \frac{(1+i)^{-(1-n)} - (1+i)^{-n}}{i}$$

$$= \frac{\frac{1+i-1}{i}}{(1+i)^n} = (1+i)^{-n}$$

By calculus:

$$-\frac{\Delta P}{\Delta n} = -\frac{d}{dn} \left[\frac{1 - (1+i)^{-n}}{i} \right] = \frac{\ln(1+i) \times (1+i)^{-n}}{i}$$

$$\text{But } \frac{\ln(1+i)}{i} \approx 1$$

$$\therefore -\frac{dP}{dn} \approx (1+i)^{-n}$$

C.f. is divided between int. + ~~deprec.~~^{recovery},
~~so if deprec. is ΔP , int. must be:~~

~~$$\text{Int.} = 1 - \Delta P$$~~

In eq., recovery = deprec. (changing signs, b.c. deprec. is a negative viewed as an absolute value.)

$$\therefore \text{Int.} = 1 - \text{depr.} = 1 - (1+i)^{-n}$$

~~But~~ That also follows by rearranging PV formula:

$$\text{Int} = Pi = 1 - (1+i)^{-n}$$

(This is how banks tell you each yr. how much of what you pd. was deductible int.)

In early years, deprec. is very small. (over)

So is K-recovery.

E.g. I loaned at 11.5%, ~~to~~ amortized over 40 yrs.,
3-yr. balloon pmt. How much was debt reduced
in one year?

$$\text{Deprecn} / PV = \frac{1.0p^{-4}}{\frac{1 - 1.0p^{-4}}{p}} = \frac{p}{1.0p^4 - 1}$$

$$= \frac{.115}{76.8} = .0015$$

In early years, deprecn. + cap. recovery are very small. E.g. $1.07^{-30} = .13$ of a, and much less of P.
 $1.115^{-40} = .0128$. ~~$\frac{1}{40} = .025$~~

h. Most of the K in durable ~~assets~~ ^K is ~~held~~ ^{frozen} in cold storage.

Only at the action edge is the K flowing into cash or service.

✓
The Great
Escape.

The values frozen in K are like a group of prisoners trying to escape thru a narrow tunnel. They are jammed up, single file, trapped inside until they reach the end. Claustrophobic!

But the values recovered are not the full service flow. They are the right side of the curve -- Value h first, back to a in reverse order. ~~Then~~ The rest is committed to pay int. or dividend inc.

This is the way K gets recycled.

Why input to a manager? That recycled K is most of the liquid K you have to work with. The battle goes to him who gets there "fastest w. the mostest". Mobilization is the key. Recycled cap. is "the ready". It is what keeps your organization going, w/o any new infusion of outside K; and w/o new savings.

Your K is of 2 kinds:

1. K of the First Kind is Ready K or working K. Kinetic or in motion. Liquid. Current Assets. It's at the Edge, turning into cash. Your volume depends on it.

i. DCF is a bottom line for use in planning + decision-making.

The lazy way is to justify an invt. by saying "let's wait & see". This is how Riverside stumbled into SONGS + IPP + PVNGS; and Wash. into WPPSS.

The smart way is to forecast Rev. + Expenses.
= C.F.

Then DCF. The discounting is also subtracting, - subtracting int. All the math. we have seen is just an elaboration on adding + subtracting. Compounding is adding: $P + Pi$. Discounting is subtracting.

The way a mgr. reaches a bottom line is to forecast gross revs. + then subtract a series of costs. What we are learning is how to subtract interest over time.

DCF is the Net Product of labor currently hired.

In Ec. 100A, learned about MP. But a mgr. must go further — identify assoc. MC subtract them from GMP to get NMP. E.g., ex. props. need no lab. fields. int. mngt.
Do that in 2 steps: 1, subtract expenses from revs.
2, " interest by discounting.

~~~~~~~~~

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~~3, Subtract mtrls. + c. assoc. current expenses.~~

What's left is max. you can afford to pay a contractor to build something, Turkey basis.

If you are your own contractor, and are hiring labor, must take step 3:

3, Subtract mtrls. + c. assoc. current outlays.

"Case" of wine = 12 bottles.

$$\$7/12 = 58\frac{1}{3}$$

Est. values of one bottle, whsle

| <u>Age</u> | <u>Value</u>    | <u>+ Int. @ 10%</u> | <u>Storage</u> | <u>Σ</u> |      |
|------------|-----------------|---------------------|----------------|----------|------|
| 0          |                 |                     | .58            |          |      |
| 1          |                 |                     | .              |          |      |
| 2          |                 |                     | .              |          |      |
| 3          |                 |                     | .              |          |      |
| 4          | \$4             | .40                 | 4.40           | .58      | 4.98 |
|            | 4.98            |                     | 5.50           | .        |      |
| 5          | <del>4.40</del> |                     | <del>.74</del> | .        | 6.06 |
|            | 6.06            |                     | 6.66           | .        |      |
| 6          | <del>4.84</del> |                     | <del>.78</del> | .        | 7.24 |
|            | 5.32            |                     | 7.97           | .        |      |
| 7          |                 |                     | 9.40           | .        | 8.55 |
| 8          |                 |                     |                | .        | 9.98 |

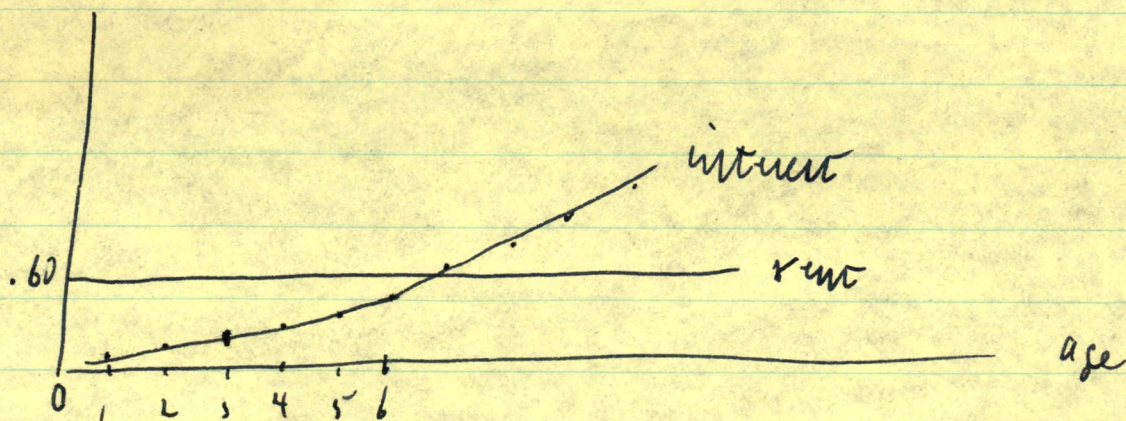
x

1.1x

$$1.1x + .60 = y$$

$$x = \frac{y - .60}{1.1}$$

| Age | Value | Int.<br>@ .10 | Int. + Storage<br>@ 60¢ |
|-----|-------|---------------|-------------------------|
| 0   | 0.83  | .08           | .68                     |
| 1   | 1.51  | .15           | .76                     |
| 2   | 2.26  | .23           | .83                     |
| 3   | 3.09  | .31           | .91                     |
| 4   | 4.1   | .40           | 1.00                    |
| 5   | 5.    | .50           | 1.10                    |
| 6   | 6.10  | .61           | 1.21                    |
| 7   | 7.31  | .73           | 1.33                    |
| 8   | 8.64  | .86           | 1.46                    |
| 9   | 10.10 | 1.01          | 1.61                    |
| 10  | 11.71 | 1.17          | 1.77                    |
| 11  | 13.48 | 1.35          | 1.95                    |
| 12  | 15.43 | 1.54          | 2.14                    |
| 13  |       |               |                         |



## Safekeeping

# Wine — It's Being Sent to Lockers

By CAROL MCGRAW,  
Times Staff Writer

On any given day, some of Beverly Hills' better-known inhabitants descend into a dark labyrinth far beneath the glitzy shops on Little Santa Monica Boulevard. There they lovingly deposit their precious cargo in rented lockers.

Squinting in the dim light, it is possible to make out some of the nameplates on the closets—comedian Mel Brooks, actor Gene Wilder, football stars O.J. Simpson and Lynn Swann, composer Henry Mancini, pop rock singer Al Stewart. Other lockers bear no names, and some are identified only by secret code numbers and thumbprints.

This inelegant basement, which takes up almost an entire block, is elegantly referred to as a *cave du vin*—a precisely climatized, electronically secured wine cellar where hundreds of thousands of dollars worth of the best wine in the world is pampered and protected.

## Practice Growing

No longer do wine connoisseurs have to keep their wine in such tacky places as their kitchen cabinet or in one of those discount store wine racks. More and more wine lovers are now renting space in cellars such as this to ensure that their collections are kept away from sunlight, temperature fluctuations, thieves, and even spouses and the Internal Revenue Service.

There are only a handful of these rental wine cellars in the United States, but their popularity is increasing, especially in California and New York, which led the country in wine drinking last year. (Californians consumed 116.5 million gallons, or about 4.6 gallons per person. New Yorkers imbibed 53 million gallons, or 3 gallons per person. While Washington, D.C., consumed only 4.4 million gallons, it led the nation in per-capita consumption—6.9 gallons per person.)

At the Wine Merchant on Little Santa Monica, cellar space rents for an average of \$7 per case per year, according to proprietor Dennis Overstreet. The lockers vary from cubicles that hold 24 cases to walk-in units, which have a 200-case capacity.

## Sizes Vary

Some enthusiastic collectors rent several of the larger ones. Other patrons, with smaller thirsts and pocketbooks, can rent space for a single case or bottle. Overstreet's 1,500-square-foot cellar, which he opened about 15 years ago beneath his wine shop and now houses 250 lockers, was so successful that he recently built two more in West Los Angeles and Laguna Beach, which contain a total of 800 lockers.

Economic and market conditions have been extremely good for buying wines during the last couple of years, according to industry experts. A strong U.S. dollar, overproduction in several countries and three fine consecutive Bordeaux vintages have been a boon for wine collectors. Which in turn has creat-

Please see WINE, Page 32

Compiled from the Los Angeles Times, the Los Angeles Times-Washington Post news service and major wire and supplementary news agencies.

## In View

**Since Jaime Beth** Slavin died at 16 of Reye's syndrome a year ago, a park and a golf tourney have been established in her name. (Page 1.)

**The mostly poor** elderly in the Westlake area can avail themselves of a number of services at St. Barnabas Senior Center. (Page 1.)

## In Food

**Baked chicken dishes** can fit into a tight time schedule easily. The long cooking time allows plenty of time for many household chores. (Page 1.)

## The State

A challenge to the California Legislature's repeal of the diminished capacity defense (better known as the "Twinkie defense" used in the Dan White multiple murder case) was rejected by the state Supreme Court, which unanimously denied a hearing sought by Martin Lynn on his 26-years-to-life sentence in a San Diego County murder case. Lynn had claimed that legislation outlawing the diminished capacity defense unconstitutionally prevented him from proving that he was so drunk that he could not have premeditated the strangling of a Vista man in 1982. His conviction and sentence were upheld by the 4th District Court of Appeal last August.

**Large doses** of vitamin C—used by vitamin enthusiasts because they believe that it wards off colds and other ailments—may impair bone development in small children and the unborn, according to researchers at the University of California, Berkeley. A report on their study said "megadoses" of vitamin C or ascorbic acid fed to young guinea pigs or their pregnant mothers appeared to decrease the density of their bones. Diane L. Bray, who conducted the study for the university's department of nutritional sciences, said vitamin C has been thought to be safe at any level of consumption because the body does not store it, but her study indicates that there may be a link between the disease osteoporosis (thinning of bone tissue) and large quantities of the vitamin.

**Picket lines** appeared at three more San Francisco restaurants after members of the Hotel and Restaurant Workers and Bartenders Union voted 572 to 31 to turn down the latest management contract offer that would have ended a seven-week strike. The walkout now involves 33 restaurants. Owners of at least four of the struck establishments said they had begun hiring permanent employees to replace the strikers.

A "toxic threat" is posed to San Francisco Bay by the \$750-million federal plan to extend the San Luis Drain, according to three members of Congress, who want an investigation. Democratic Reps. George Miller of Martinez, Sala Burton of San Francisco and Barbara Boxer of Greenbrae pointed out that high levels of selenium in the water drained from agricultural areas of the San Joaquin Valley have been blamed for deaths and deformities in fish, birds and other wildlife at the Kesterson National Wildlife Refuge, Los Banos, where the drain now ends. "The refuge has been turned into a toxic waste dump and the Bureau of Reclamation is about to unload this dump on the Bay Area," Miller said. Farmers contend that the drain is needed to reduce high salt levels from crop roots.

# WINE: Prized Collections Stored in Lockers

Continued from Page 1

ed a pleasant, but perplexing, problem—where to store all that fine wine.

Composer Mancini, who has been collecting wine for 20 years, said he recently built a 30-case wine cellar in his new home. One night when he was out of town, his family was having hamburgers for dinner and sent a houseman downstairs to fetch a *vin ordinaire*. As he was pouring it at the table, Mancini's wife noticed the label: 1966 Lafite Rothschild (worth about \$225).

"They told me it wasn't so hot with pickles and mustard," Mancini said.

Now he keeps all his expensive red Bordeaux, including bottles of 1924 Haut Brion and Lafite, which he received as gifts, in a rental locker. He and his wines both breathe easier.

"A good wine is like a child. If you treat it badly it won't reach its potential and will disappoint you," the Wine Merchant's Overstreet said.

Overstreet, who was once a wine consultant for the prestigious Sotheby Park Bernet auction house, tends to wax poetic when talking enology. But there are some practical reasons for renting a locker, too.

"One of my Bel-Air customers told me that when he was going through his divorce, his wife lined up all his wine bottles in the

driveway, including a 1945 Lafite, and began smashing them with a hammer as he drove up the driveway," Overstreet said. "He keeps his wines here now."

While such acts are intentional, wine experts shudder when they talk about the unintentional atrocities uninformed consumers inflict on their wines.

"What usually happens when you are invited to someone's house and bring along a nice bottle of wine?" asked Marshall Newman, spokesman for the Wine Institute, a San Francisco-based trade association of more than 400 wineries. "It's a nightmare. The host and hostess thank you and then shove the bottle in one of those cute little wooden wine racks on top of the refrigerator—execution by light, vibration, heat and air."

## Conditions for Aging

Fine wines need a cool, constant temperature to age properly, explains Cornelius Ough, chairman of the department of viticulture and enology at the University of California at Davis. Most experts agree that between 55 and 65 degrees is ideal for storing wine.

Better wines take anywhere from 10 to 40 years to reach their peak. But even inexpensive wines will taste better if they are laid away for at least three months. Exposing wines to high tempera-

tures and air will age them too quickly, destroying the bouquet and flavors. Light, especially fluorescent lighting, causes wine to discolor and adopt an off flavor.

Ough keeps his own wines in a closet on a cool inside wall in his house. However, he says, "If you're buying \$100 bottles of wine and don't want an accident, a cellar would be in order."

Home wine cellars are favored by some wine collectors who have the space and money for them. (The 200-bottle size cost a minimum of \$3,000 to install.)

Consumers expecting to see a traditional French cave when they visit underground rental cellars are likely to be disappointed. Possibly only an air conditioning contractor might think of these cellars as romantic—with their humidifiers, air conditioning and backup generators, costing as much as \$200,000.

There are no dirt floors, cobwebs, or ancient wooden cooperage. Instead, the earth is paved over with sensible concrete and the wines are hidden behind padlocked wooden doors.

Instead of a gnarled cellar master to provide assistance, dollies are used by customers to lift cargo to the upper rows of lockers. Video cameras record every move, and the burglar alarms are so sensitive that one proprietor said they "go off when the wind blows."

The cellar in some ways operates like a safety deposit vault. The identity of customers is verified, and they are allowed to go unaccompanied into the vault and spend as much time as they want "admiring and talking to their wines," Overstreet said. Some clients have decorated their rented cubicles. One doctor took off the wooden doors and installed his own wrought iron gate and plastic stained glass. Several have taken off the cardboard nameplates and replaced them with brass.

But for other wine collectors, there is little need for fancy decor, explains actor Rick Jason, who owns the Wine Locker in Van Nuys. Jason, who rents out 500 lockers, says that most customers rarely visit the facility. "One of my best customers hasn't been here in four years. He's waiting for the wine to age."

While ambiance isn't offered, other services are. Most wine merchants will keep note of the type of wines their rental customers want, and when they become available will deposit them in the customers' lockers—for a charge, of course. Some proprietors even provide itemized bills with notations to let customers know when their wines will be ready to drink to maximum advantage.

Overstreet said that a half dozen of his customers prefer anonymity,

and so he has devised a system by which they can sign up for lockers using code numbers instead of names. If there is ever a dispute over who gains entrance to the locker, the customer's thumbprint is on file. "We speculate," Overstreet said, "that they want unmarked lockers for all the same reasons that people like Swiss bank accounts."

## Some Are Kept Secret

(Some wine collectors like to keep their expensive collections a secret in event that spouses or others lay claim to their financial holdings. And a few of those who collect wine for investment purposes have been found to lay wine away for a number of years, then resell it to private parties for considerable profit—profit not always reported to the Internal Revenue Service, wine experts say.)

One service usually not provided is insurance. In fact, most rental agreements include a clause releasing the proprietor from any liability in case of earthquake, fire, theft, or failure of cooling equipment. Instead, most customers insure their wine through personal policies.

While laying down wine has been common overseas for centuries, and rental facilities have been available in places like France and England for years, the rental idea didn't catch on here until wine consumption grew dramatically in the 1970s. (Last year Americans consumed 527 million gallons

'A good wine is like a child. If you treat it badly it won't reach its potential and will disappoint you.'

Dennis Overstreet,  
proprietor of The Wine Merchant

worth \$7.8 billion, according to industry statistics.)

Mark Tamashiro, 31, and two friends drive to Van Nuys twice a month to visit their 2,000-bottle collection of fine German and French wines stored at the Wine Locker. The Wine Merchant's Overstreet says they collect the wines strictly for drinking, not for investment.

And, he says, they may have to rent yet another locker to hold not only the 1983 German Rieslings and '82 and '83 Bordeaux, but the wines he and his partners made themselves from several hundred pounds of Zinfandel and Merlot grapes.

But there is a definite problem in having unlimited storage space for wines, he said.

"We can't drink them fast enough. The 1976 Germans are starting to go over the top."

# World Farming Fund Sows Hope, Reaps Controversy

By STANLEY MEISLER, *Times Staff Writer*

PARIS—The International Fund for Agricultural Development had an auspicious beginning.

It grew out of the World Food Conference of 1974, at which Secretary of State Henry A. Kissinger called for programs to make sure that "within a decade, no child will go hungry, no family will fear for its next day's bread."

The conference was concerned over a famine that blighted a huge part of the Earth ranging from the Sahel region of Africa across the Soviet Union and on to China, by skyrocketing costs for surplus wheat and other grains needed for the emergency, by the shocks of enormous increases in the price of oil. So, it set up the fund to increase agricultural production and feed the hungry by helping the world's small, poor farmers and landless peasants.

## Major Innovation

And, in a heralded innovation, the Organization of Petroleum Exporting Countries agreed to share the cost of the fund with the industrialized countries of the world.

But now, the fund, or IFAD, as it is called, is an embattled organization, its supporters arguing about just how much to cut the budget. The Republican Party platform, on which

has acted as if it were somewhat skeptical of its achievements. It has reduced the contribution that the Carter Administration budgeted and delayed negotiations for more money. But it has not openly attacked the fund's work.

For that reason, the group's officials were surprised when the Republican Party platform, adopted at the convention in August, pledged that "our contribution to the International Fund for Agricultural Development will be eliminated due to its consistent bias toward non-market economies."

Embarrassed U.S. officials have disavowed the platform plank. Richard Derham, assistant administrator of the Agency for International Development, who heads the American delegation to the meeting of the fund's governing council here, said: "The platform of the Republican Party is not executive policy."

The Reagan Administration wants to encourage governments to remove restrictions on a free market in agriculture, he said, and added, "Bad economic policies hurt poor people." But he made it clear that the U.S. officials were in Paris

American contribution, not to threaten a withdrawal if programs are not changed.

In 1978, when the work began, the fund was given \$1 billion for the first three years. Although it had been hoped that OPEC and the industrialized countries of the Organization for Economic Development (OECD) would split the contributions equally, OECD gave 56% and OPEC gave 44%.

A second round of funding of \$1.1 billion was organized for 1981 to 1983, with the OECD giving 58% and OPEC 42%. When the governing council failed to reach agreement on funding for a third round, the second round was stretched to cover a fourth year, 1984. This action meant that the fund's budget was effectively cut by a quarter every year.

Officials of the agricultural organization blame the U.S. government for this delay and point out that Congress appropriated the final payment of the second round only a few weeks ago, almost a year after it was intended to be spent.

A new element has entered the third round of funding, with OPEC countries insisting that, because of the drop in the price of oil, they can no longer contribute as much as they did. They say they will reduce their contribution for 1985-1987 from \$450 million to \$295 million.

The U.S. government, however, is adamant that any reduction in the OPEC contribution should be matched by a proportional reduction in the contribution of the industrialized countries.

# GAP: Number of Homeless Rises

Continued from Page 29

concludes: "Public expenditure on health care, education, housing and transport systematically favors the better off, and thereby contributes to inequality in final income."

Government employment, in contrast, causes moderate inequality. U.S. government wage differentials aren't as wide as those in the private economy. The government pays women and blacks higher wages than they receive in the private economy, and it employs more of them than their proportion of the work force. The volunteer Army helps low-income youths by providing jobs where no other work may be available.

However, the redistributive impact of government employment has declined in recent years as growth in government employment has lagged far behind growth in private employment. Whereas 18% of all non-agricultural employees worked for federal, state and local governments in 1978, less than 17% do today.

The money to pay for government payrolls, purchases and services is raised by a hodgepodge of progressive taxes that take larger percentage bites out of higher incomes, and regressive taxes that bite deeper into lower incomes. However, progressive taxes have become less progressive over the years, and regressive taxes form an

increasing share of the total tax burden.

The federal income tax, originally intended to redistribute income from the new industrial rich to the poor, has become so riddled over the years with devices chiefly helping taxpayers in higher brackets to exclude, exempt, defer and shelter taxable income that it has lost much of its progressivity.

The United States has no yearly "wealth tax" on total assets, as do some European countries. It does have inheritance and gift taxes with progressive rates. However, the rates are coming down, and legal loopholes permit the wealthy to transfer assets during their lifetimes to family trusts and charitable foundations. As a result, the share of inheritance and gift taxes has fallen from 1.9% of federal revenues in 1970 to 0.9% this year.

American businesses and their owners have also been bearing a smaller share of the federal tax burden. Corporations have been able to shelter more and more of their profits by deducting the cost of new equipment much faster than it actually wears out. As a result of this and other loopholes, the corporate income tax's share of federal revenues has fallen from 28% in the 1950s to 9% this year.

Meanwhile, the regressive payroll tax that finances the Social Security system has risen from 12% of federal revenues in the

1950s to 36%. Regressive state and local sales taxes also take a bigger bite.

The net effect of government taxation and spending at all levels is to reduce the inequality of Americans' incomes only slightly, political scientist Page contends. "People in poverty gain some, but less than they used to and less than is popularly imagined," he said.

Mancur Olson, professor of economics at the University of Maryland, put his finger on a major reason in a recent article in the Washington Monthly: "Most redistribution is not from upper- and middle-income people to low-income people; it's from middle-income people to other middle-income people, or from the whole society to particular groups of rich people, or from one group to others that are well organized and lobby effectively for themselves."

The limited redistributive impact of government taxation and spending strikes liberals as unfair to the poor and too generous to the rich. And it appears to bother even some conservatives. As unlikely a reformer as Treasury Secretary Donald T. Regan recently suggested cutting or eliminating Social Security benefits to people wealthy enough not to need them. So far, the proposal has gone nowhere.

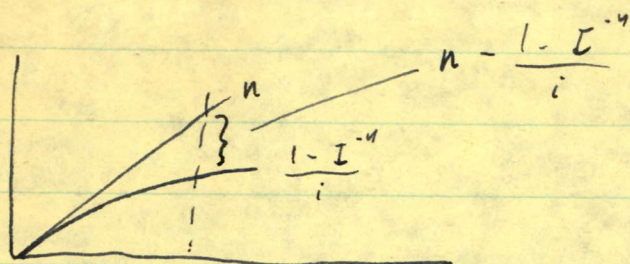
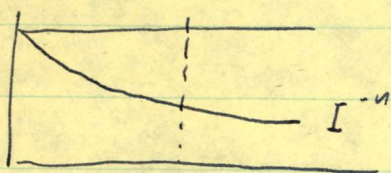
**Next: The gap grows larger in the Third World.**

Inflation can be interp. 2 ways:

a. Real int. rate is lower.

b. Growth is accelerated.

There may be the same. If real int. = 0, then entire print. goes to lower debt.



1. You could say each c.f. is all cap. recovery, like rings of onion. Then c.f. of machine is like harvesting in trees. But then, none of c.f. is current interest. All is cap. recovery, offset by capitalizing int. cost into growth of all the inner rings - (an unwieldy location.) Mean pd. wd. be  $< m$ .

The other way is to call it current interest, with a small cap. recovery. Shd. get same result. C.f. covers current int., no need to cap. it. And no right to, bcs. int. has first claim.

2. With normalized bank of machines, c.f. covers int. currently, no need to cap. int.