

Ad. 289-0 Reading Notes

Wed, Sept. 27, '78

Edeh Chap. 4. Growth, Pollu., & Social Cost.

1. Main themes

- a. GNP can rise by changing product mix, pollute less. No "rigid links". (But, using I/O, only hits product mix, not product modifn. or process modn.) Overlooks recycling.
- b. Instl. bias is at fault.

c. GNP is bad measure of living standards.

Next assst.: Schmitze. Chap. 2. Nat. Accts.

.. Ch. 6. Ec. Growth in U.S.

b. Instl. bias, kinds considered

- i) Not enough prop. rts.
- ii) Social costs are too pervasive to act. for, by prop. rts. Mishan, Kapp. 2d best & hy. Polanyi, stresses stable communities.
- iii) Power relations, or class struggle are the problem.
The system is what turns men into beasts & slob.

Overlooks other incl. bias: tax, regulatory. See p. 255,
'77 NTA proceedings.

Faults in Edel, & Misc. points. See margins.

Schultz, Ch. 2, Nat. Output & Income. Oct. 4, '78

1. Price makes commensurable. Externalities ignored.

2. Govt. services valued at "cost".

In U.S. govt. invt. not distinguished from other G.
~~inv~~

Agio of govt. invt. i. not counted.

Service flow of govt. lands not counted:
recrv. value

scenery

Cash interest counted as cost; but not implicit interest.

3. Cap. gains not treated by Schultz.

v. D & McD p. 37. They are excluded.

Losses excluded, too.

Thus, ruining lands & wharves, not deducted.

4. Discoveries of res. not treated as gains;

nor depletion ... as losses. - D & McD

5. Mainly, count only g & s "sold". Bias.

Others are not "ex. in nature." Defn. of ex. wanting.

6. Excl: o-occ. home. (Principal resid. only?)

6. Claims of Inv.

a. Bus. fixed

b. Resid.

c. Δ inv.

(Discovery, etc. left out?)

7. Inv. is changeable element.

8. Wage & salaries set 60% of GNI, before taxes.

Re Schultz. Ch. 6, Oct. 9, '78

1. Reps. thinking that says we must harness nature to grow.

Apotheosis of growth - of GNP.

2. Must ΔK & Invest.

This requires more & more space.

K complements land, ~~but~~ may displace workers.

Unspoken. Sch. scenario has always $\Delta K/w$. This implies more land & utls./worker.

3. How ~~it~~ wd. Sch. feel re: Kaiser Steel

Solo pipeline

Oil spills

Pesticides.

4. Max gross activity is good.

There are no costs, $\therefore$ no net. E.g. say a Kaiser Steel ruins adjoining land. Traverse it, convert other land - all part of GNP.

5. Techn. is an indep. force, rather than responding to relative prices. p. 142.

1
Mulltze, Ch. 6, "E., Growth, in U.S."

Not one word about land or res. or env. as limit.
"Growth is great, growth is good, growth we thank thee
for our food."

Demand is what brings ~~out~~ actual output up to
potential output, or capacity.

Growth depends on Δ capacity, assuming there is
enough demand. L.v. problem is Δ capacity
(Near, watertight compartments.)

✓ LDCs are different from U.S. (note simplification,
orgn. exposition & conn. thru compartmentalizing
Oblivates consistency; allows glibness, pat answers,
easy, facile, didactic pontification.) Shallow Schultze.

"Unavoidable frictional unempl. = 3-4%
(by '78, they are saying higher, 6-7%. They will
rationalize whatever they must.)

Other countries are lower, [& less inflationary -
have not succumbed as U.S. has to Keynes.]

But full empl. = 96%.

We reach potential GNP when 96% labor is
employed.

(Overlooks:

a. Misallocated labor, under-empl. etc.

b. Idle land, & misalloc. land, underused land

c. Same for K.

d. Large fallacies in measg. GNP. E.g.

- sprawl, commuting, waste, Counted as cons.

- etc., Misallocn. of S.C. wth. focus CWP.

1946-69, output/man-hr 1390 per yr.

✓ (The unempl. part of labor force is unqual.
They are unqual. people; and the jobs neglected are the
unqual. ones. and/or mis-trained people.

✓ The greater loss comes from idle res. not unqual.
good land, rent-yielding..

And the effect on character, etc., of society.

Loss of rent doesn't show in GNP, but.

extre travel cost is part of GNP.

1889-1969, = 80 yrs., output/man-hr. in U.S.
rose 5X.

$$(1+g)^{80} = 5$$

$$80 \ln(1+g) = \ln 5$$

$$\ln(1+g) = \frac{1.61}{80} = .020118$$

$$1+g = 1.020322$$

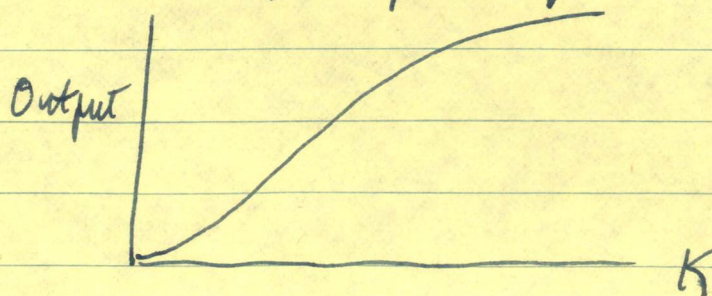
$$g = .020322$$

$$g \approx 2\%/\text{yr.}$$

Suggests rate is accelerating, but not true.
(Recent evidence is decline.)

(Terms are so poorly defined, no one wd. know.
This is true of most ec. analysis. They begin w/
defn. & w/o system consistency.)

p. 137 Capl. prodn. fn.



Assumes dim. ret. to aggr. K in ec., w. labor the fixed factor. Nothing about resources.

But this is not production of K ? Yes, it is, but disguised as output/man hr.

Is not MP of labor, but AP

Is not partial, but aggr. Is $\therefore$ mostly speculative. Just a frame of ref. to take on faith.
~~again~~

~~Then~~ Then assumes tech. change is cap-using, so over time, slope of curve rises, rotates up from origin. Thus, cap. accrues. w/o dim. mp.

(cf. Marx & Keynes, who saw $i = 0$)

✓ Fun. of more K is to "harness the forces of nature" — seen as unlimited. p. 138.

✓ (Recall arguments re waste of urban land. You create more by expanding; & this is inv. opp. Tolley. Recl. creates more farmland. or Gase Canal

(No need to eze. on nature. Implicitly assumed thru-out.)

✓ Cap. has been Δ g faster than labor. He now calls this a "requirement" - p. 138.

✓ Invt. must cover:

Replmt.

Δ workers (K widening)

Δ K/w (K deepening) (or slowing)

✓ p. 139, 4% of "K stock" "wears out" ea. yr. (This seems to say that $K = 25 \times$ output.

Showing that he defines K narrowly, excluding inventories, etc.)

1930-40, no net invt. So K/w declined. (Yet this didn't stop boom, 1940-46!)

1946-55, $\Delta(\frac{P}{w})$ very hi; but $\Delta K/w$ was low. So other factors are more important.

(Unanswered qns:

- how measure product of xprtu? Probly in miles travelled; shd. be linkages.

- how Kuznets handle l.v.?

- " " " public K?)

p. 142 Sch. continues to thump for K funt.,
altho none of his evidence (Kuznets, Denison)
supports it.

✓ p. 142, stresses need of cap. funt. for tech.
progress. Understates replant. hugely.

✓ p. 142 Maybe progress "is becoming" (passively)
less K-using.

Bad ex. R.r. was cap.-using. Actually,
r.r. more labor-int. than pipe lines, highways.
Certainly much less land-using than hiways.

Big 1 of r & d claimed.

"As we have seen" ... when we haven't.

Human K -- puts forth big pitch.
To please profs. who order books.

Overlooks cost to indiv. If you require
25 yrs. in school first, defer inc., etc.

Output per man hr. less more, omits hours spent
getting educated; and interest on that K.

p. 143 The "economy requires" more educated workers.
 Note telltale phrase. An abstraction requires
 real people to fit molds. Tyrannical Philosophy

The ec. is no good unless it adapts to what
 we are & want to be.

Edu. oversold. Not all edu., but
 many kinds of stylized, doctrinaire, non-functional,
 pedantic, recondite, self-justifying edu. oversold --
 & the mkt. knows it.

True edu. never oversold -- learning to
 face problems & think.

p. 145, T. 6-5, Demism's Sources of Growth.

$\Delta K/w$ is small, 13%.

Misc. is 44%

Edu. is 30% - largest single element. But of below.

But Schultz says on to forgo any concln.
 Need more K; hence tax subsidies.

(Sch. is a manipulator of symbols, images,
 metaphors, regardless of substance behind them.
 Like BW writers. - who also mix metaphors.)

8

Devision solved causation problem by assuming
60% of premium inc. of educated is caused by edu.

Ach. policies

1. Δ growth is good
2. Δ cap. form. is required
3. Δ inv. incentives needed
 Saving no problem
 Use of K no issue.
4. Corp. inv. incentives needed.
5. Δ consumer taxes & govt. services
6. Easy money - for business, corpora
7. Maintain demand.

Edu. ok, ~~p~~ but has slow payoff

8. Flexibility (but his man. assumes rigid prices.)

p. 152 We understand system, can have growth w. stability.

Edel, Ch. 1, "Ec. System: Growth or Change?"

Oct. 11, '78

Further growth needed to bring up the very poor countries, & people.

But stop growth for growth's sake, due to:

- compn. to survive
- " which forces pollution
- need for full empl.
- vested interests

Marx. Capm. requires growth, for:

- get big or get out. Indiv. firm must grow.
- must reinvest savings to sustain demand

Seek new mkt, imperialism.

(Hobson said K sought inv. outlets, not mkt, esply; geographers saw better that they needed new mkt. Edel thrashes around w. trivia, misses this main point.)

(Note how Schmitze's simple duality breaks down. The process of sustaining demand by inv. creates new capacity.)

Marx & Keynes saw problem as too much K acc.; Schmitze sees as too little.

All 3 underestimate flexibility of mkt to change valence.

Edel says K-m must grow to use the K it keeps accruing.

Other flaky reasons, pp. 137-41

Soviets just as bad. (Big dams, nuclear dependence). Stress on K accum. (In '50s, they boasted they wd. beat us by forced saving.)

(Lange, free mkt. socialist, said people don't save enough.)

Common left-wing position re concern, is that indivs. ~~don't~~ discount future too highly.)

China, maybe better.

Edel leans to non-hierarchical alts --- kibbutzim linked via market.

Coalitions for immediate reforms may grow into movements for new systems.

I.e., China Club shd. espouse efficient change, etc.; then go on to reform urban sprawl, etc.

Stress on orgn. for reform is Marxist element.

Oct. 16, '78

B + M Ch. 1, Scarcity + Growth

Malthusian movement: Cons. movement.

(Note non-integration w. Macro. Non-comm.)

Mill, aggr. dim. rets.

[Mare + Keynes, dim. r. of r., but due to under cons.]

a. Hanson, Hobson, + Mackinder, saw more clearly need to expand land base, for a) marks b) inv. out lets ~~to~~

Turner, et al, saw frontier as pop. out let.

Note Tradition of gloom. (Disma indeed)

Cons. movement was misguided. True!

Define Cons.

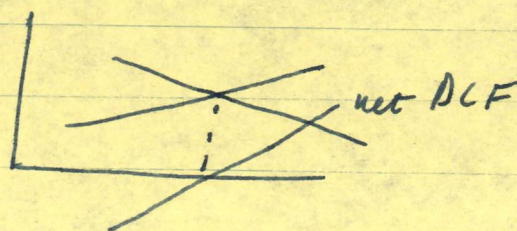
(Macro: looks for bottlenecks)

Oct. 18, '78

B + M, Ch. 2, Contemp. Views

Ideas + Qns. for discussion

1. Statesmen think nat. res. have public interest.
Cite Ely, Justice in distr.
Cite Scott Conf.
2. Tech. feasibility vs. ec. justification.
Availability of social mechanisms.
3. Growing skepticism of govt. to curb + replace business. Govt. needs curbing.
4. Paley Comm.
 - a. No serious threat of scarcity
 - b. Rely more on fn. sources. to improve int. relations!
 - c. Defense stockpiles.
5. Cons. res. is time-dist. of use.



6. Is extraction ~~unreasonable~~ now at the expense of future?
Is discounting future mean robbing future? Pigou; Rawls.
W. Mitchell, Is priv. horizon shorter than public? Maybe narrower.
Is social discount rate less than priv?

Del Sander on shale use.

7. Things B & M do not believe
- nat. res. are scarce
 - scarcity Δ s over time
 - " impair liv'g standards

Ad. 289-0.

Mon. Oct. 23, '78

B + M ch. 3, Malthus, Ricardo + Mill

A. Malthus: Plateau, ff. by drop-off, absolute dim. rets.

Weaknesses:

1. Didn't say when. But if gain of pop. over prod. capacity is slow then Δ pop. becomes problem only after centuries + is low priority now.

(Hanusberg et al. have shown Δ res. demands of U.S. are mainly from Δ use per cap. not Δ pop.)

(But world pop. is grow'g fast. Mortality dropping. Still, the pill etc. will surely save us.)

2. Res. Δ due to knowledge.

(But our knowledge is not coming up to use less res. p.c., but more.

E.g. petrol, known since 1859 at least.

Timber

Fish

Farm land

Water

Iron

2

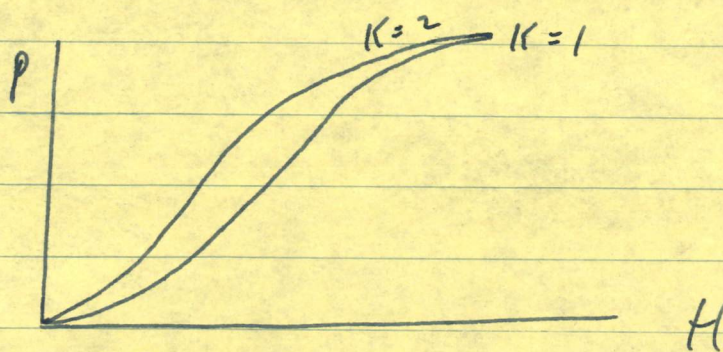
3. Techn., with lower fertility rates.

4. Social synergy
E.g. Ag. rates in A.M.

also, subst. K for labor. Here, $B + M$
may go wrong. Subj. K for H (human effort) may get
less from land, as sheep or cattle for gardens.

Poisons for labor, another doubtful gain.
3, 4, 5 - T, Dows, for grubbing, e.g.

Discuss: is K sub. or compl. w. labor?



Instns. can also improve. E.g.:

- remove Trade barriers. Let land specialize.
- improve credit mkt's, allocate better
- raise land taxes. Sell infrastructure w. 100% financing.
- reduce war & armaments

B. Ricardo

Land grinds down.

So do mines

Review ideas of deple. vch to mines. Define depletion. Gray, Scott, etc.
(Von Thünen.

No end to earth, but go down gradually.

Δ g real cost.

(Note, this is at margin. B + M mines roll in all. So does rate - making.)
(Int. & ext. margin.)

c. Mill

Reaffirmed dim. rets. (Dismal science.)

But social produ. fr. more than sum of indiv. ones.
(Pigou made synergy central.)

H. C. Carey, quibble vs. Ricardo. Use best land last.

Mill says 'progress' operates vs. dim. rets.
(But not labor-sav'g progress!)

(Emphasize implied growth of rent. Labor ~~at~~ starves while C.P. for society still above starvation.
Mill wanted to socialize rent.)

Mill also introduced esthetics.

Ad. 289-0, Oct. 25, '78

B + M., Ch. 4. The Cons. Movement.

Interprets Consts. mainly as rebels vs. free mkt.
But this misstates. They rebelled vs. mucky, unearned \$,
decline of small firms.

Consts. were vs. land mkt., he says. But this is only
half-true. They were vs. mkt. failure.

Kidnaps Polanyi to express Cons. idea re land +
mkt. But Polanyi not a Const., but an instlt.

Consts. wanted to inventory res. - then hold them as
limited.

Consts. looked at much more than farm land.

Ecological interdependence was big idea. And
this does indeed threaten mkt. indiv. E.g.
wtr. xfts; wtr. sheds; runoff.

OK. But then some carry to extreme, man is vile.

Physical waste v. ec. waste. Give e.g.

4 Cons. Rules

1. No damage regenerative ability
2. Use renewable res. in pref. to extractives
3. Use plentiful minerals first

Overdevelop renewable res., e.g. hydro.
(Note reversal of attitude, hydro is now villain.
Gov. & corps. always lag behind public wishes.)

Get max physical yield from minerals

Waste nothing, e.g. flare no gas.

Recycle.

Social effects. Wanted wide distr. of land.

Scarcity wd. lead to unemp. (1911 Timber Report.)

Uncanned A wd. go to few, divide society.

Opposed immigration (& export of minerals. Van
Hise.)

Canadian Association of Broadcasters, says that the repatriation of Canadian ad dollars from the U. S. "is preserving the lifeblood of the Canadian broadcast industry." A study of whether programs are getting bigger production budgets and whether they are qualitatively better because of it is under way, but it is plain that revenues to Canadian TV stations have boomed.

At CITY-TV in Toronto, for example, revenues soared 43% in the first year after C-58 took effect and climbed a further 35% last year. "I don't know exactly how much is due to C-58," says James West, vice-president for sales, "but I know it is a great percentage."

Ad losses. Below the border, WKBW-TV in Buffalo used to sell \$2.3 million worth of commercial time to Canadian advertisers. Last year it sold one-fourth as much.

WGR-TV, its rival in the market, similarly saw its Canadian revenues fall from about \$2 million annually to 25% of that amount. "It's a frustrating problem," says Philip A. Jones, the station's general manager. "There's a lot of money not coming in any more," says Beuth at WKBW-TV. Some of the lost volume has been recouped by increased sales to U. S. customers, but some stations contend that the financial drain is putting them perilously close to

A U. S. law would end tax deductions for conventions held in foreign countries

bankruptcy. Some stations are still trying to lure Canadian advertisers by offering time at rates 50% lower than U. S. advertisers pay.

Minister Sauvé is thought to be weakening on her stand that C-58 is not negotiable, and there are indications that Canada will send a representative to Washington to attend the Strauss hearings. Other measures to help Canada free its airwaves from U. S. domination have been suggested, in case a pull-back on C-58 is necessary. One proposal would allow cable-TV systems to carry U. S. programs but would require them to be ready to delete any commercials on request from the CRTC—so advertisers might get considerably less than they pay for. This technique was tried in 1976 before the passage of C-58. Another and more radical proposal would have the government jam U. S. broadcasters' signals to keep them away from Canadian homes. Sauvé dismisses the idea as technically impossible, but WGR-TV's Jones offers another reason why the government will not cut Canadian viewers off from their nightly fix of *Happy Days*, *Laverne & Shirley*, *Battlestar Galactica*, and the other programs sent their way from the States: "People would kill them if they did." ■

REGIONS

Padlocking federal forests

Proposed wilderness areas could sharply cut land for timber and mineral use

Not since the Administration of Theodore Roosevelt has the timber industry faced as big a threat from the federal government as it does today. To ensure that at least some harvested areas would be replanted, Roosevelt and his chief forester, Gifford Pinchot, pulled vast forest lands under federal control. Now, in a move that could affect the energy

ry decisions on which areas should be so protected. About 26 million of those roadless acres are commercial forest land, capable of producing a total annual harvest of 6 billion bd. ft. of lumber, or enough wood to build 512,000 single-family homes each year. If too much land is locked up, industry officials warn, mills may close, timber supplies may dwindle, and forest product prices may rise.

The roadless lands include much of the Overthrust Belt, stretching from Canada to Mexico along the Rocky Mountains, that energy experts believe

contain up to 9 billion bbl. of oil and 52 trillion cu. ft. of natural gas. These areas also hold untold amounts of minerals. And wilderness designations could hurt manufacturers of off-road vehicles because snowmobiles, dirt bikes, and other motorized vehicles are not allowed in wilderness areas.

Recommendations. The wilderness concept already has caused an uproar, particularly in the West, where most roadless lands are located. The Forest Service now is sifting through more than 350,000 public comments it received—a governmentwide record—on its draft proposals, released last June.

Agriculture Secretary Bob Bergland plans to announce in December the Forest Service's final recommendations for wilderness, nonwilderness, and areas designated for further study. The recommendations will go through the White House and then to Congress, where the battles are expected to be heated.

Industry's stake. The roadless lands have been off limits to developers since 1970, when the Forest Service began trying to determine which lands should go into the wilderness system created by the Wilderness Act of 1964. The timber industry has the most at stake. Land withdrawals for wilderness will affect the amount of timber the government can sell each year from its national forests.

Under federal law, Forest Service sales must be scheduled so that timber



Roadless Colorado land: Will development be banned?

and minerals industries as well, the government may padlock as much as one-fifth of the 187 million-acre national forest system into a "wilderness" classification that bans all development.

Already 15 million acres of U. S. Forest Service land have been designated wilderness. This latest move could add as much as 25 million acres, taken from 62 million roadless acres plus some intermingled private lands. Throughout November, regional officials of the Forest Service, which is part of the Agriculture Dept., will make prelimina-

tsk

stocks will never be depleted. Whatever volume of timber becomes wilderness can no longer be figured in the equation. Because the Forest Service owns more than one-fifth of the nation's commercial forests, which contain more than half the supply of pine, spruce, fir, and other softwood timber used for lumber and paper products, a large withdrawal could be disastrous. To meet future demand, "the majority of the 26 million acres [of commercial forest land that could become wilderness] must remain in the nonwilderness category," says R. Kirk Ewart, Boise Cascade Corp.'s director of industry affairs.

Shortfall. The impact already is being felt. "Because of this planning process, the Forest Service has experienced a shortfall in meeting timber sale targets," Ewart says. The reason: Cuts that had been planned years ago in some roadless areas have been held up. Ewart says the losses could reach 386 million bd. ft. in 1979.

Bergland's recommendations "will contain an explicit list of proposed wilderness areas," according to M. Rupert Cutler, Assistant Agriculture Secretary and the man who oversees the Forest Service. "The biggest question I will face will be what percentage of lands do we recommend for further study and what do we bite the bullet on."

He notes that "there will be some

disappointment with the [large] size of further study areas. I don't know what size that category will be, but I am determined to make it less than one-third" of the study lands.

That prospect pleases no one. "If one-third is left in further study, we haven't accomplished anything," Ewart says. "There's enough information in the Forest Service to guide decision-making on the vast majority of the 62 million

Boise Cascade's Ewart: Wilderness plans already have cut timber supplies

acres." Environmentalists say the Forest Service lacks the necessary information. "For the Forest Service, speed has been the main criterion and quality was a poor second," says John A. McComb, Washington (D. C.) representative of the Sierra Club.

Surveys. The oil and gas industry, too, says it knows too little about the Overthrust Belt to specify which tracts of land it wants. "We're going to take very little land," says an Amoco Oil Co. spokesman, "but we can't tell you where it's going to be." Still, the energy companies want the lands put into nonwilderness until they can be explored.

But the environmentalists have done some surveying and they have identified 36 million acres for wilderness plus 9 million for further study. They plan to

compare that list with Bergland's. "Our concern is what is in the nonwilderness category," says Timothy Mahoney, a policy analyst for the Wilderness Society. "If areas we think are important are threatened, we might come up with bills to keep local areas for wilderness."

Indeed, that will be the strategy on both sides. Conservationists feel they can get more from Congress if they split proposals into as many bills as possible, particularly if they can win support from local delegations. Industry is working to lump proposals into the biggest parcels that Congress can handle.

Lawsuits. The timber industry may also seek legislation that will release lands for nonwilderness. That would prevent legal challenges from environmentalists, because congressional acts are exempt from requirements for environmental impact statements. Forest Service management plans for these areas are not.

Legislation releasing lands for development could also circumvent what industry and the Forest Service fear most—a lawsuit challenging the adequacy of the whole process of wilderness study and recommendations. While neither the Wilderness Society nor the Sierra Club says that it now plans such action, they admit that they would consider suing "if the recommendations are too offensive." As McComb says, "This is certainly going to be a balancing act on the part of the Forest Service." ■

When companies can't reach their own land

In southwestern Montana, the Forest Service's study to assess roadless lands for wilderness potential has put Burlington Northern Inc. in a bind. The company owns about 13,000 acres there, intermingled with Forest Service lands, in an area drained by Jack Creek. Because these roadless federal lands have been managed as wilderness areas for the past eight years, Burlington Northern has been discouraged from seeking access across them to its timber.

In addition, some of the Burlington Northern land itself could fall into the wilderness category, according to M. Rupert Cutler, Assistant Agriculture Secretary for conservation, research, and education. That possibility made the company decide to postpone harvesting the Jack Creek area. But recently the company decided to prepare for a timber cut anyway because of another threat: the mountain pine beetle. Most of the Jack Creek area already is infested with these beetles, and many lodgepole pines have turned a bright orange.

"Timber losses already add up to 15 million bd. ft.," says Donald M. Nettleton, Burlington Northern's director of

land management for the Rocky Mountain district. To prevent more timber losses caused by the beetle, "we decided to pursue acquisition of access across Forest Service lands," Nettleton says.

Hamstrung. Although the Jack Creek area has the most immediate problem, it is only a small part of Burlington North-

Burlington Northern's Nettleton: Most of BN's land is intermingled with federal.



ern land whose fate is tied to federal study lands. Most of Burlington Northern's land was acquired through land grants given to railroad companies by the government a century ago, and about 1.1 million acres of Burlington Northern's total 1.5 million acres of forest are intermingled with federal land. Nettleton thinks there may be access problems with half of the 1.1 million acres.

But Burlington Northern is not alone in its struggles. Southern Pacific Land Co. owns 30% to 50% of the land in 16 wilderness study areas in Northern California. Weyerhaeuser Co. owns some intermingled lands, too, and other companies may be hamstrung by the need for access across wilderness areas.

The Forest Service does have an answer: The government will grant access where possible and will exchange private lands for national forest lands where it is not. The agency is now working on a deal that will give Burlington Northern land in four national forests in western Montana in trade for Jack Creek and an additional 164,000 acres the company owns within the Beaverhead and Gallatin National Forests. The trade could take 15 years to complete, again leaving the company without control over some of its own resources.

Randy L. Rasmussen

Mon. Nov. 6, '78

B + Ch. 6, Mitigations of Scarcities.

Now relax "vigorous" - artificial - constraints.
(But not const. of no instl. bias -- except when they do, they are selective + unrealistic + misleading.)

Resource constraint now identified w. "extractive" sector. This omits flow res: wtr, urban + scenic land, much of soil quality, etc.
Air corridors, street space, ...

Substr:

in produ
in cons.

These can mitigate, but the reaction cannot more than overcome the cause, p. 130. Good point!

p. 131, using unqual. res. becomes more K-int.
(so, K may limit -- build up for True stuff.)

See resource-sav'g use of K, p. 132.
(K is res.-using, labor-sav'g on balance —
more people believe today.)
Cite Lovins -- assign here.

pp. 132-33 Ideas on K + labor,
pregnant but aborted. Wicksell will clarify.

Int'l. trade, alleviates. (But hi energy costs,
pollut. costs. Re res., hi military costs.)

Recovery, big thing. (but not energy. Entropy
 ΔS !)

p. 137 Higher incomes, consume less resource.
Backwards!

✓ p. 141 5 straw men.

Adm. 289-0

Mon., Nov. 13, '78

Sample gas. Go over old notes.

Capt. + hy. base essentials.

TFELLC, App. 1