Working the Woods

I. Timber
II. Wood
III. Industry
IV. The Owl Flies
I. Timber

A. Trees
B. Logging
C. Cut & Run
D. Timberlands
The Nature of Trees

- Trees are the resource base for wood products industry
  - Trees matter

- Tree varieties
  - Hard & softwoods, etc.

- Tree size
  - Economies of scale

- Tree age
  - Clarity of wood in old growth
Trees & Forests

- Forests matter
  - Source of trees
  - Mix of trees
  - Ecosystems

- Industry seeks forests
  - Forests shape industry
  - & Industry reshapes forests
Second Nature

- First & second growth
- Logging reshapes forest
  - Faster growth
  - Smaller trees
  - Pure stands
  - Species change
  - Fire hazard
  - Soil loss
Pacific Northwest

- Leading US center of timber industry > 1900
  - Scott Prudham, *Knock on Wood*
  - Why?

- Nature of NW forest
  - *Temperate rainforest*
  - Big trees
  - Clear wood
  - High tree density
  - Fast growth
I. Timber

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Early US logging

- Hand saw & axe
  - Industrial steel

- Animal & water transport

- Paul Bunyon days…
Industrial logging

- Bigger, longer saws
  - 2-man saw

- Donkey engines & drag lines

- Railroads

- Deeper into forests
Petro-logging

- Chain saws
- Bulldozers
- Trucks
- Clear out forests fast
Clear Cutting

- Cut everything
- Soil loss
- Failure to reseed
- Roads & erosion
Mills & cuts

- Cutting goes outward from mills
  - After timber cleared, mills are moved

- Past & present pattern
  - Many small, mobile mills
  - Today’s mega-mills
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Mining the forests

- Extraction > cultivation
- Cut rate > regrowth
- Renewable resource?
  - Illusions of scientific management
Cutover lands

- Exhausted forests
- Devastated landscapes

Figure 9. Area destroyed by forest fires, October 8, 1871. Open circles show towns which were not destroyed, closed circles show towns which were destroyed.
Go West, Woodsman

- US forest frontier
  - New England > 1620
  - Ohio country > 1800
  - Upper Midwest > 1850
  - South > 1900
  - Pacific Northwest > 1920

- California
  - Bay Area, Sierra > 1850
  - North Coast > 1890
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Timberlands

- Private
  - Timber companies
  - Misc. owners

- Public
  - National Forests
  - State Forests
    - University forests
National Forests

- Reaction to over-cutting
  - Fear of ‘timber famine’

- Forest Reserves (1890-1910)
  - Presidential decree

- National Forests > 1910
  - Forest Service, Dept. of Agric.
  - Professional forestry

- Forest leases
  - Regulated by Forest Service
The Urban Forest

- The forest is moved to the city
- ... and sometimes burns...
Working the Woods

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II. Wood

A. •Lumber

B. Woodsman, Pare That Tree

C. Go East, Old Man
Lumber - the first wood product

- Capitalism & commerce
  - Wood as commodity
- Industrial revolution
  - Modern tools
  - Machine cut wood
- Dimensional lumber
  - 2x4s, 4x4s, etc.
  - Shingles & staves
Lumber milling

- Secondary manufacture
  - Biggest US industry < 1910
- Sawmills
  - Industrial equipment
  - Innovation in saws
Lumber uses

- Railroads
- Mines & oil wells
- Furniture
- Construction
  - The ‘balloon frame’
II. Wood

A. Lumber

B. •Woodsman, Pare That Tree

C. Go East, Old Man
‘Wood products’

- Plywood (1930s)
  - Pacific NW specialty

- Veneers
Laminates

- Glulam
- LVL
Chipboard

- Waferboard
- Oriented Strand Board (OSB)
- ‘Fiber industry’
Techno timber

- Less (solid) wood
  - Less dependence on nature (of trees)
- More chemistry
  - Fibers & adhesives
  - More control of inputs
- More energy
- Similar to food & agriculture

Biotech to the rescue? Prof at Oregon State is developing soy flour & amino acids protein threads like those used by mussels, to replace wood fibers.
II. Wood

A. Lumber

B. Woodsman, Pare That Tree

C. Go East, Old Man
Southern Strategy

- New products, new resource demand
  - Chipboards & softwood
  - Fast growth, small trees

- New forests, old places
  - Plantations of pine
Working the Woods

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III. Industry

A. • Timber Industry

B. Timber Geography

C. Timber Region
Industrial organization

- Affected by nature
  - Few scale economies
  - Low concentration
    - (‘vertical disintegration’)
The giants

- Based on landholdings
- Government grants (RRs, Timber Act)
- Weyerhaeuser, Georgia-Pacific, Louisiana-Pacific
Contract cutting

- Cost
- Risk
- Flexibility
Growing concentration

- Control of timber
  - As supplies diminish

- Bigger mills
  - E.g. Sierra Pacific
Wood products industries

- Furniture
- Toys
- Flooring
- Construction
- Etc.
III. Industry

A. Timber Industry

B. Timber Geography

C. Timber Region
Lumber camps

- Old lumber camps
  - Male workforce (1900s)
  - IWW (Wobblies)
  - Long gone...

- Gyppoos
  - Small towns
  - Mobile camps
  - Still around
Mill towns

- Small mill towns
  - All over US
  - One-horse towns

- Large mills towns
  - Coos Bay, Eureka, etc.

- Company towns
  - Scotia, etc.
Transport networks

- Ships
  - Coastal trade & old lumber schooners

- Trains
  - Local RR, company RR
    - Skunk trains & variable guages

- Trucks
  - & modern highways like US 101
City sites

- Lumberyards
- Millwork
- Construction
Urban geography of a timber region

- Few big cities
- Simple city hierarchy
III. Industry

A. Timber Industry

B. Timber Geography

c. Timber Region
Timber regions

- One-industry places
  - Pacific Northwest had timber & fish & mines
  - Diversified late, with government help (hydro)
    - Boeing
  - Shift to high tech
    - Microsoft
    - Portland’s Silicon Forest
Forest politics

- Industry dominance over the region
- Between 1993 and 1998, the logging industry gave US senators $2.5 million in contributions
Monoculture?

- Industry creates place
  - Specialization
  - Concentration
  - Identification

*Cf. Hollywood, Silicon Valley, Detroit, etc.*
Clash of civilizations

- 1990s uproar
  - NF cutbacks (Clinton)
- Changing region
  - New culture
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IV. The Owl Flies

A. **Forests Forever?**

B. Techno-Trees

C. Going Global
Spotted Owl controversy

- Old Growth forests
  - Last 5-10%
  - On NF land
- Endangered Species
  - Listings
  - Did owl cause the crisis?
The owl comes at midnight

- Declining timber
  - End of old growth
  - Declining yields
    - 2d & 3d cuts
Mill closures

- Compounds decline
  - Less employment
  - Ruined towns & regions

- Causes
  - Declining timber
  - Rising productivity
  - Recession of 1980s
  - Shifting supply (global)
IV. The Owl Flies

A. Forests Forever?

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Reforestation

- Natural limits to growth
  - Planting & seeding
    - Failure & loss
  - Time to maturity
    - 20-120 years
Can capital wait?

- What long-term?
- Strange case of Pacific Lumber
State & capital

- University & Forest Service R&D
- Myth of Sustained Yield
Biotech to the rescue?

- Introduction of GMO trees with biopesticides
- To South American plantations
- Danger of spreading pollen changing ecosystems.
Or return of nature?

- Replanting
- Gathering
- Immigrant labor
IV. The Owl Flies

A. Forests Forever?

B. Techno-Trees

C. • Going Global
Plundering global forests

- Tropical
  - Amazon
  - Central America
  - Central Africa
  - SE Asia

- Temperate
  - Canada
  - Siberia

- Clearcuts & waste
Global wood trade

- Russia to Europe
- Asia to Japan!
- Canada » US not shown

**Timber Tab**
Canadian softwood-lumber exports to the U.S.

Source: International Trade Department of Canada

**Map**
- Source: import data from Eurostat, World Trade Atlas, national yearbooks of statistics - commodity by country
Global giveaway

- Selling off the rainforest - a modern-day scandal

- Kisangani - Vast tracts of the world's second-largest rainforest have been obtained by a small group of European and American industrial logging companies in return for minimal taxes and gifts of salt, sugar and tools, a two-year investigation will disclose today.

- More than 150 contracts covering an area of rainforest nearly the size of the United Kingdom have been signed with 20 companies in the Democratic Republic of Congo over the past three years. Many are believed to have been illegally allocated in 2002 by a transition government emerging from a decade of civil wars and are in defiance of a World Bank moratorium.

- According to the report, the companies, mainly from Germany, Portugal, Belgium, Singapore and the US are already stripping from the 21m hectares (52m acres) of forest, primarily to extract African teak, which sells for more than £500 a cubic metre and is widely used for flooring, furniture and doors in [the rich countries].
Global plantations

- Toward the tropics
  - Brazil, So Africa, Chile,

- Eucalyptus & Monterey Pine

- For fiber (wood & paper)
Working on the global plantation

- Deforestation
- Labor conditions
Old problem of deforestation

- Modern forest devastation begins in Central Europe c 1500
- What is it about capitalism that devours the earth?