Environmental Politics in Other Industrialized Democracies

Main Lecture Points

- Other Industrialized Democracies:
  - Face many of the same environmental problems
  - Use different policy solutions
  - Arrived at by different paths
  - Design, legislate, and implement solutions at different speeds

- Differences in Pollution Intensity & Population Demographics Matter

- Differences in Government Institutions Matter
  - Electoral Rules
  - Government Structure

Major Themes of the US Story

- Increasing intensity of pollution driven by economic growth
- High visibility crisis & publications
- Crystallizing events
- Federal Elections
- Institutions
  - States vs. Federal
  - Executive vs. Congress
  - Congress vs. Congress
  - Bureaucrats vs. others
  - Courts
- Continuous Major Policy Changes Alongside Periods of Status-quo

Japanese Environmental Politics Story

- 1950s-1960s:
  - Tremendous economic growth led by industry + LDP + bureaucracy
  - National level regulation
  - increasing pollution & deadly pollution diseases

- Late 1960s:
  - waves of protest and complaints
  - 4 major pollution-disease lawsuits
  - LDP loses several municipal & local elections

- 1971: "The Pollution Diet" passed 14 major laws. Goes from most environmentally lax industrialized state to most stringent.

- 1980s-1993: pollution issue fades

- 1993: Electoral formula changes, environmental policy increases in saliency

- 2001: Govt. restructured: Ministry of Environment created

Japan's Big Three Pollution Diseases

- Minamata Disease

- Yokkaichi Asthma

- "Itai Itai" Disease

Japan's "Big Four" Court Cases

- <u>Aoyama et. al. v. Mitsui Kinzoku</u>, Nagoya High Court, August 9, 1972

- <u>Ono et. al. v. Showa Denko</u>, Niigata District Court, September 29, 1971

- <u>Watanabe et. al. v. Chisso</u>, Kumamoto District Court, August 9, 1972

- <u>Shiono et al. v. Showa Yokkaichi Sekiyu</u>, Tsu District Court, July 24, 1972

Major Themes of the Japanese Story

- Increasing intensity of pollution driven by economic growth
- High visibility crises & continuous, increasing protest
- High visibility but ineffective court cases
- Municipal & Local Elections
- Institutions
  - Majority Party (LDP): Executive & Parliament
  - Bureaucrats vs. Bureaucrats
- Sudden major policy change, followed by little for decades, then major policy change

Comparative GDP Growth
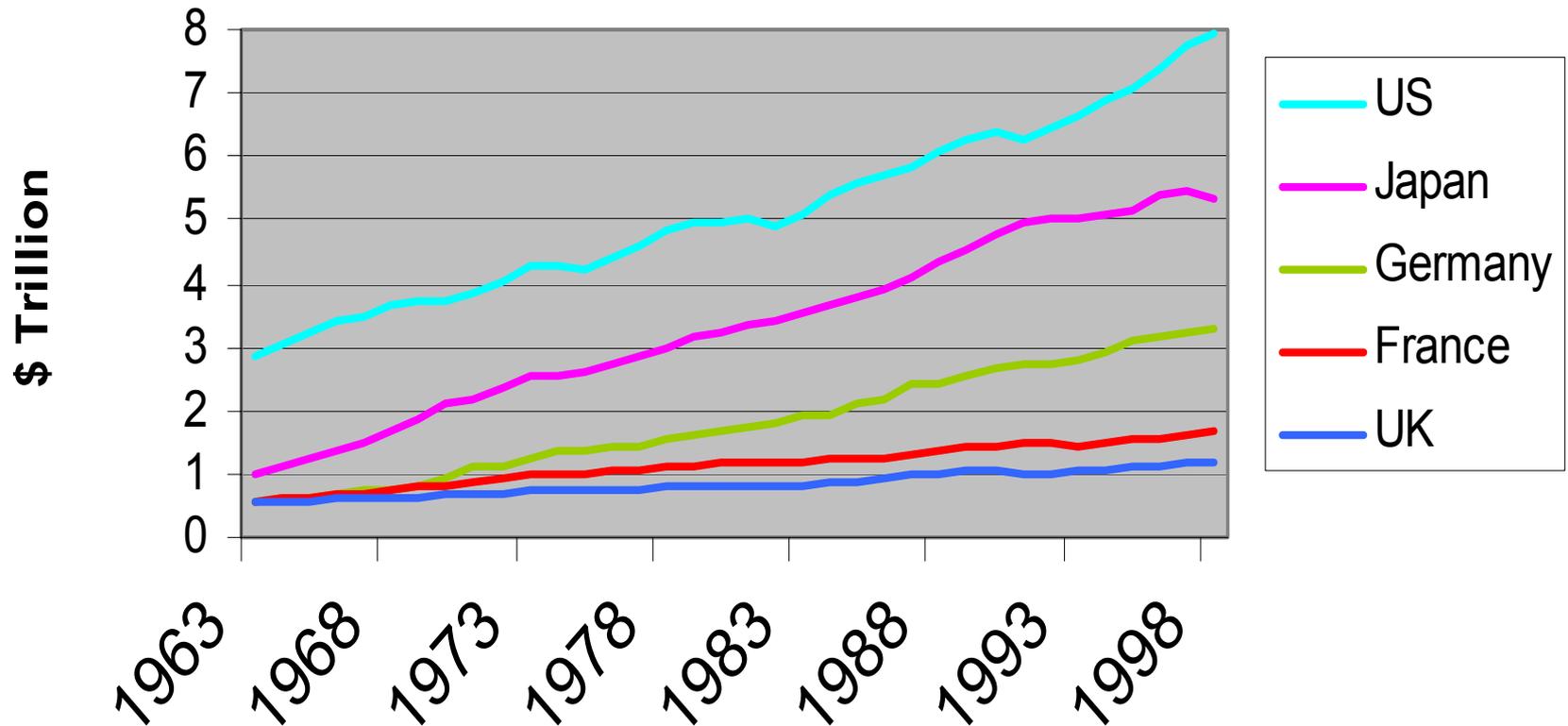
World Bank (2002)

Sulfur Dioxide (SO2) Air Pollution, 1970

	Total Emissions	Per Capita Emissions	Per GDP Emissions
US	27.8 m. tons	271 lbs/person	15 lb/$1,000 in GDP
UK	6.2	224	19
Japan	5.6	107	5
Germany	3.6	92	5
France	2.9	114	7

From stationary sources; SO2--OECD 1993 data; population, GDP—World Bank Data

Sulfur Dioxide (SO2) Air Pollution, 1998

	Total Emissions	Per Capita Emissions	Per GDP Emissions
US	21.4 m. tons	152 lb/person	5.1 lb/$1,000 in GDP
UK	2.2	76	4.0
Japan	1.0	16	0.7
Germany	1.4	35	1.5
France	1.0	36	1.8

OECD, World Bank

Comparative S02 Reduction
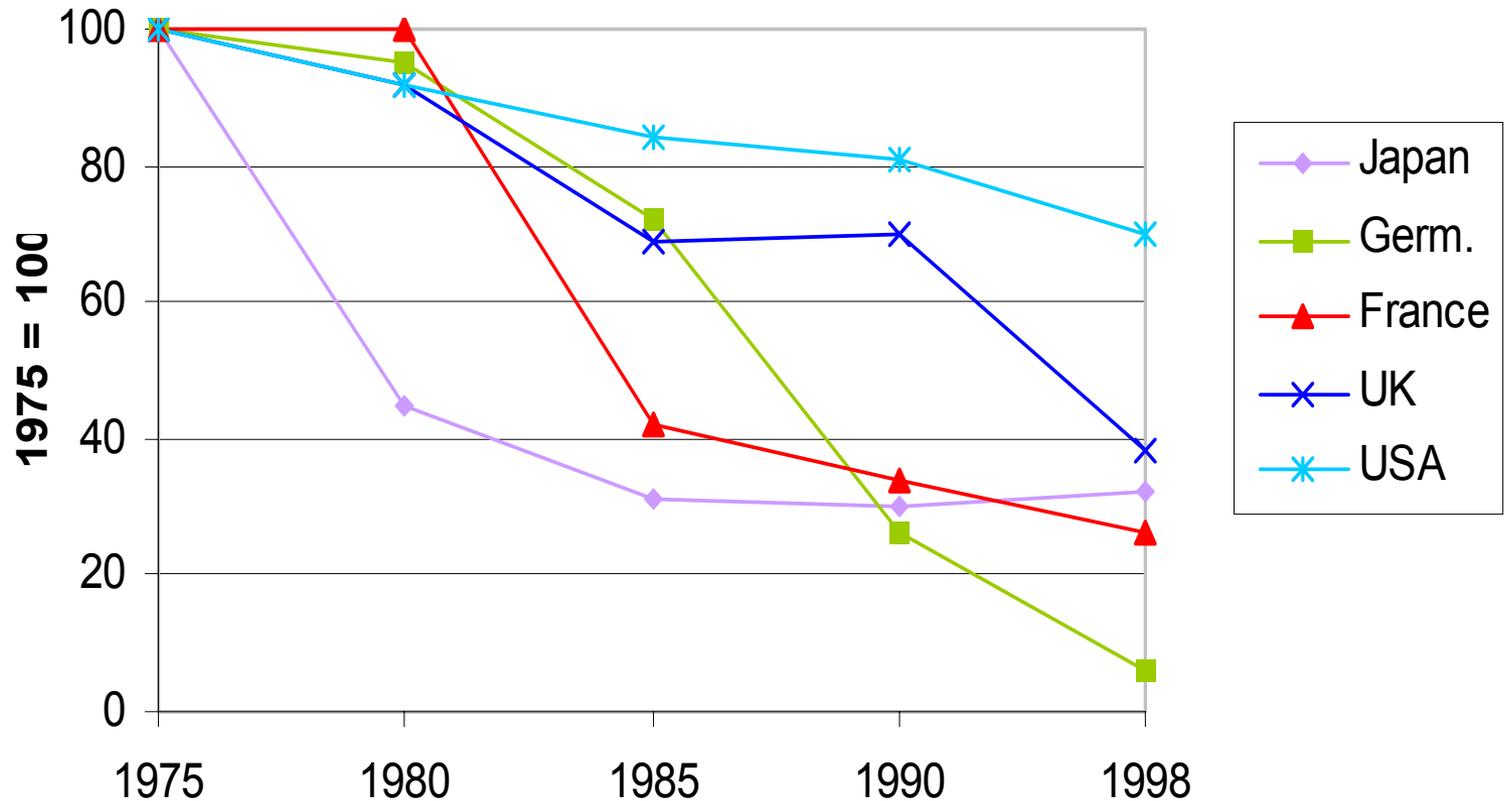
Why are some countries more polluted than others?

- Degree or timing of industrialization

- Density of population

- Density of industry

- Size of the economy

- Amount/diversity of natural resources

- Green Parties

- Powerful Corporations

- Institutions
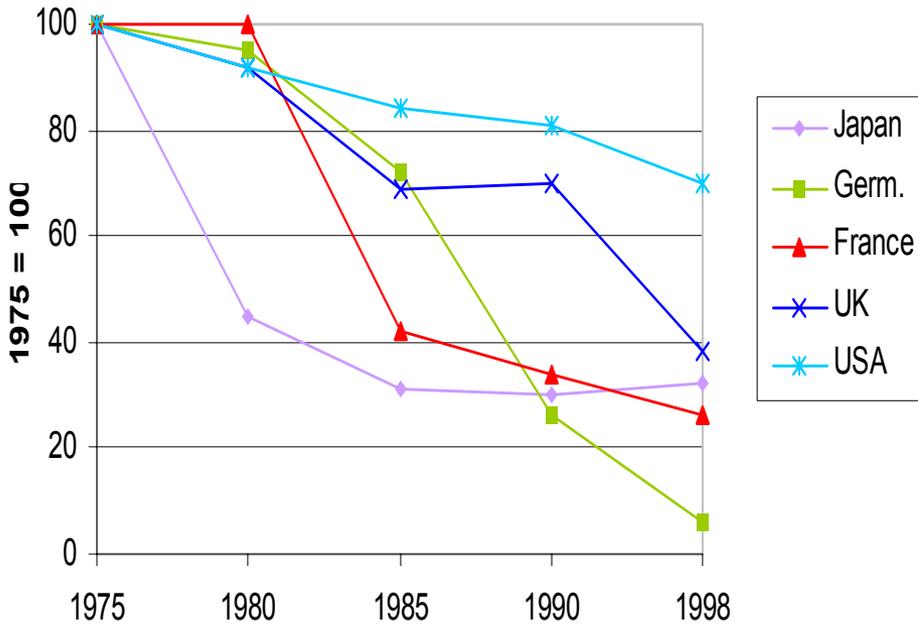
**Comparative Pop & Industrial Densities, 1970**

Broadbent (1998)

Do Demographic Factors Explain the Differences in S02 Abatement?
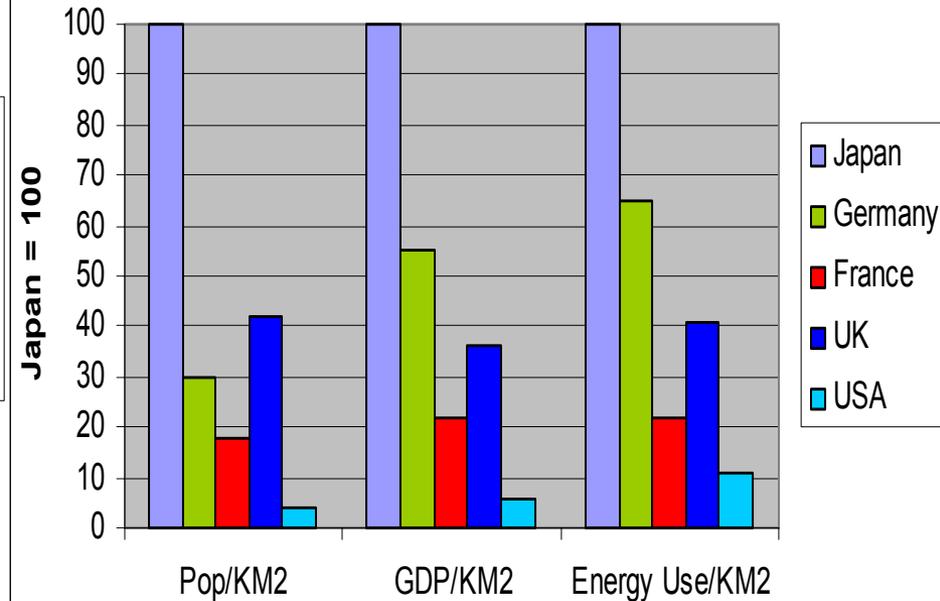
Comparative Air Pollution Intensity, 1970
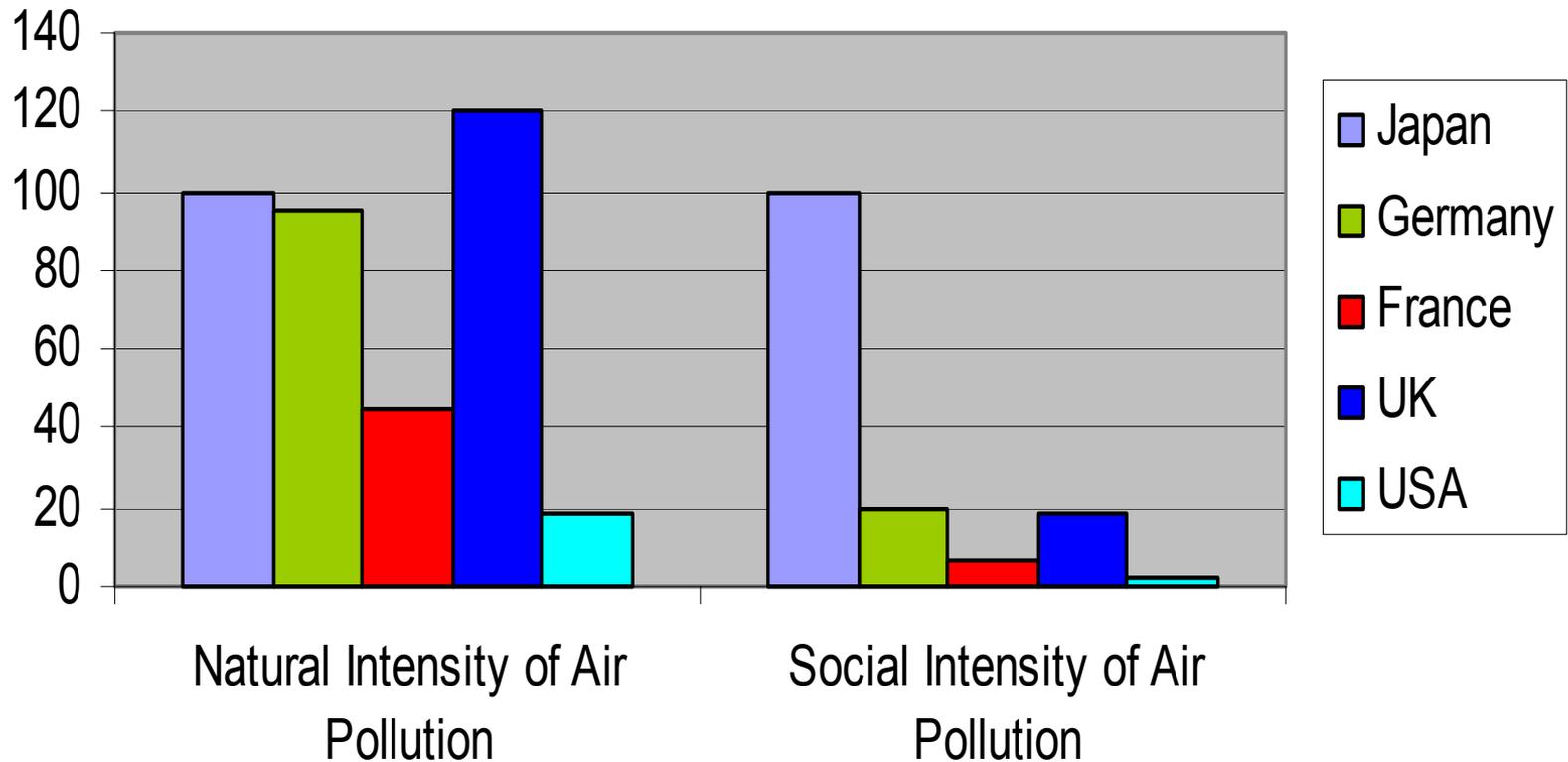
Broadbent (1998)

Natural Intensity of Pollution = total SO2 output/populated land area

Social Intensity of Pollution = total SO2 output * population density

Comparative SO2 Reduction
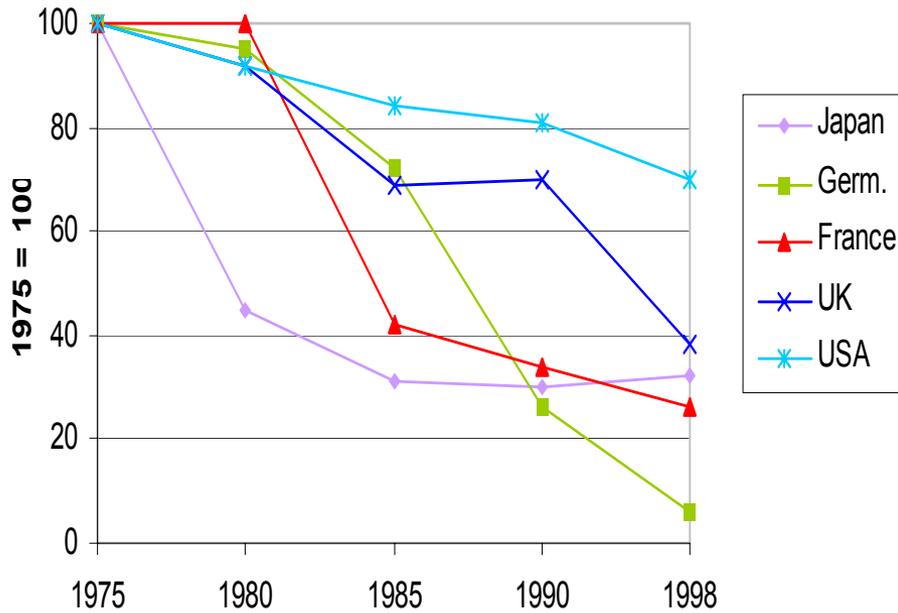
Comparative Air Pollution Intensity, 1970
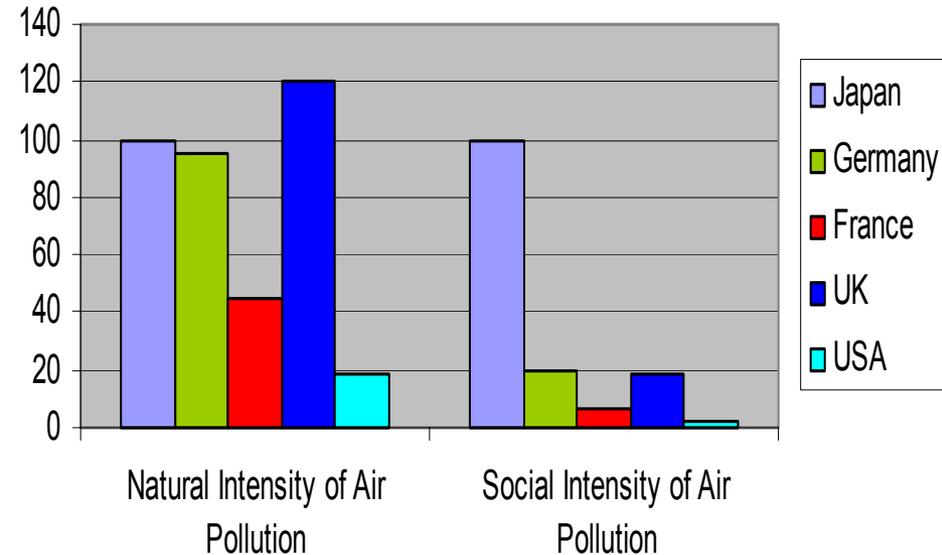
Broadbent (1998)

Natural Intensity = total SO2 output/populated land area

Social Intensity = total SO2 output * population density

What Might Account for The Remaining Cross-National Differences?

■ Material interests of those suffering or benefiting, and how they turn these interests into policy → Institutions (elections & division of power)

■ But how would election styles affect policy?

The Great Lunch Election

- Pizza

- BBQ

- Chinese

The Great Lunch Election

	Voter 1	2	3	4	5	6	7	8	9	10
1st	Pizza	Chnx	BBQ	Chnx	BBQ	Chnx	Chnx	Pizza	Pizza	Pizza
2nd	Chnx	Pizza	Pizza	BBQ	Chnx	Pizza	Pizza	Chnx	Chnx	BBQ
3rd	BBQ	BBQ	Chnx	Pizza	Pizza	BBQ	BBQ	BBQ	BBQ	Chnx

Major Types of Electoral Formulas

- <u>Simple plurality:</u> each individual casts a single vote for a single alternative, the one with the most votes wins

- <u>Plurality runoff:</u> each individual casts a single vote for a single alternative, the two with the most votes move to simple plurality.

- <u>Sequential runoff:</u> each individual casts a single vote for a single alternative, the one with the fewest votes is eliminated, the balloting in repeated until only one remains.

- <u>Borda count:</u> each voter lists his preferences by awarding X votes to his first choice, X-1 to the second, etc. The votes are totaled and the one with the most points wins

- <u>Condorcet procedure:</u> Pairwise round-robin, each alternative is run against each other, the one that wins the most is victor or the one that beats all is victor.

- <u>Approval Voting:</u> Each voter casts votes for any alternative he likes, the one with the most votes wins.

The Great Lunch Election

	Voter 1	2	3
1	Pizza	Chnx	BBQ
2	Chnx	Pizza	Pizza
3	BBQ	BBQ	Chnx

Round-Robin: Run Every Combination of Choices

	Carlos	Julia	Patrick
1	Pizza	Chnx	BBQ
2	Chnx	Pizza	Pizza
3	BBQ	BBQ	Chnx

Pizza v. BBQ = Pizza
BBQ v. Chnx = Chnx
Pizza v. Chnx = Pizza

Round-Robin: Run Every Combination of Choices

	Carlos	Julia	Patrick
1	Pizza	Chnx	BBQ
2	Chnx	Pizza	Pizza
3	BBQ	BBQ	Chnx

Pizza v. BBQ = Pizza (C,J)
BBQ v. Chnx = Chnx (C,J)
Pizza v. Chnx = Pizza (C,P)

The Great Lunch Election

	Carlos	Sarah	Patrick
1	Pizza	Chnx	BBQ
2	Chnx	BBQ	Pizza
3	BBQ	Pizza	Chnx

Election Rule: Pizza v. Chinese → winner v. BBQ

The Great Snack Election

	Carlos	Sarah	Patrick
1	Pizza	Chnx	BBQ
2	Chnx	BBQ	Pizza
3	BBQ	Pizza	Chnx

Election Rule I: Pizza v. Chinese→ winner v. BBQ...winner BBQ!

Election Rule II: BBQ v. Pizza→ winner v. Chinese

The Great Snack Election

	Carlos	Sarah	Patrick
1	Pizza	Chnx	BBQ
2	Chnx	BBQ	Pizza
3	BBQ	Pizza	Chnx

Election Rule I: Pizza v. Chinese→
   winner v. BBQ...winner BBQ!

Election Rule II: BBQ v. Pizza→
   winner v. Chinese...winner Chinese!

Election Rule III: Chinese v. BBQ →
   winner v. Pizza...

Probability of Vote Cycling Arising

of Voters →

# of Choices	3	5	7	9	11	Huge
3	5.6%	6.9%	7.5%	7.8%	8.0%	8.8%
4	11%	14%	15%	16%	16%	18%
5	16%	20%	22%	~	~	25%
6	20%	~	~	~	~	32%
Huge	~100%	~100%	~100%	~100%	~100%	~100%

US Federal Electoral System

- First Past the Post

- 1 vote per voter

- 1 seat per district

- 435 House districts/50 Senate districts/ 1 Presidential district

Seat 1
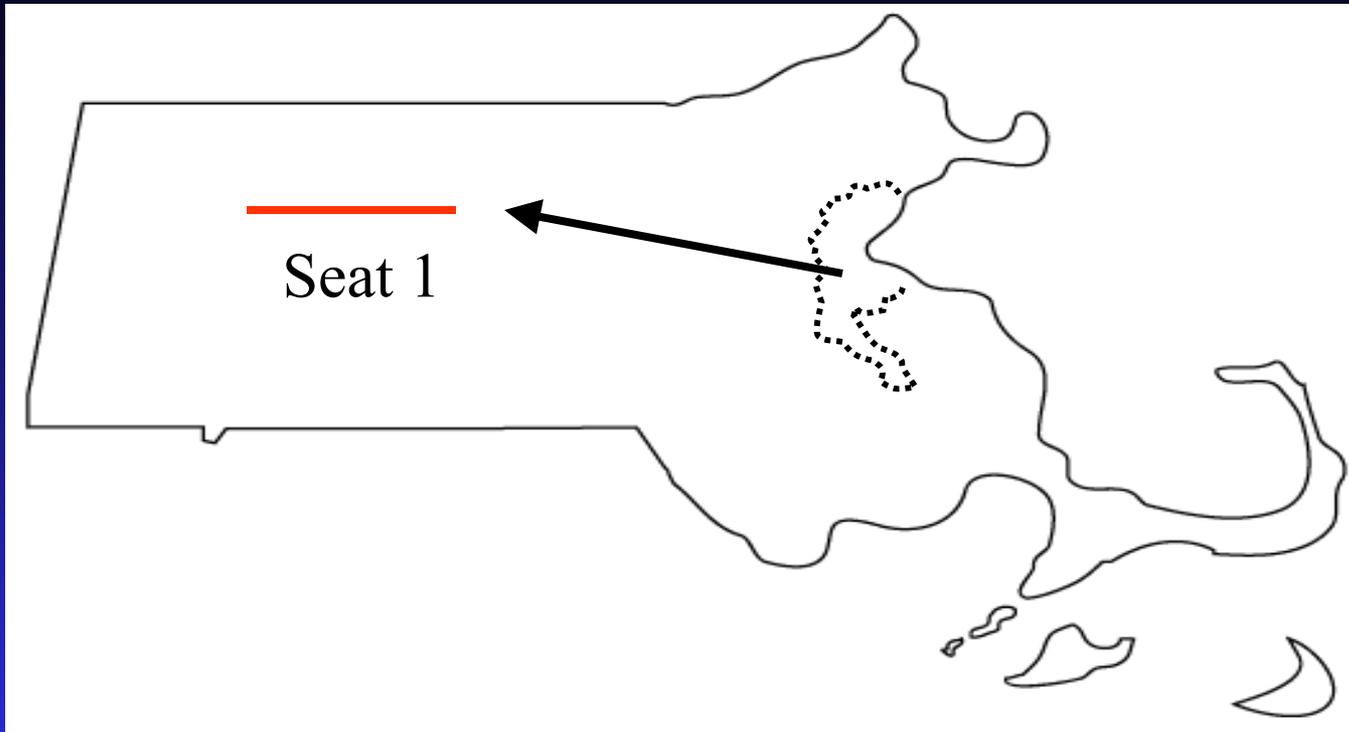
Democrat

Republican

Japan's Electoral System: 1947-1993

- Single Non-Transferable Vote (SNTV)
- 1 vote per voter
- ~3-5 seats per district (average = 4)
- ~130 districts
- ~512 members of the Diet's lower house
- Diet members elect the Prime Minister, who then chooses the Cabinet Members

Seat 1   Seat 2
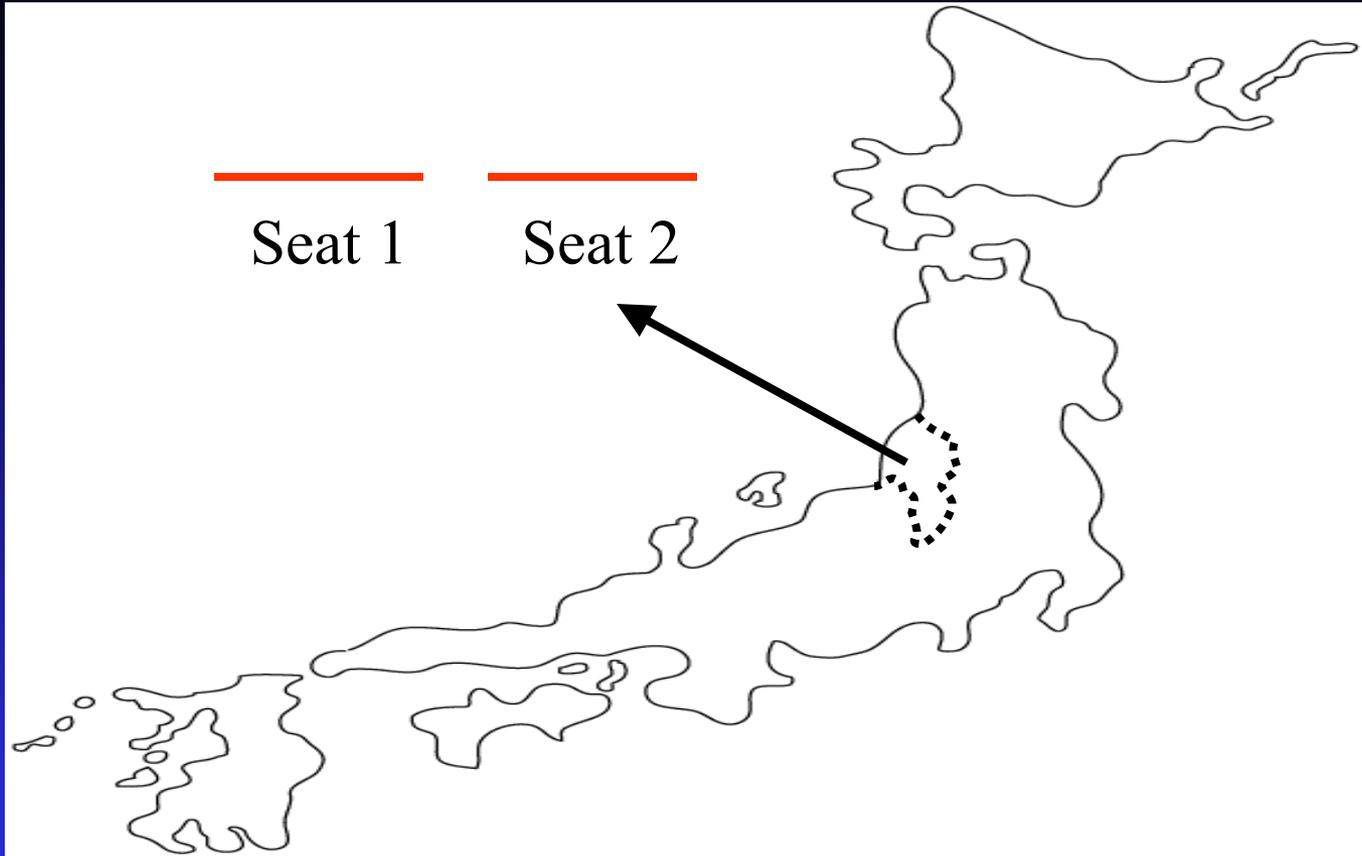
Socialist   Liberal-Dem #1   Liberal-Dem #2

Japan Inc.
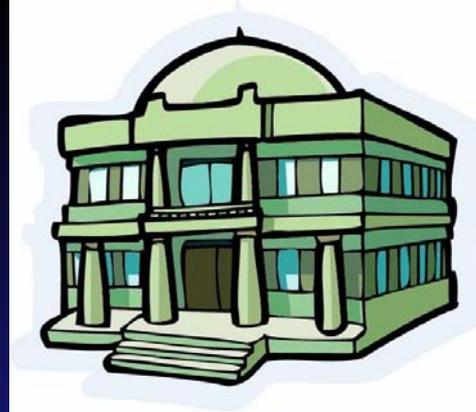
Bureaucracy

Favorable
Regulation

Staff, Budgets,
Oversight
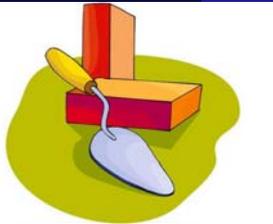
Politicians

*Interest
Groups*

Campaign Support

17.32 Environmental Po
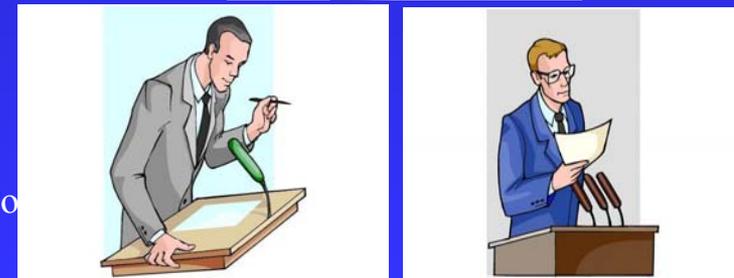
Japan Inc.
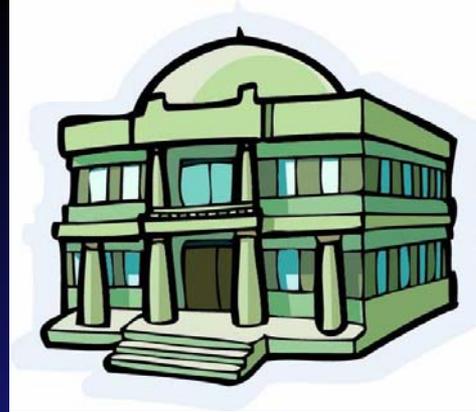
Bureaucracy

Interest Groups

Politicians

Jobs + "turf"
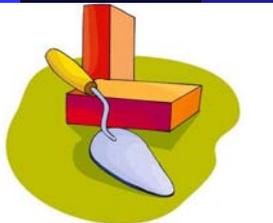
Economic Growth, Jobs, Policy

Legislation, Pork

17.32 Environmental Po
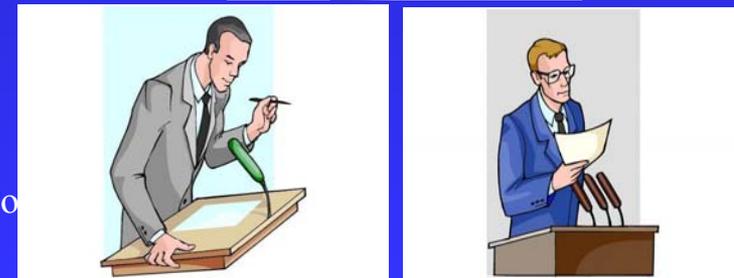
Government Structure

- Vertical: Federal vs. Unitary

- Horizontal:
    - Parliament vs. President
    - Unicameral vs. Bicameral
    - Judicial Review
    - Bureaucracy

US Government Structure

- Federal: budgets determined independently at all levels of govt. Federal govt. given power over foreign policy, defense, trade, currency/finance, posts, patents, etc. All residual rights & powers (those not specified in the Constitution) are left to the states which each determine the power structure within their own territory.

- Presidential with weak President, and roughly equal House and Senate.

- Judiciary is independent branch of govt., with checks & balances on the legislature and executive

- Bureaucracy with limited power over the private sector, positions filled with many political appointees

Japanese Government Structure

- Unitary: budgets and policy are predominately determined in Tokyo; municipal & local government administer and act as the local face of the national govt.

- Bicameral Parliament with strong lower house, very weak upper house.

- Judiciary is *not* independent: falls under the Ministry of Justice which determines the career paths of all judges and attorneys

- Bureaucracy of academic elites with few appointed positions and considerable power over the private sector. MITI, MoF, MoC most powerful...EA is sub-cabinet and shares jurisdiction over environment with more powerful ministries

Implications of Japanese Government Structure

- Unitary--local govts cannot well oppose or fight policy decisions made in Tokyo, even when run by minority party members.

- Parliament--House elections determine major policy directions, same party in power for ~35 years.

- Judiciary--courts are subservient to ruling party, lawsuits are expensive and burdensome, no class action suits, narrow judicial standing, few lawyers & judges, expensive to sue...hence even one-sided cases take years to pass through the legal process.

- Bureaucracy--bureaucrats from more powerful ministries can "outrank" the EA and demote environmental considerations

Annual average SO₂ concentration (average from continued monitoring stations)

Ministry of Environment, Japan
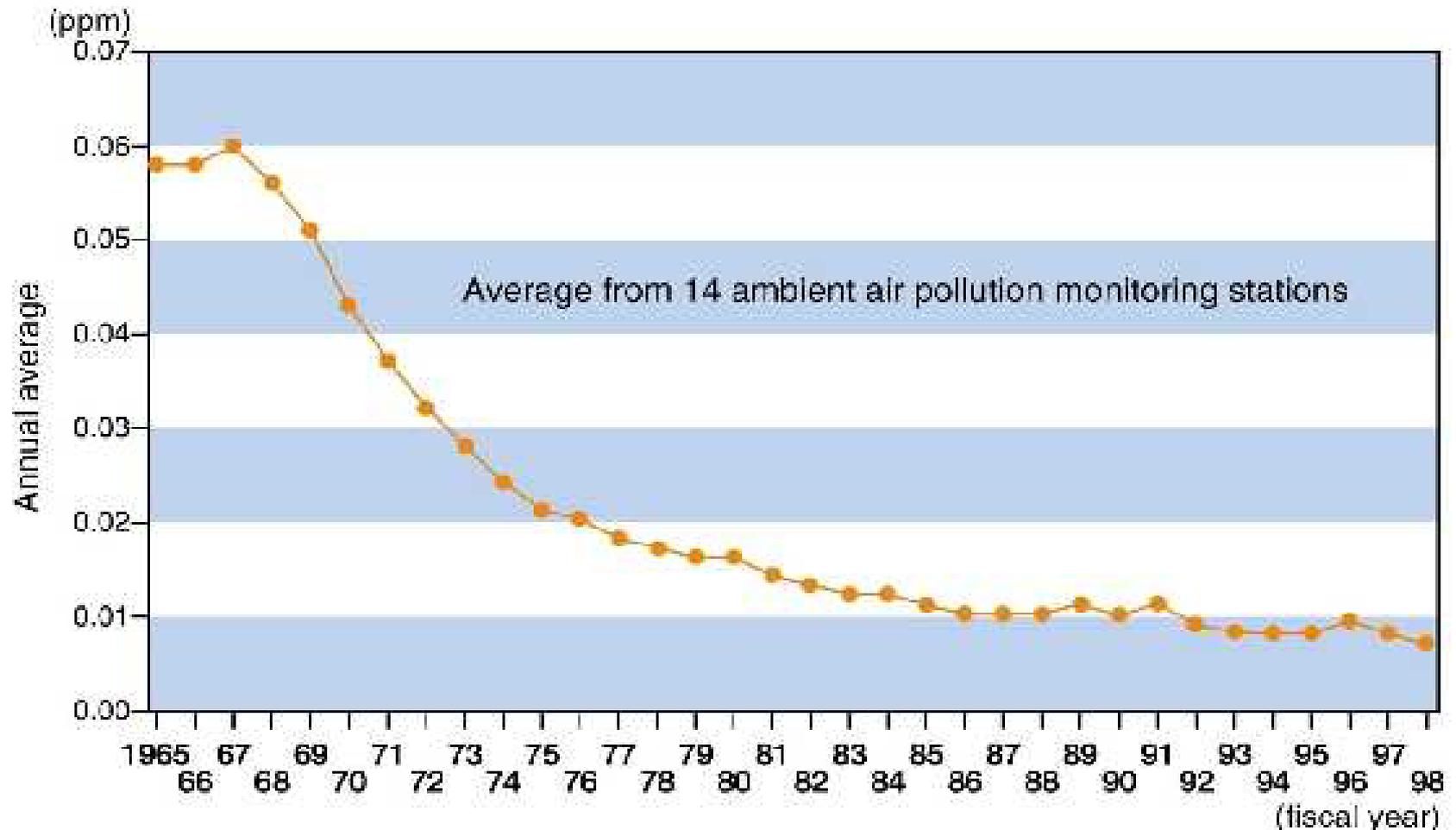
Japan's Electoral System: 1994-2003

- 512→500 (later →480) Seats in Diet's lower house
  - ◆ 300 from single-member districts
  - ◆ 200 (later →180) from 11 electoral regions with 6-30 per region chosen by PR (closed-list)

	US	Japan	Germany	UK	France
Vertical Structure	Federal	Unitary	Federal	Unitary	Unitary
Pres/Parlmt?	President	Parliament	Parliament	Parliament	Parliament
Executive Power	Low	Med	Med	High	High
Bicameral	Strong	Weak	Strong	Weak	Weak
Judicial Review	Strong	Weak	Strong	Weak	Weak/Medium
Mean District Magnitude (house/senate)	1/2	4/5-->1+?/5	1/5	1/na	1/3
Electoral formula	Plurality (FPP)	Plurality (SNTV)→ FFP + PR	Mixed Plurality-PR (closed list)	Plurality--PR	Plurality-->PR
Vote Thrshold for a House seat	na	depends on the district	5%	na	5%

Major Electoral System Elements

- Number of votes per voter
- Can a voter abstain from casting all of her votes?
- Can a voter cumulate his votes on one candidate?
- Number of seats per district
- Electoral Formula (Plurality vs. PR)

Major Plurality Electoral Systems

v = # votes per voters

p = must voters vote all their votes?

c = may voters cumulate their votes?

k = # of seats per district

Electoral formula = Simple Plurality Systems

	v	**p**	**c**	**k**	**f**
First Past the Post	1	no	no	1	Plurality
SNTV	1	no	no	k > 1	Plurality
Limited Vote	< k	yes	no	k	Plurality
Cumulative Vote	<= k	yes	yes	k > 1	Plurality

Major Proportional Electoral Systems

- Party List

- Mixed-Member Proportional

- Single Transferable Vote

Major Proportional Electoral Systems

- **Party List**
  - -Open List = voters choose between individuals, with multiple candidates per party
  - -Closed List = voters choose between set lists of individuals

- **Mixed-Member Proportional**
  - -Voters have two votes to cast on a split ballot.
  - -Half the ballot is single-member plurality vote
  - -Half the ballot is party list

- **Single Transferable Vote**
  - -Q = #voters/(#seats +1) + 1
  - -Voters submit a list of preferences in order
  - -Candidates receiving Q votes win. Surplus votes are transferred to the
  - -remaining candidates...wash, rinse, repeat.