

Soci250 – Sociological Theory

Module 5 – Vilfredo Pareto

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Outline

Main Themes

Life & Influences

Psychosocial Schema

Morphological Schema

Main Themes

- ▶ Pareto's contribution to rational model of economics
- ▶ extension to non-logical actions
- ▶ separating residues & derivations
- ▶ distribution of income model for mobility in social structure
- ▶ model of circulation of elite
- ▶ theory of revolutions

Vilfredo Pareto 1848–1923

Life & Influences



- ▶ Early life – Pareto engineer
 - ▶ born Paris
 - ▶ father exiled Italian baron
 - ▶ mother French
 - ▶ 1850 back to Italy
 - ▶ secondary school in classics (Latin & Greek)
 - ▶ then Polytechnical U. in Turin
 - ▶ 1869 thesis on principles of equilibrium of solid bodies
 - ▶ RR engineer then general manager of Italian RR

Vilfredo Pareto 1848–1923

Life & Influences



- ▶ Middle life – Pareto economist
 - ▶ 1889 marries Alexandra Bakounin
 - ▶ 1891 reads *Principles of Pure Economics* by Maffeo Pantaleoni
 - ▶ studies economists Walras, Cournot, Edgeworth
 - ▶ 1893 replaces Léon Walras at U. of Lausanne, Switzerland
 - ▶ 1896 *Course in Political Economics*

Vilfredo Pareto 1848–1923

Life & Influences



▶ Later life – Pareto sociologist

- ▶ 1898 inherits fortune, moves to Céligny, Switzerland
- ▶ 1901 Alexandra leaves him, returns to Russia
- ▶ 1902 Jeanne Régis moves in
- ▶ 1909 *Manual of Political Economy*
- ▶ 1916 *Treatise in General Sociology*
- ▶ ca 1923 marries Jeanne Régis
- ▶ 1923 dies in Céligny

Vilfredo Pareto 1848–1923

Relationship to Fascism

- ▶ 1922 Fascist Party led by Mussolini takes over power in Italy
 - ▶ Mussolini professes admiration for Pareto
 - ▶ 1922 Pareto agrees to represent Italy to League of Nations
 - ▶ 1923 Pareto appointed Senator of the Kingdom of Italy
 - ▶ 1923 two articles in *Gerarchia*
 - ▶ “expresses a certain degree of sympathy for fascism”
 - ▶ “but specifies that it must be liberal” (Aron II)
- ▶ 1923 dies on 19 August

Vilfredo Pareto 1848–1923

Relationship to Marxism

- ▶ Pareto has studied Marx (not sure for Durkheim or Weber)
 - ▶ 1902 *Socialist Systems*
 - ▶ Marx's *economic* theory of value, exploitation, etc. makes no sense
 - ▶ Marx's *sociology* is much better, but
 - ▶ class struggle consists of conflict between two elites
 - ▶ revolutionary elites always present their cause as cause of people as a whole
 - ▶ once in power they become themselves oppressors
 - ▶ this circulation of elites will not stop with proletarian revolution, as Marx believes
 - ▶ in one of his last articles Pareto argues Marxism should be taught in Italian universities

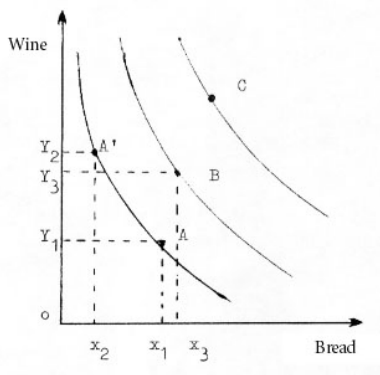
Vilfredo Pareto 1848–1923

Outline of Sociological Contributions

- ▶ Pareto's work can be divided into two parts (Schumpeter)
 - ▶ Psychosocial Schema
 - ▶ economics & logical (=rational) actions
 - ▶ typology of actions
 - ▶ fundamental hypothesis
 - ▶ residues & derivations
 - ▶ Morphological Schema
 - ▶ distribution of income
 - ▶ social structure
 - ▶ circulation of elites
 - ▶ social system

Psychosocial Schema

Economics & Logical Actions



Indifference curves of an individual for bread & wine

- ▶ From Pareto's work in microeconomics
 - ▶ Edgeworth assumes individual utility
 - ▶ derives *indifference curves* (Edgeworth box)
 - ▶ points represent different combinations of bread & wine
 - ▶ individual always tries to climb up the “pleasure hill”

Psychosocial Schema

Economics & Logical Actions

- ▶ From Pareto's work in economics (cont'd)
 - ▶ Pareto: “utility” ambiguous, misleading connotations
 - ▶ no need to assume cardinal utility, only preference ordering
 - ▶ adopts purely subjective definition, calls it *ophelimity*
 - ▶ indifference curves are the primitive notion
 - ▶ ophelimity derives from indifference curves, not the other way around

Psychosocial Schema

Economics & Logical Actions

- ▶ From Paretos work in economics (cont'd)
 - ▶ using two boxes, one for each individual A & B
 - ▶ obtain representation called Edgeworth-Bowley box
 - ▶ can show what combinations of goods A & B will voluntarily exchange
 - ▶ set of all such combinations called *Pareto frontier*
 - ▶ can derive exchange without comparing individual utilities
 - ▶ *Pareto optimum* is state of society such that no one can be made better off (greater ophelimity) without making someone else worse off (lower ophelimity)
 - ▶ only “optimum” concept that does not compare individual utilities

Psychosocial Schema

Typology of Actions

- ▶ Economic roots of Pareto's typology of actions
 - ▶ economic action is prototype of *logical action*
 - ▶ e.g. merchant buying stock when expects price to rise
 - ▶ today called *rational action*
 - ▶ logical action defined as one logically linked to goal, both
 - ▶ subjectively (from the point of view of actor), and
 - ▶ objectively (from point of view of outside observer with broader knowledge)
 - ▶ other actions are *non logical*

Psychosocial Schema

Typology of Actions

- ▶ O = action objectively linked to goal (result)
- ▶ S = action subjectively linked to goal

Type of action	O	S	O=S?
Logical	+	+	O=S
Non-logical 1	-	-	
Non-logical 2	-	+	
Non-logical 3	+	-	
Non-logical 4	+	+	O≠S

- ▶ examples of non-logical actions
 - ▶ type 1: some customs
 - ▶ type 3: reflexes
 - ▶ type 2: magic ritual, e.g. sacrifice to Poseidon for safe sailing
 - ▶ type 4: action with unintended consequences, e.g. Bolshevik revolution ends up in dictatorship
- ▶ Pareto recognizes notion of “objective” link itself function of progress of knowledge

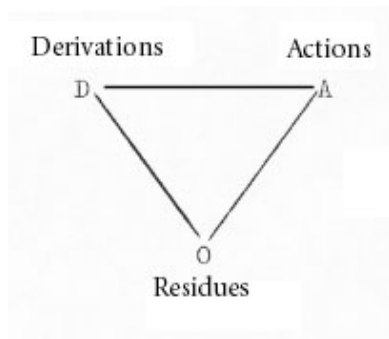
Psychosocial Schema

Sociology is Study of Non-logical Actions

- ▶ Study of non-logical actions
 - ▶ economics is the study of repeated logical actions
 - ▶ it is often successful in predicting economic behavior
 - ▶ the rational model of economics (maximization of subjective utility) is powerless in explaining non-logical actions
 - ▶ the study of non-logical actions is a task of sociology
 - ▶ but how does one study non-logical actions?
 - ▶ two observable aspects of non-logical actions
 - ▶ actions themselves
 - ▶ reasonings used to explain/justify actions
 - ▶ e.g.
 - ▶ act: act of military heroism
 - ▶ reasoning: warrior dying sword in hand enters Walhalla

Psychosocial Schema

Residues & Derivations



Relationship of actions (A) and derivations (D) with residues (O)

- ▶ Pareto's method
 - ▶ analyze a large number of actions (A) with the reasonings used to explain them (D)
 - ▶ use a kind of informal "content analysis"
 - ▶ find constant elements; these are *residues* (O)
 - ▶ variable elements are *derivations* (D)
 - ▶ e.g. prohibition of homicide (O) justified in many different ways (D)

Psychosocial Schema

Residues & Derivations

- ▶ Pareto's method (cont'd)
 - ▶ often assumed $D \rightarrow A$ (reasons given (D) are cause of action (A))
 - ▶ but implausible
 - ▶ findings of neuropsychology
 - ▶ part of the brain rationalizes actions motivated by other part of the brain
 - ▶ $A \rightarrow D$ slightly more plausible
 - ▶ most likely $O \rightarrow A$ & $O \rightarrow D$
 - ▶ residues produce both A & D

Psychosocial Schema

Residues & Derivations

- ▶ What are residues?
 - ▶ residues O may reflect certain instincts
 - ▶ derivations correspond to work of the mind to explain O
 - ▶ residues do not include all instincts; only the ones producing derivations
 - ▶ because of the way residues are obtained from derivations
 - ▶ excludes appetites, tastes, inclinations, self-interest

Psychosocial Schema

Residues & Derivations

- ▶ Pareto distinguishes 6 classes of residues
 1. instinct of combinations
 2. persistence of aggregates
 3. need to manifest sentiments by external acts
 4. residues related to sociability
 5. integrity of individual & dependents
 6. sexual residuals

Psychosocial Schema

Residues & Derivations

- ▶ The first 2 classes of residues are the most important
 1. instinct of combinations
 - ▶ tendency to establish relationships among ideas & things, to elaborate theories & logical developments of all kinds
 - ▶ basis of magic as well as science
 2. persistence of aggregates
 - ▶ almost the opposite of the first class
 - ▶ tendency to inertia, opposition to change, maintenance of *aggregates*, i.e. ideas or things that have already been linked together
- ▶ Pareto will use the first 2 classes in model of circulation of elites

Psychosocial Schema

Residues & Derivations

- ▶ the 4 classes of derivations
 1. affirmation – no justification other than personality of the one affirming
 2. authority – argument of authority based on one or more men, tradition, abstract entity, . . .
 3. agreement with sentiments or principles – reasonings appealing to sentiments, individual or collective interest, legal principles, . . .
 4. verbal proofs – pseudo-logical demonstrations using loaded terms, ambiguities, metaphors, abstract terms with no concrete referent, . . .
- ▶ note correspondence of first 3 classes with Max Weber's charismatic, traditional, & legal modes of domination

Morphological Schema

From Income Distribution to Social Mobility to Circulation of Elites

- ▶ one can trace Pareto's developing vision of social structure
 - ▶ discovery of regular shape of distribution of income in societies
 - ▶ developing mathematical formula for this distribution
 - ▶ distribution of income as model of social structure (distribution of political power, privilege, ...)
 - ▶ individuals move up & down within this structure
 - ▶ social mobility corresponds to selection process
 - ▶ elites too circulate, aristocracies do not last
 - ▶ elite replacement occurs slowly or through violent revolution
 - ▶ this cycle will not end; revolution are always led by new elites

Morphological Schema

Income Statistics for England & Ireland

Table 1
Reverse Cumulative Distribution of Income in Great Britain
and Ireland for Years 1893 to 1894

Income (£)		Great Britain		Ireland	
x	$\log x$	N	$\log N$	N	$\log N$
150	2.18	400,648	5.60	17,717	4.25
200	2.30	234,985	5.37	9,365	3.97
300	2.48	121,996	5.09	4,592	3.66
400	2.60	74,041	4.87	2,684	3.43
500	2.70	54,419	4.74	1,898	3.28
600	2.78	42,072	4.62	1,428	3.15
700	2.85	34,269	4.53	1,104	3.04
800	2.90	29,311	4.47	940	2.97
900	2.95	25,033	4.40	771	2.89
1,000	3.00	22,896	4.36	684	2.84
2,000	3.30	9,880	3.99	271	2.43
3,000	3.48	6,069	3.78	142	2.15
4,000	3.60	4,161	3.62	88	1.94
5,000	3.70	3,081	3.49	68	1.83
10,000	4.00	1,104	3.04	22	1.34

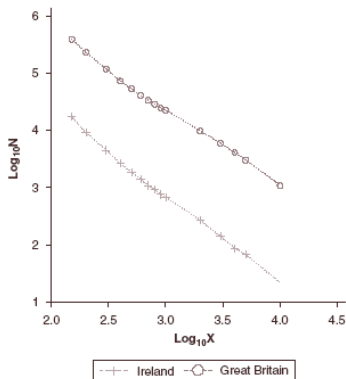
Note: Income in £ (x) and number of incomes greater than x (N).

Source: Data from Pareto (1897, §958).

Morphological Schema

Pattern in Income Distribution

Figure 1
Comparison of the Reverse Cumulative Distributions of Income for Great Britain and Ireland, 1893 to 1894. Plot of $\text{Log}_{10} N$ (number of incomes greater than x) Against $\text{Log}_{10} x$ (income in £)



Source: Redrawn from Pareto (1897, §958, Figure 47). See Table 1 for data.

- ▶ Pareto tinkers with income distributions

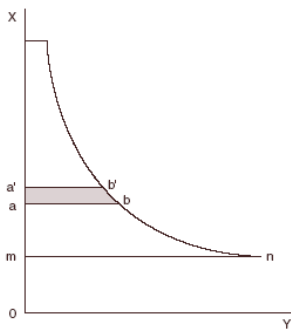
- ▶ log-log plots of income distributions is straight line
- ▶ same pattern for contemporary England & Peru in 1600s
- ▶ like “crystals of the same substance”
- ▶ different sizes but same shape

Plot of $\log N \times \log x$ falls on straight line

Morphological Schema

Shape of Income Distribution

Figure 2
Typical Shape of the Income Distribution.
Income x (vertical axis) Against Probability Density y (horizontal axis)



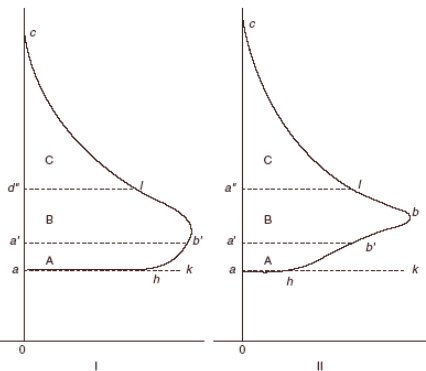
Source: Pareto (1897, §961, Figure 48).

- ▶ Pareto discovers the *Pareto distribution*
 - ▶ from log-log plot to shape of income distribution
 - ▶ shown with income going from low to high on vertical axis
 - ▶ is like a representation of the “social pyramid”

Morphological Schema

Shape of Income Distribution

Figure 3
Comparison of Income Distribution in Classical Antiquity (I)
and a Modern Industrial Society (II)



- ▶ upper part of income distribution tapered
- ▶ bottom part variable
 - ▶ in ancient societies bottom flat
 - ▶ in modern societies bottom tapered

Source: Modified from Pareto (1909, p. 386, Figure 56).

Morphological Schema

Social Mobility

- ▶ Within the social pyramid
 - ▶ individuals constantly moving up or down
 - ▶ even in most rigid caste societies there is some movement
 - ▶ mobility function of individual qualities
 - ▶ but mobility not perfect
 - ▶ actual movement results from
 - ▶ individual qualities
 - ▶ disposition of obstacles to mobility
 - ▶ social selection
 - ▶ weak at bottom: even talented elements held back
 - ▶ weak at top: incapable elements protected
 - ▶ strongest in middle of distribution

Morphological Schema

Elite & Non-elite

- ▶ in famous Pareto text
 - ▶ score individuals in each branch of human activity
 - ▶ on a scale from 0 to 10
 - ▶ rating success of lawyers, poets, women in seducing powerful men, etc.
 - ▶ top scorers are the *elite*
 - ▶ members of elite participating in government constitute the *governing elite*
 - ▶ long lasting governing elite is an *aristocracy*
 - ▶ elite always contains members who “shouldn’t be there”

Morphological Schema

Circulation of Elites

- ▶ In all societies
 - ▶ children of aristocracy do not inherit qualities of forebears
 - ▶ “History is a graveyard of aristocracies”
 - ▶ usually elite is slowly changing
 - ▶ able elements from lower stratum rise to join elite
 - ▶ incapable elements sink down into non-elite
 - ▶ this is the *circulation of the elite*
 - ▶ system stability compromised when circulation of elite is defective, so that
 - ▶ low-quality elements accumulate in elite
 - ▶ high-quality elements in non-elite are prevented from rising
 - ▶ elements with qualities other than those needed to maintain themselves in power accumulate in elite

Morphological Schema

Circulation of Elites

- ▶ When circulation of elite compromised
 - ▶ nominal elite accumulates elements who do not have qualities required to maintain themselves in power
 - ▶ revolution takes place
 - ▶ typically led by disaffected members of old elite
 - ▶ derivations (ideology) of revolutionary movement presents cause as that of entire people
 - ▶ once revolution succeeds
 - ▶ victorious revolutionary leaders become the new elite
 - ▶ start oppressing non-elite in their turn

Morphological Schema

Link With Typology of Residues

- ▶ Historical/economic circumstances
 - ▶ affect kinds of elements recruited into elite
 - ▶ when economy is growing rapidly, elite recruits many members with Type I residues (instinct of combination)
 - ▶ in wartime elements with Type II residues (persistence of aggregates) rise into elite
 - ▶ accumulation of too many Type I elements may weaken elite, as it loses willingness to use force
 - ▶ producing cyclical fluctuations in nature of elite

Morphological Schema

Topic for Discussion

- ▶ About video *Red Flag* on the Russian Revolution and aftermath
 - ▶ at the time they were writing neither Marx nor Pareto (whose *Treatise* came out 1916) knew the actual Russian Revolution of 1917
 - ▶ Marx gives an account of the proletarian revolution that he thought would one day overthrow capitalism
 - ▶ Pareto describes revolutions in general as violent episodes of replacement of one governing elite by another
 - ▶ one can view the Russian Revolution as a “natural experiment” that “tests” Marx’s and Pareto’s theories
 - ▶ Which perspective (Marx’s or Pareto’s) gives a better account of the Russian Revolution and its aftermath?