

Teaching Evaluation Statistics

Li Shao

August 13, 2018

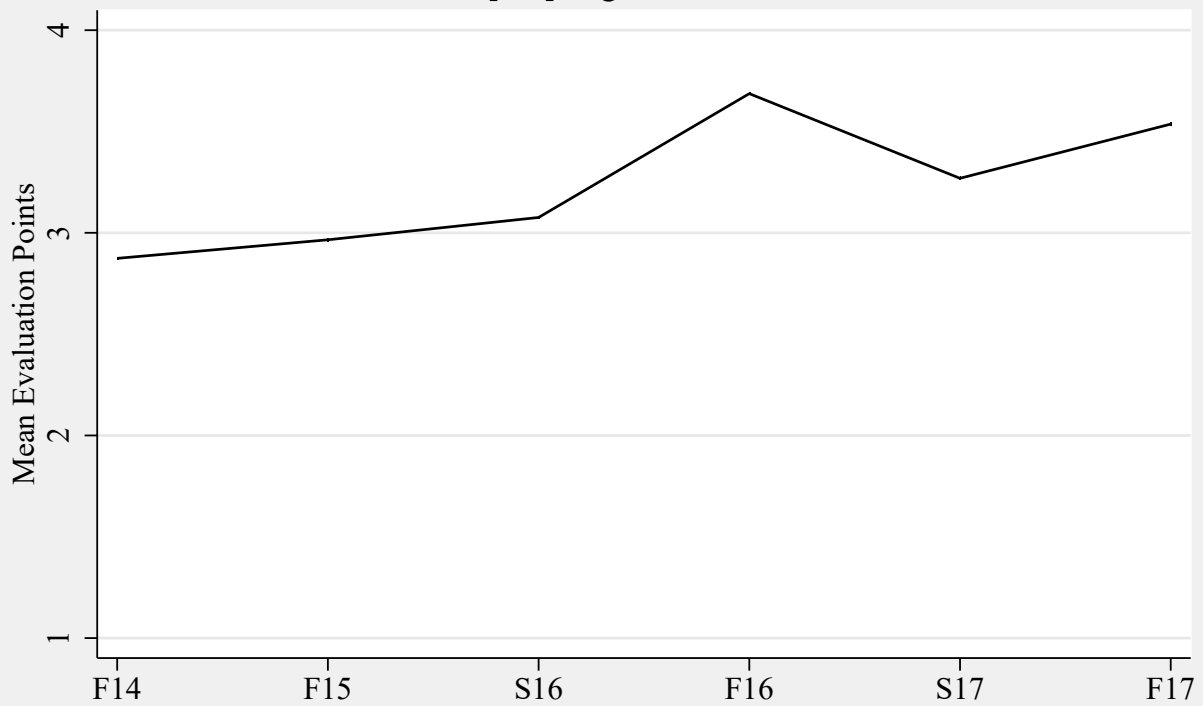
This document includes all available teaching evaluations for Li Shao's teaching assistant experience. In all figures, "F" refers to Fall semester and "S" refers to Spring. "14, 15, 16, 17" refers to year 2014-2017; mean point: 3.28/4.

Classes shown in this document:

- F14: Comparative Politics; Instructor: Yüksel Sezgin
- F15: Political Analysis; Instructor: Spencer Piston;
- S16: Political Analysis; Instructor: Spencer Piston;
- F16: Comparative Politics; Instructor: Margarita Estevez-Abe
- S17: Comparative Politics; Instructor: Anoop Sadanandan
- F17: Comparative Politics; Instructor: Margarita Estevez-Abe

Mean Evaluation across Semesters

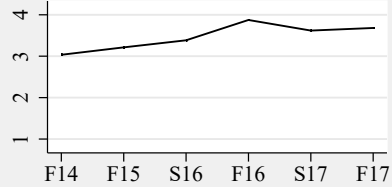
[1-4] higher the better



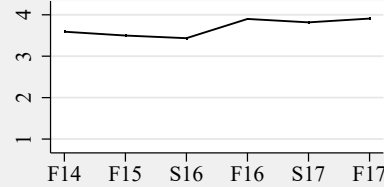
S15 is missing due to the lost of record; Students' self-evaluation excluded

Question Breaking Down

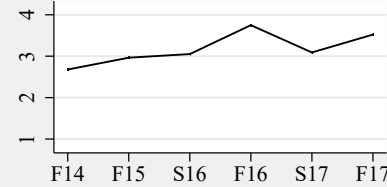
Q: TA was usually prepared for section



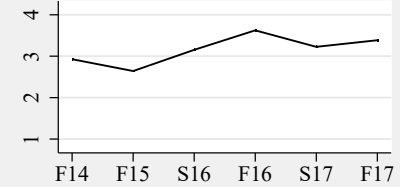
Q: TA was on time to class



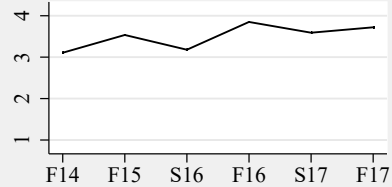
Q: TA seemed well organized



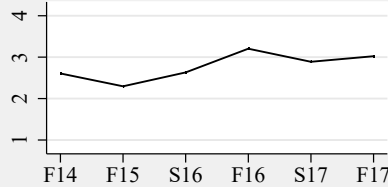
Q: Grading was generally fair



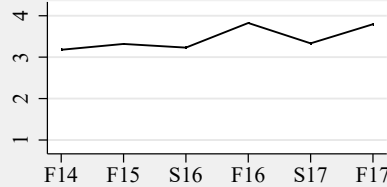
Q: Assignments were returned on time



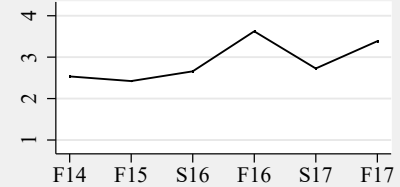
Q: Comments on assignments were useful



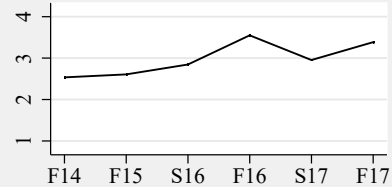
Q: TA seemed to enjoy teaching section



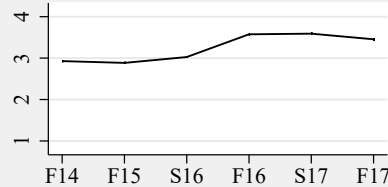
Q: TA helped to clarify the reading



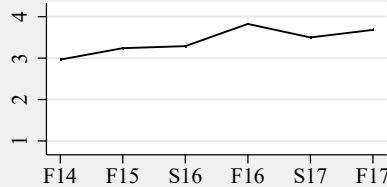
Q: TA helped prepare me for exams



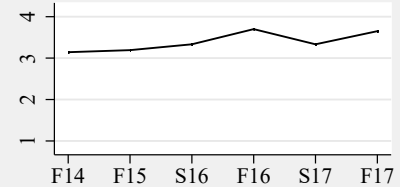
Q: TA encouraged student participation



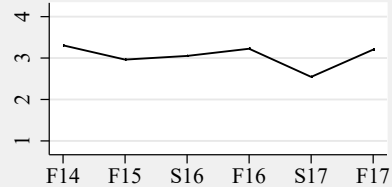
Q: TA showed respect for students' ideas



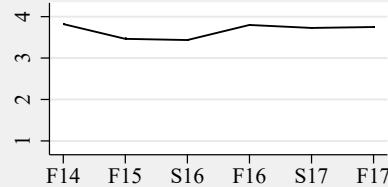
Q: TA was available to help students



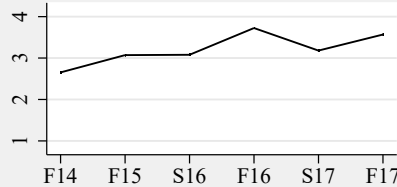
Q: I did most of the readings for class



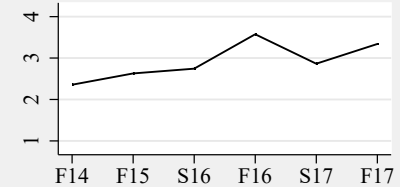
Q: I came to sections most of the time



Q: I felt comfortable approaching the TA



Q: I learned a lot in this section



S15 is missing due to the lost of record

Selected Comments from students

- Be clearer in exams
- Review the materials from the literature
- a little pride
- he knew a lot
- he just couldn't communicate the information
- difficulty of the material and readings
- (I like) his preparation for the lessons and his clarification of difficult reading materials
- helped me to work on my PSC research paper efficiently. Great TA!
- Videos were helpful to clarify
- The grading criteria is not straightforward
- Friendly and helpful especially with the final paper
- couldn't speak English that well
- knowledgeable and energetic
- very willing to help
- having troubles relating his lectures to class content
- connections to current events
- enthusiastic
- very constructive advice in writing my paper
- Unorganized; Grading inconsistent
- grading not necessarily fair
- I liked the enthusiasm of the TA and his genuine love for the subject and the caring of the students' knowledge of it.
- Take time to go over the most difficult topics - helpful; encourage participation
- Going over Problem sets question by question
- understood the materials and relayed information in different ways
- did not always get through everything

- Liked the group activities that we had its helped a lot;
- respond to emails timely
- funny, nice, dedicated
- I enjoyed the hands-on activities
- tough on grading
- Class exercises helped
- difficult to understand
- very good with making time to meet with students outside of class
- I liked the extra practice provided in sections
- He was clear about his expectation and was available during office hours
- Li Shao was very accommodating in making sure he was available for questions outside of class
- He has worksheets that explained concepts in readings
- He always answered questions in emails
- He explained things well and provided good notes
- difficult to understand
- very good with making time to meet with students outside of class
- I liked the extra practice provided in sections
- He was clear about his expectation and was available during office hours
- Li Shao was very accomadating in making sure he was available for questions outside of class
- He has worksheets that explained concepts in readings
- He always answered questions in emails
- I liked how Li always encouraged us to participate and how he really helped clarify the readings and helped us prepare for the exams
- Highlight parts of presentations/powerpoints that were most important
- He was puncture for class, very friendly, and always well prepared for class
- The TA was good at breaking down things we learned into terms easily relatable

- going over readings in depth analysis for tests
- Very knowledgeable and well organized
- How dedicated and passionate
- The class was interesting and incorporated current events
- Giving two long readings per week was a bit much especially since we couldn't really dive deep into each one
- always really enthusiastic about speaking and leading discussion helped to clarify the readings A LOT;
- was always on time
- TA takes time to explain concepts from lectures
- Li is Funny, related, but also very helpful and very smart/interested in the course material
- We got notes for each week, this will really help for finals
- The presentations helped me learn each week
- each discussion was a much needed renew of class for tests
- approachable and easy to clarify doubts
- The notes were in a format that were easy to understand
- He went into depth of the information we had already learned
- He explained the material really well and really helped me understand the class a lot better
- Reading clarification; preparing for exams
- availability for help
- excited to teach section
- (Li) did not just repeat lecture notes but rephrased and expanded them to help with learning
- how dedicated and passionate
- make sure students understand contents
- Section helped review key ideas from class

Selected Teaching Materials

This section includes following documents

1. The China Lecture arranged by the instructor in F17
2. Section Syllabus and Reading Guide for F17
3. Two quizzes for S17
4. A sample of student's note (as the discussant) in S17
5. Student warming-up form in F17
6. In-section presentation about umbrella movement in HK in F15
7. Three lecture slides for independent teaching in Summer 2018 (Political Analysis)
8. One sample of in-class exercise in Summer 2018
9. Final Exam of Summer 2018

Communist Party Leadership in China

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Department of Political Science
Maxwell School

Nov 29, 2017

Overview

- 1 The Party's Leadership
- 2 The Leadership of the Party
- 3 Xi's New Rule

The Party's Leadership

The Largest Party in the World: Population

- Up to 2016: **89.44 million**, one in every 15 Chinese;
- 22.89M Women; 31.11M younger than 40; 41.03M with college degree;
- Ranked #16 in the world population (between Vietnam and Germany)



The Largest Party in the World: Party Organization

- Government Party Organizations: 3,207(Provincial, City, Country)
- Street-Level Organization: 688K(Village, Township, City Blocks)
- Public Sector: 232K;
- State-Owned Enterprises: 189K;
- Private Enterprises: 185K;
- Social Organizations: 289K;

the Party Leads Everything! *Nonmenklatura*

- Government, Courts, Legislation
- Army: Party organizations built at the company level
- State-own Enterprises: Finance, Electricity, Railway, Oil
- Media, Publishers, Writers, Singers, Filmmakers
- Universities
- Religious Associations

the Party Leads Everything! *Nonmenklatura*

“No Communist Party, no Tathagata Buddha”



“Christian Church celebrates the Party’s 90th Anniversary”



The Top-Down Structure

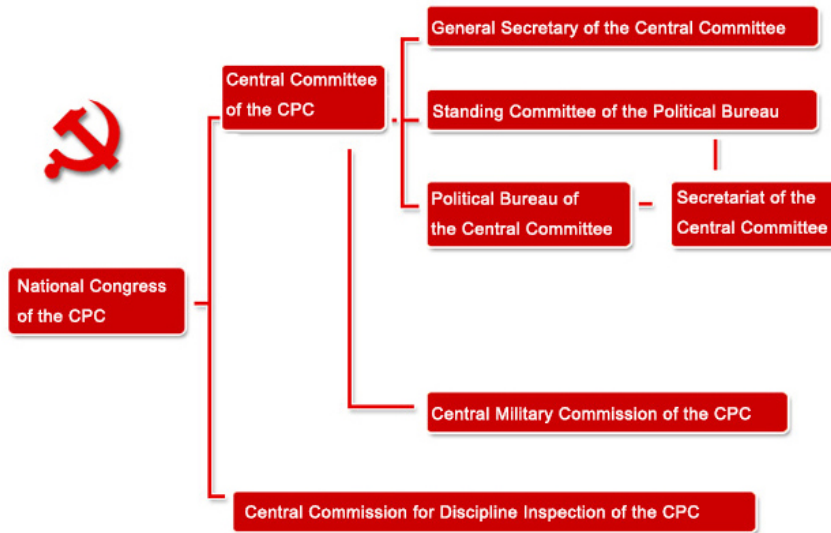
- A top-down hierarchical system – also the salary/welfare structure;
- allowing limited bottom-up input: *democratic dictatorship*, *consultative authoritarianism*(Stromseth et al. 2017; Truex 2014);
- Train Party cadres via political campaigns and Party schools(Lee 2015)
- How the Party select its cadres?
 - Meritocracy? (Education Degree, Age limit, Economy, Politics) (H. Li and Zhou 2005)
 - Factional Patronage? (Shih, Adolph, and Liu 2012)
 - or Both(Landry, Lü, and Duan 2017)

Very Brief History of the Party's role

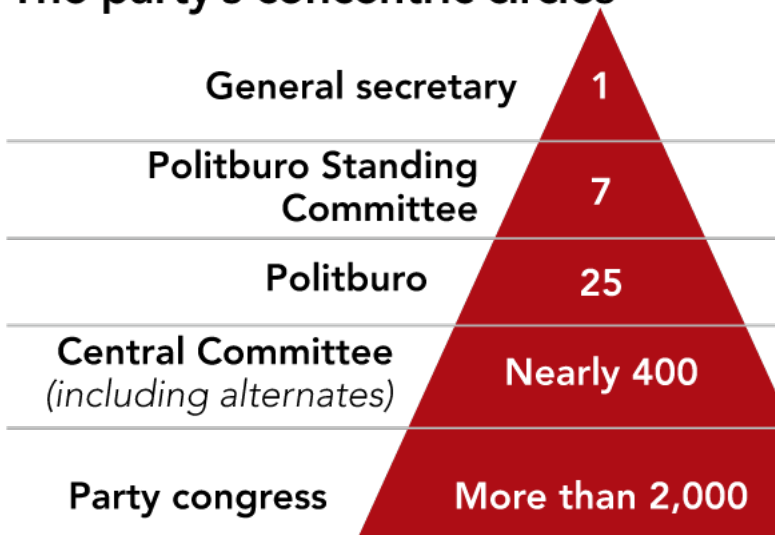
- **1949-1976** Communist Regime: the Party took power at every aspect of your life (totalitarian model)
- **1978-2012** Liberalization: the Party retreats, private sectors expanded; (the society becomes more autonomous)
- ***Xi Jinping's era*(post-2013):** “regain the leadership of the Party”
 - ① Party committees built in new NGOs and private companies;
 - ② In some private companies: requires a Party cadre to sit in the board;
 - ③ Harsher repression on social activists, freedom of press and civic lawyers;

The Leadership of the Party

Nominal Structure



The party's concentric circles



Standing Committee of the Politburo



- 1 The top leader(*Xi Jinping*): Party General Secretary; President of China, Chair of Central Military Committee;
- 2 Members take top functional positions of the Party and the state;
- 3 Every five years new members are selected into the committee; Every ten years the General Secretary and the Premier are changed;
- 4 Age limit: 68
- 5 The order of names = the power the cadres have;

Transition: First Two Generation

- Mao(1949-1976) to Deng(1978-1992)
 - 1 Mao died in 1976. A **mini coup** of *Deng's* supporters to repress the radicals(Gang of Four, including Mao's wife);
 - 2 *Deng* recovered his power in 1978, **stripping the power** of the nominal leader *Hua Guofeng* later and started the reform;
 - 3 *Deng* never became the head of the state or the Party (Except for the chair of Military Committee);
- Deng to Jiang(1989-2004)
 - 1 After 1989, *Deng* purged his own reformist disciple, *Zhao Ziyang*, and picked *Jiang Zemin*;
 - 2 In the 14th Party Congress(1992), *Deng* **hand-picked** *Hu Jintao* as the successor of *Jiang* to the Standing Committee;
 - 3 *Deng* retired 1992, after making sure the reform would be continued;



Transition: Third and Fourth Generation

- Jiang(1989-2004) to Hu(2002-2013)
 - ① *Jiang* retired from the positions of the state and the Party peacefully in 2002 and 2003, but remained in the Chair of Military Committee for an extra two years
 - ② His faction continued to be influential in the leadership, and *Xi Jinping* arrested a lot of his followers in the anti-corruption campaign;
 - ③ *Jiang* became popular Internet memes for his anecdotes and personality; [goo.gl/QYxqRR]
- Hu to Xi(2013-now)
 - ① *Hu Jintao* gave up all power to *Xi* in 2012 and 2013;
 - ② *Xi Jinping* was selected as the successor in the 17th Congress(2007);
 - ③ *Hu* had no old-revolutionary background and his power was weak, balanced by colleagues in the standing committee;



Xi's New Rule

Xi's Mid-Term Transition: 19th Party Congress(2017)

- In Xi's first term (18th congress, 2012-2017), he relied on *Wang QiShan*, the Party whip, to launch a massive anti-corruption campaign and strengthen his power;
- His power is believed to be strongest in the Party since Deng; and is still expanding;
- In the 19th Congress, **no successors(cadres younger than 58)** are picked into the standing committee;
- *Xi's* Theory is written into the Party Charter with his name; only *Mao* and *Deng* enjoyed this honor; before *Xi*, only *Mao* got it when he was still in power;



习近平任中共中央总书记中央军委主席 党的十八届一中全会产生中央领导机构

习近平同志主持会议并作重要讲话

新华社北京11月15日电 中国共产党第十八届中央委员会第一次全体会议，于11月15日上午9时在北京人民大会堂举行。习近平同志主持会议并作重要讲话。会议选举习近平同志为中共中央总书记，李克强同志为中共中央常委、国务院总理，张德江同志为中共中央常委、全国人大常委会委员长，俞正声同志为中共中央常委、全国政协主席，王岐山同志为中共中央常委、中央政法委员会书记。



习近平同志主持会议并作重要讲话 党的十八届一中全会产生中央领导机构

习近平李克强等中央领导同志参加会见出席党的 十八大代表、特邀代表和列席人员并发表重要讲话



习近平同志



人民日報頭版看中中共集權玄機

明報



2017年十九屆一中全會



2007年十七屆一中全會



1969年九屆一中全會

Conclusion

- The institutionalization of leadership transition is seen as a reason for China's authoritarian resilience, while it is never fully implemented; (C. Li 2012; Nathan 2003)
- According to Geddes' framework, China becomes more and more personalistic; (Geddes 1999)
- Xi may break the two-term ten years' rule in 2022, but even he doesn't, he may still remain as powerful as *Deng*. The next transition of leadership remains **uncertain**.
- It is hard to reverse the liberalization process, while democratization is still dim; (Acemoglu and Robinson 2006; Boix 2003)

References I

- Acemoglu, Daron and James A Robinson (2006). *Economic Origins of Dictatorship and Democracy*. Cambridge; New York: Cambridge University Press.
- Boix, Carles (2003). *Democracy and Redistribution*. Cambridge studies in comparative politics. Cambridge, UK ; New York: Cambridge University Press. 264 pp.
- Geddes, Barbara (1999). "What Do We Know about Democratization after Twenty Years?" *Annual Review of Political Science* 2.1, pp. 115–144.
- Landry, Pierre F., Xiaobo Lü, and Haiyan Duan (2017). "Does Performance Matter? Evaluating Political Selection Along the Chinese Administrative Ladder". *Comparative Political Studies*, p. 0010414017730078.
- Lee, Charlotte P. (2015). *Training the Party: Party Adaptation and Elite Training in Reform-Era China*. Cambridge: New York : Cambridge University Press.
- Li, Cheng (2012). "The End of the CCP's Resilient Authoritarianism? A Tripartite Assessment of Shifting Power in China". *The China Quarterly* 211, pp. 595–623.
- Li, Hongbin and Li-An Zhou (2005). "Political Turnover and Economic Performance: The Incentive Role of Personnel Control in China". *Journal of Public Economics* 89 (9-10), pp. 1743–1762.

References II

- Nathan, Andrew J. (2003). "Authoritarian Resilience". *Journal of Democracy* 14.1, pp. 6–17.
- Shih, Victor, Christopher Adolph, and Mingxing Liu (2012). "Getting Ahead in the Communist Party: Explaining the Advancement of Central Committee Members in China". *American Political Science Review* 106 (01), pp. 166–187.
- Stromseth, Jonathan R. et al. (2017). *China's Governance Puzzle: Enabling Transparency and Participation in a Single-Party State*. Cambridge, United Kingdom ; New York, NY, USA: Cambridge University Press. 343 pp.
- Truex, Rory (2014). "Consultative Authoritarianism and Its Limits". *Comparative Political Studies*, p. 0010414014534196.

PSC 123 Fall 2017

Intro to Comparative Politics Section Survival Guide

My Name: Li Shao, Email: lishao@syr.edu

Office Hour: Mon 4pm-6pm, send an email before you come

Office Location: Eggers 042, Underground TA Bay

***Please remember the information above or penalty will find you!!!**

1. Attend lectures, take notes, and make sure you understand the important points of the slides (They are available on Blackboard);
2. **Attend Sections** – I will take attendance (10% of your total grade). You have to send an Email to me with doctor's notice or Sport team obligation to excuse your absence. The other 10% will be determined by my impression of your section performance. **(i.e. Requirement 3-7).**

Our study goal:

1. To understand the basic theories of Comparative Politics;
 2. To learn the comparative perspective;
 3. To learn to process intensive and rigorous knowledge;
 4. To think and analyze like an educated citizen;
3. **Reading:** Finish all required readings (available on Blackboard) before the lectures and sections, bring a copy of the weekly readings with your notes. There won't be a written quiz, but **you need to demonstrate your effort on the reading in the discussion.** Otherwise you will lose your participation points. You don't have to understand the reading perfectly, but you need to do it and try to understand it. We will talk about how to do this later in the semester.
4. **Participation:** In the section, we will mainly discuss the weekly readings and go through the important points of the lectures. The main format is that I ask questions, and you try to answer. **Our goal is to make sure we could articulate the main ideas by our own language in an unambiguous way.**

This semester I will try a new method, **the mic rule**, to encourage your participation.

1. At the beginning of the class, I will randomly pass a "mic" to one of you.
2. I will ask questions and you need to answer.
3. If you finish your answer, or you do not want to answer it, you need to pass the "mic" to the student next to you.
4. Only those who have a mic could talk. You can voluntarily ask for the mic.
5. You cannot pass the mic back to the person who passed it to you.
6. It does not matter whether your answer is right, but you need to show your efforts of study and think.

5. If you don't want to bring the entire paper, you need to bring a very extensive note of the readings, including their main arguments, major evidence, flow of argumentation, the citation that confirms your understanding of the reading, and questions you don't understand.

6. Electronic Device: I allow electronic device **only on notes-taking and reading-checking purpose**. I will use **the rule of horror** to regulate your usage. If you text, visit irrelevant websites or watch videos, I will drop your participation grade significantly with no notice.

7. Anyone asks my office hour and the location again will be punished. You can choose from either **taking 10% off from Participation Grade or sing a song to the entire class in a particular section**. If you ask my office hour after every section ends, it means you only have the former option. Of course, you can pre-empt this by volunteering to sing in the first few weeks.

8. After each test is returned, if you have questions/appeals about grading, **reach me (instead of the professor) within one week**. Appeals that involve less than 5% of the total grade will not be accepted to reconsider. After the first appeal, if you still don't like my grading, I will let Maria Laura to grade it. If you are still not satisfied, we will hand it to the professor to make the final call.

Intro to Comparative Politics Reading Guide

1. What do you need to know (For all articles and your exam answer, to some extent)
 - a. **Question:** what questions do the author(s) try to answer? What do they want to explain?
 - b. **Argument:** What is the answer? How are these answers presented in the most parsimonious way?
 - c. **Argumentation:** How do they get there? Why are the arguments convincing?
 - i. **Logic:** What is the underlying logic? Could you repeat it in your own words?
 - ii. **Evidence:** What are the empirical evidence (statistics, cases examples?)
2. **Structure** (for original research articles)
 - a. Introduction (Everything is included)
 - b. Literature Review, what does the previous literature say? (Important if you are not familiar, but most of the time should skim through)
 - c. Theory (What is the author's answer?)
 - d. Analysis (What are the pieces of evidence?)
 - e. Discussion/Conclusion
3. **Method**
 - a. Do not read with no preparation.
 - b. Do not read word by word without thinking.
 - c. Read the titles, subtitles and itemized sections to get a general idea of the piece.
 - d. Carry the **structure** in mind.
 - e. Carry the mission to look for **arguments** and **argumentation** in mind.
 - f. Take notes/highlight key points.

1. True or False

- 1) Hobbes argues that justice and injustice do not exist in the state of nature since there is no common power and no law.

- 2) Hobbes argues that the biggest cause of the fights between people is the inequality, which provokes contempt and envy.

- 3) Hobbes argues that if people want to live under peace and harmony, then they should give up their right to govern themselves and authorize a man or an assembly of men to rule with complete authority.

- 4) The concept of nation-state tells us that most countries in the world have only one nation.

- 5) The state that Hobbes describes is a theocratic state.

2. Multiple Choices

1) In Weber's definition of state,

- a. The state is the agency that tax people;
- b. Ordinary people do not have the right to exert violence;
- c. The state follows the willingness of dominate class who owns properties;
- d. The state is independent from the social actors;

2) Who will agree with Hobbes' theory of the state?

- a. Olson
- b. Weber
- c. Marx
- d. Lennon

3) According to Marxist, Trump is building a wall across the U.S.-Mexican border mainly because_____

- a. He wants to do something for the unemployed in the rustbelt;
- b. He wants to protect the safety of Americans;
- c. He tries to protect the interest of businessmen in U.S.;
- d. Mexicans do not belong to the American nation featured by Anglo-Saxon white culture.

1. True or False

- 1) Schmitter and Karl add two procedures to the list proposed by the political scientist Theodore Lowi. Lowi's list of procedural minimal conditions for democracy to exist comprises what he calls "polyarchy".

- 2) By definition, we know that Democracies have less corruption than authoritarian regimes.

- 3) It is expected that not all citizens will take an active and equal part in politics in different democracies. What is important is that they have legal access to do so.

- 4) Democracy functions by the contingent consent of politicians acting under conditions of bounded uncertainty.

2. Multiple Choices

- 1) When former scholar defines democracy as a polyarchy, which is not true in its procedural definition?
 - a. Elected officials control government decisions
 - b. Freedom of Expression should be protected
 - c. Citizens should have the right to form independent political parties
 - d. All citizens have the right to vote in the election

- 2) Which case is an example of direct democracy?
 - a. Warren silenced in the Senate
 - b. Britain quits EU
 - c. French Revolution to overthrow the King
 - d. South Korean President promises to step down because of massive protest

- 3) Which one distinguishes totalitarian regime from authoritarian one?
 - a. Whether you can choose your spouse
 - b. Whether you are safe to criticize the government
 - c. Whether there is a dictator
 - d. Whether the ruling party has an ideology

Christopher E
Maysam S
Sarah B
Matti G
Discussion Notes 4/26

Ethnicity and Politics

Concepts and Theories

What is ethnicity?

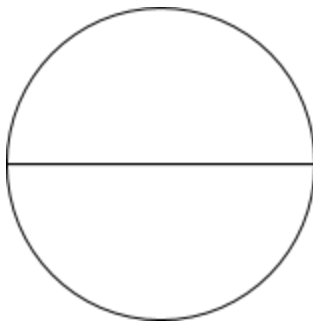
This concept of ethnicity can be defined in a number of different ways. However it is defined, it is a compelling motive for many conflicts and alliances. Its impact on politics is immeasurable.

- Primordialism
 - Blood ties, you are born with an ethnicity and it is immutable
- Constructivism
 - Ethnicity can change from context to context
- Instrumentalism
 - Ethnicity is a choice that is made to further one's personal goals
 - Ex: Identifying as Irish Catholic to get elected in Boston

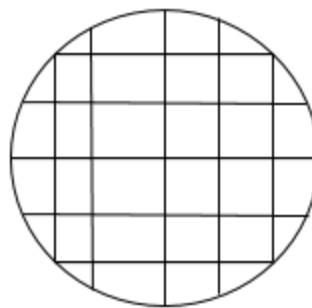
Why ethnic violence?

- Age old rivalries
 - There are rivalries that have gone back generations
 - There are moments of peace and of violence between these groups
- Overlapping social cleavages

Overlap

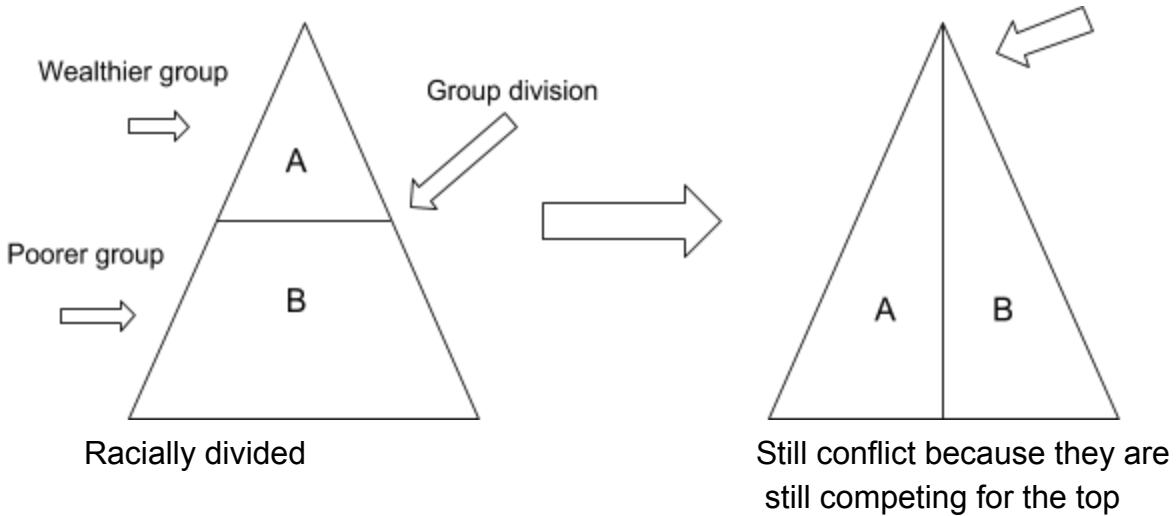


Cross Cutting

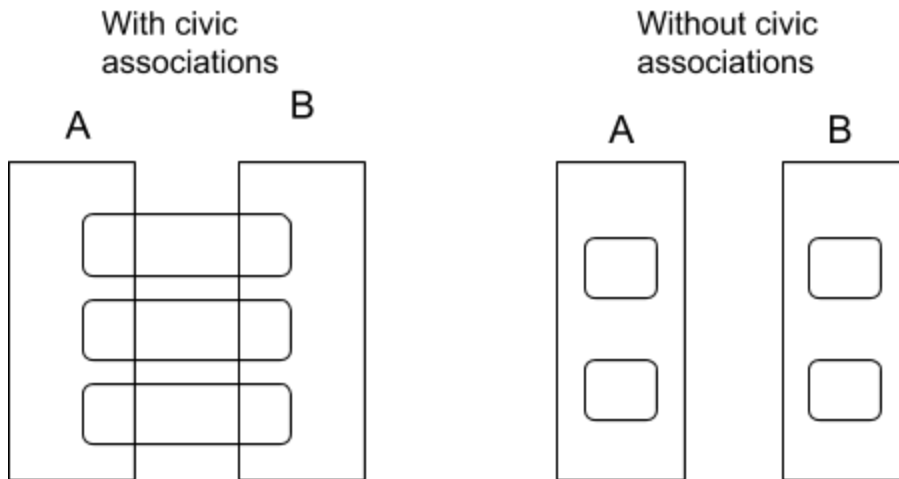


- Economic competition

- Conflict only over scarcity of sources



- Extractive resources
 - Oil, diamond
 - Who has ownership of these natural resources causes conflict
 - Also those who don't reap the benefits are upset, so there is conflict which could lead to them revolt
- Low civic associations
 - The absence of civil associations leads to more ethnic conflict



- Civic associations allow people to get to know each other and realize that they have more in common than they thought they did, thus leading to ethnic peace
- Limitation: violence will happen between A and B eventually which will lead to them being divided in the second visual

- Elite manipulation
 - Elites manipulate the masses
 - Lower class will revolt
 - Elites benefit from ethnic violence
- Deficient institutions*
 - A collapse of the state happens and then institutions break down
 - The institutions after being broken down cannot protect others
- Security dilemma*
 - In the absence of an institution, everyone who feels insecure does something to protect themselves (Ex: buy a gun for protection)
 - This escalates to everyone being armed
 - Leads to a spiral of violence when everyone has guns
- Commitment problem*
 - People cannot/will not tell their neighbors “This gun isn’t for you, it is just for my protection”
 - There is no trusting commitment
 - Leads to conflict

How to Solve Ethnic Conflicts

- International Intervention
 - UN
 - Limitation: has to be neutral, has to prioritize certain issues over others, if someone within decision making committee vetoes then they can’t follow through with that certain action
- Regional solutions
 - NATO
 - Regions decide a solution
- Partition/secession
 - Divide the area - people can move from side to side but there is a buffer between them
 - Irredentism
 - Limitation: Moving means giving up ancestral ties and most people don’t want to do that
 - The new divisions of people will then find something else to fight over
 - New divisions will come about and they will be based upon more minor differences
- Cooperative solutions

- Consociational institutions/power-sharing
 1. Grand Coalition of Ethnic Groups - everyone, all minorities represented within the government
 2. PR
 3. Cultural Autonomy - different language schools, places for people of all religions to practice
 4. Minority Veto - minorities can veto lawmaking
- ★ Best solution for deeply ethnic/ deeply divided society

Questions:

- 1.) Which of the three concepts of ethnicity do you find most compelling? Why?
- 2.) What theory/theories of ethnic violence do you think are the most prevalent in the US today?
- 3.) What theory/theories of solving ethnic violence do you think would be most effective in the US?
- 4.) Who benefits from ethnic violence?

Summary

This week in class we talked about ethnicity, with a general focus on ethnic violence and how to solve it. We looked at numerous reasons for how these ethnic conflicts came about, and tried to understand why they can be so difficult to resolve. During lecture we learned that sometimes a resolution isn't always the goal, and that some groups benefit from ethnic violence within a country. This is often seen with the elite groups gaining more power over minority groups in a country because they're able to manipulate the masses. Since it's so difficult to resolve these issues, there have been multiple ideas put forth in order to do so. Each ethnic conflict is vastly different from another, which makes it hard to decide which solution to try and implement. As we saw with the partition of India, these "solutions" also run the risk of intensifying the conflicts, and creating even more violence. Over ten million people were displaced when it was decided to make two independent nation states: Hindu-majority India and Muslim-majority Pakistan. This made tensions rise rapidly and an estimated total of over one million people were killed. With cases like India and Pakistan, it is important to analyze the effect that colonization had on the conflict. The disparity between the Hindu and Muslim populations was created by Great Britain in response to the ousting of their rule in India. In this case, Great Britain benefited from the weakening of both these populations by pitting them against each other.

PSC 123 Fall 2017

Day 1 Interview

NAME of INTERVIEWER _____

NAME of PERSON INTERVIEWED _____

CLASS YEAR: Freshman Sophomore Junior Senior

MAJOR(S)/PROSPECTIVE MAJOR(S): _____

MINOR(S) _____

ZODIAC _____

1. What is Comparative Politics? After the first lecture, does it change your understanding of this subfield? (You could work with your partner to answer it)

2. What are your career plans for “life after SU”? In other words, what do you want to do when you grow up? What do you think Comparative Politics could help you?

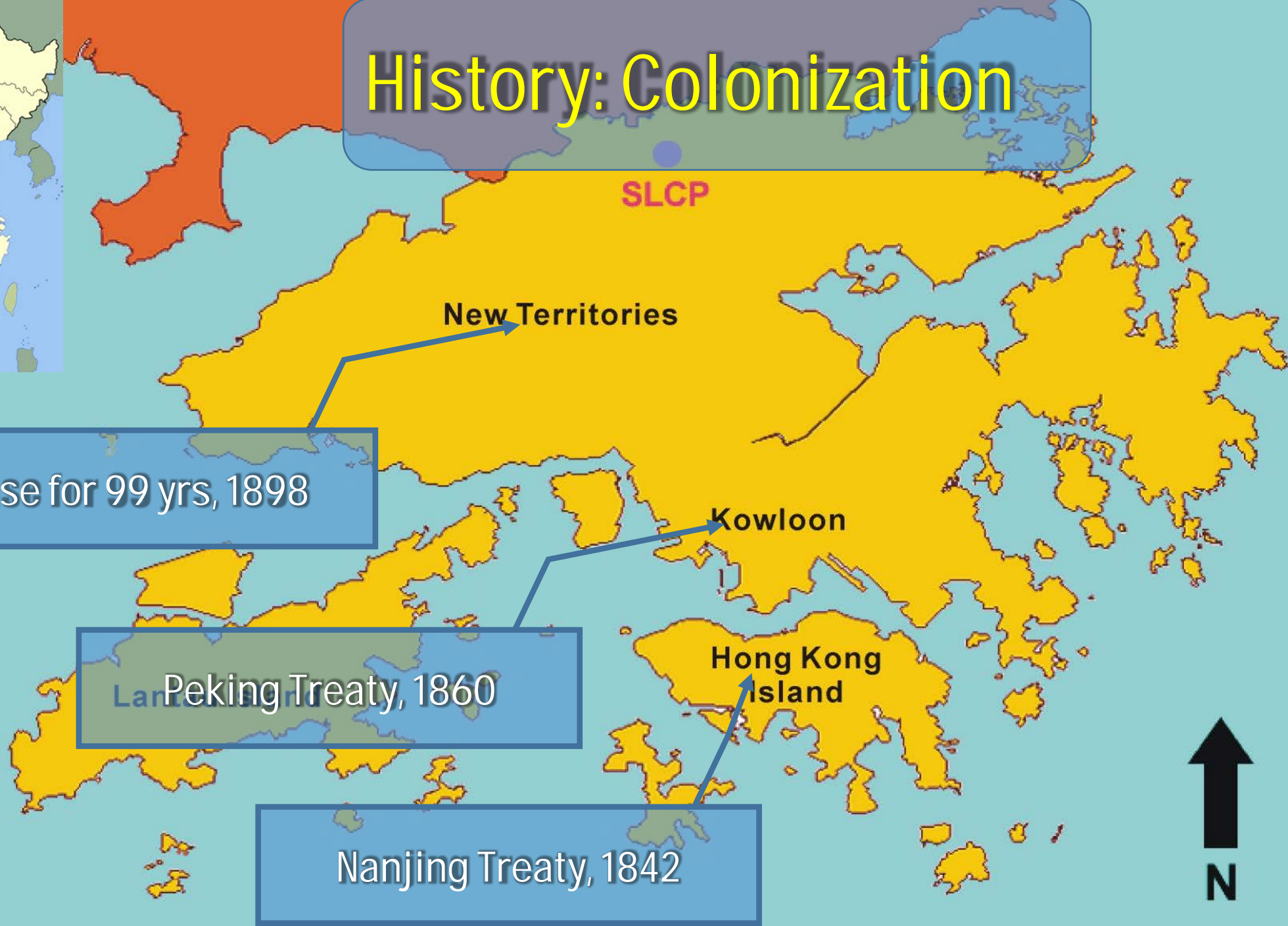


Umbrella Revolution

Protest in Hong Kong

- 
- A person wearing a black t-shirt with a white graphic, goggles, and a white face mask is standing in a city street. They are holding two black umbrellas, one in each hand, raised high. Water is being sprayed from a high-pressure hose onto their chest and arms. The background shows tall buildings and a hazy, blue-tinted atmosphere. The overall scene suggests a protest or a demonstration.
1. Why in HK?
 2. Why now?

History: Colonization



History: Hong Kong Returns

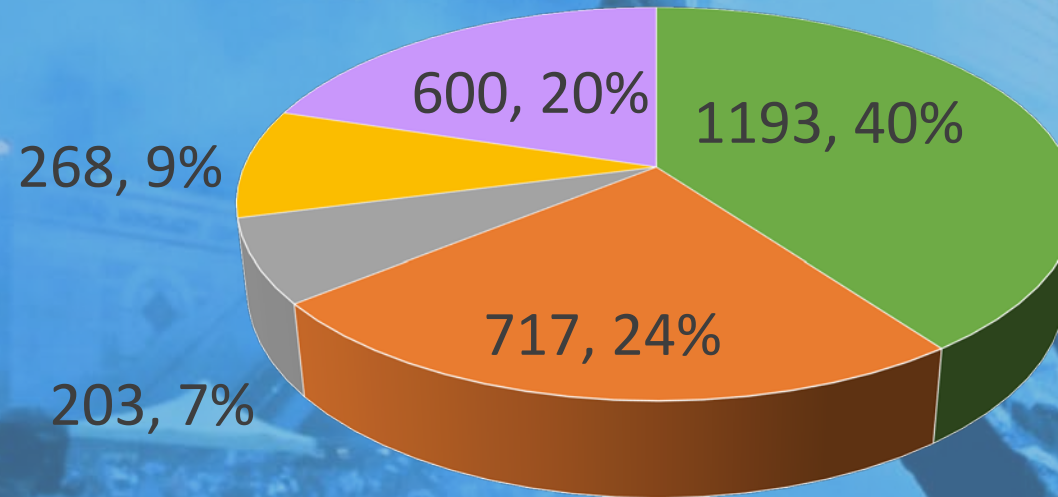
- 1984: China-UK Agreement
- 1990: Basic Law
 - Keep Independent political structure for 50 yrs
 - Universal suffrage for Legislative
 - Universal suffrage for Chief of Executive;
 - Candidates should be nominated by a representative committee
 - People's Congress holds amendment power
- 1997: HKSAR Established

People's Congress in China

- Legislative Institution
- Nominally holds the supreme power in China
- NPC Standing Committee



Members Components in National People's Congress 2013



- Bureaucrats in the Party and government
- Entrepreneurs of public and private firms
- Workers, Peasants, immigrant workers
- Soldiers
- Intellectuals, Experts, Engineers, Armed Police and other

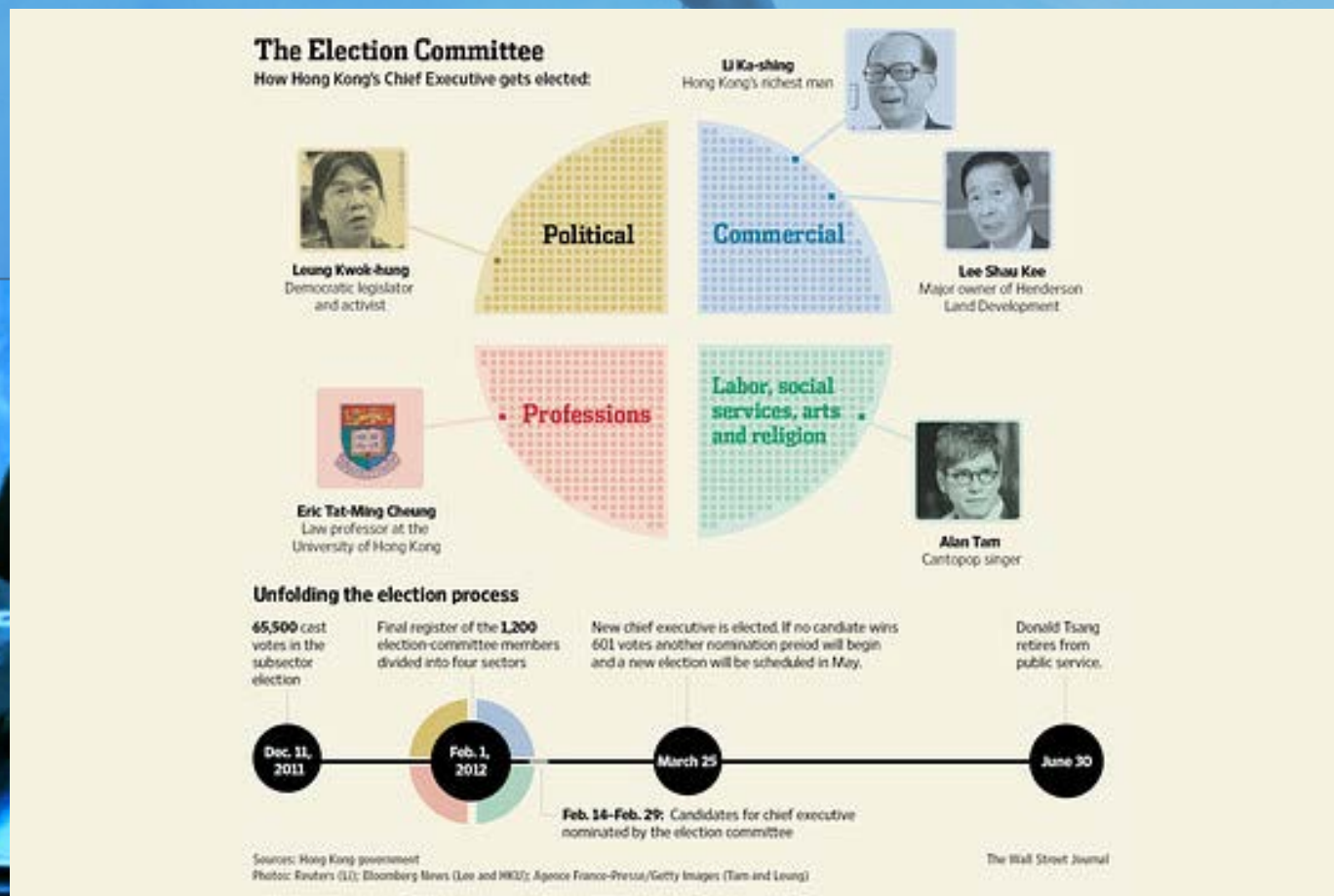
Pre-HKSAR: non-democratic

- Chief Executive: Governor sent by U.K.
- Legislative Election: started at 1985
- Local Election: started at 1982



Pre-2017

- Chief elected by a 1,200-member committee
- 1/8 members nomination



NPC's Plan on 2017

- Universal Suffrage
- Nominated by the committee, ½ threshold
- Only 2-3 candidates
- Guarantee a chief that “loves China and HK”
 - Pro-Beijing vs. Democrats
 - Functional Constituency

Communist Party's worries

- Democrats supported by major population (Image if U.S. cancels the electorate college)
- National Security
 - Article 23 movement, 2003
 - Annual commemoration on 1989





Reaction in HK

- Pro-Beijing: supportive; “Keep it to pocket first”
- Democrats: Multiple styles of nomination;
 - By citizen;
 - Less threshold in the committee;
 - By congressmen;



- 
- A person in a black t-shirt, goggles, and a mask, holding two umbrellas, with water being sprayed on them in a city street. The scene is filled with smoke and debris, suggesting a protest or riot. The person is wearing a black t-shirt with a white graphic and the word "SERIOUS" visible. They are holding a black umbrella in their right hand and a black umbrella in their left hand. Water is being sprayed on them from the left. The background shows tall buildings and a street with debris.
1. Why in HK?
 2. Why now?

Aug 31th, NPC made decisions

- The movement started by students;
- "Occupy central" joined



Why it is not good?

- Too demanding
- Ineffective
 - Disturb social order
 - Economic loss
 - Communist Party will not compromise
 - Even succeed...then democratic?



What are the causes

- Economic development—demands for democracy
 - Democratization theory/cultural change
- Conservative Decision by Communist Party
 - China's political system
- Mobilization by activists (students)
 - Social movement theories, conditions fulfilled
- History matters
 - (laws, incidents, memories)...

PSC 202

Introduction to Political Analysis

Lecture 4

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May 24, 2018

Goals

- 1 Understand what is measurement, can figure out measurements for some concepts (applications)
- 2 Assess the quality of measurement by using the concepts of validity, reliability, systematic errors and random errors;
- 3 Recognize three types of variables and identify the type when see one;
- 4 Describe a variable by its central tendency and dispersion;
- 5 Find mean, median, mode of a variable;
- 6 Learn to describe dispersion by look at the graph: high, low, unimodal, bimodal, positive skew, negative skew;

Measurement

Measurement

- 1 “The operationalization of the theory”; abstract concepts → real world
- 2 Example: how to measure the level of support to President Trump?
- 3 Trump thermometer [0-100]

ANES - Feeling Thermometers

I'd like to get your feelings toward some of our political leaders and other people who are in the news these days. I'll read the name of a person and I'd like you to rate that person using something we call the feeling thermometer. Ratings between 50 degrees and 100 degrees mean that you feel favorable and warm toward the person. Ratings between 0 degrees and 50 degrees mean that you don't feel favorable toward the person and that you don't care too much for that person. You would rate the person at the 50 degree mark if you don't feel particularly warm or cold toward the person. If we come to a person whose name you don't recognize, you don't need to rate that person. Just tell me and we'll move on to the next one.



Measurement

- 1 Sometimes we can have multiple measurements to the same concept / variable
- 2 Example: how to measure democracy?
- 3 Przeworski et al. (2000) [0,1] Freedom House[1-7]; Polity Score[-10,10];

The Quality of Measurement

- 1 Example: how to measure political trust in China?
- 2 Validity: extent to which a measurement tool measures the intended concept with accuracy
- 3 If the measurement tool consistently mismeasures, we say the **systematic error** is high;
- 4 The ruler example: the scale is wrong;

The Quality of Measurement

- 1 Reliability: the extent to which a measurement tool measures a concept consistently;
- 2 Random error: the measurement tool produces errors that are unpredictable and erratic;
- 3 When random error is large, the reliability of a measurement is low;
- 4 The ruler example: the estimation;

Assess the Quality

- Let's go back to Trump thermometer:

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Assess the Quality

- 1 Let's go back to Trump thermometer:
- 2 what if people hide their support to Trump?

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Assess the Quality

- 1 Let's go back to Trump thermometer:
- 2 what if people hide their support to Trump?
- 3 what if people have different standards on the 100 scale?

ANES - Feeling Thermometers

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Practice: assess the quality of measurement

- 1 If we want to know American citizens view on abortion and only survey residents in the city of Syracuse;

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Practice: assess the quality of measurement

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Practice: assess the quality of measurement

- 1 If we want to know American citizens view on abortion and only survey residents in the city of Syracuse;
- 2 Investigate freedom of expression in Russia, 90% of news agencies said they have enough freedom;
- 3 Voting: how many elections you have attended in the past ten years?
- 4 Drug: how many times do you take drugs in the last year?

Practice II: Gadarian (2014)

- 1 How does the author measure Republican and Democrat approvals by using the NES survey?

Practice II: Gadarian (2014)

- 1 How does the author measure Republican and Democrat approvals by using the NES survey?
- 2 How does the author measure Bush approval in her experiment?

Variables

Types of variables

- 1 Nominal(categorical): no order could be found; the numbers do not have meanings; Nationality, Religiosity, Disciplines in universities;
 - 2 Ordinal: have order, while the intervals between values are not even and unknown; “Frequency of reading a newspaper”
 - 3 Interval: equal intervals between values; Age, Income, GDP per capita
- ...

Example of a dataset

a “tidy” data frame: each row is an observation; each column is a variable

Table: A typical dataset of survey

Obs	Ideology	Party	State	Income
1	3	1	24	13.8K
2	5	0	13	15.2K
3	7	0	45	3.8K
4	1	1	7	8.6K

Example of a Codebook

- ① Respondents are randomly selected in the entire U.S.
- ② Self-Reported Ideology: 1-7; 1: Extremely conservative, 7: Extremely liberal;
- ③ Party Membership: 0, democrats, 1, republicans;
- ④ State: 1, Akansas, 2, Arizona ... 51: Washington D.C.
- ⑤ Income: annual income based on tax file;

Table: A typical dataset of survey

Obs	Ideology	Party	State	Income
1	3	1	24	13.8K
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Describe a Variable by Graphs

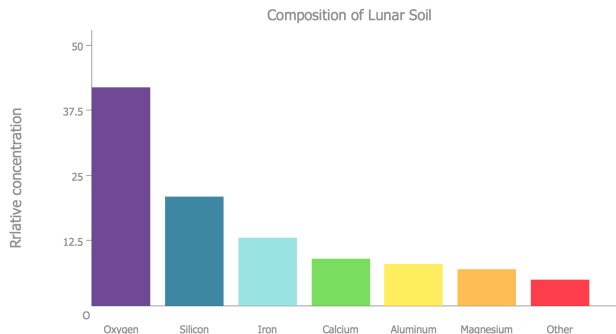
- 1 The first method is to use a graph
- 2 Interval / Ordinal Variables : histogram
- 3 Categorical : bar chart



Figure 6

Describe a Variable by Graphs

- 1 The first method is to use a graph
- 2 Interval / Ordinal Variables : histogram
- 3 Categorical : bar chart

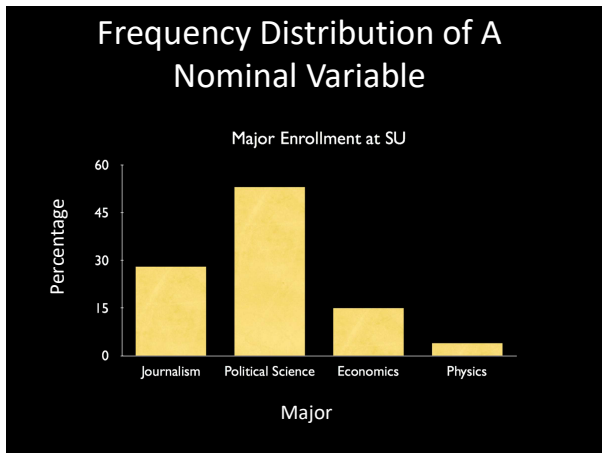


Describe a Variable by Statistics

- 1 The second method is to use statistical indicators, central tendency and dispersion
- 2 We use *mode*, *median* and *mean* to describe central tendency;
- 3 We use *number of modes*, *skewness* and *standard deviation* to describe dispersion;

Central Tendency I: Mode

- 1 most common value, best use for categorical variable ← nominal, ordinal, interval can all be used



Central Tendency II: Median

- 1 middle point of a distribution (the point of 50%), best use for ordinal
- 2 When the skewness of an interval variable is serious, we can also use the median to describe its central tendency;
- 3 Consider this: five people, in Country A, one earns 1 million, the other four earn 10K for a year; in Country B, all earns 10K for a year;

Central Tendency II: Median

Table: Finding the Median: Religious Service Attendance

Attendance	Frequency	Percentage	Cumulative %
Every Week	528	22.8	22.8
Almost Every Week	239	10.3	33.1
Once or twice a month	323	13.9	47
A few times a year	339	14.6	61.6
Never	887	38.3	100
Total	2,316	100	

Central Tendency III: Mean

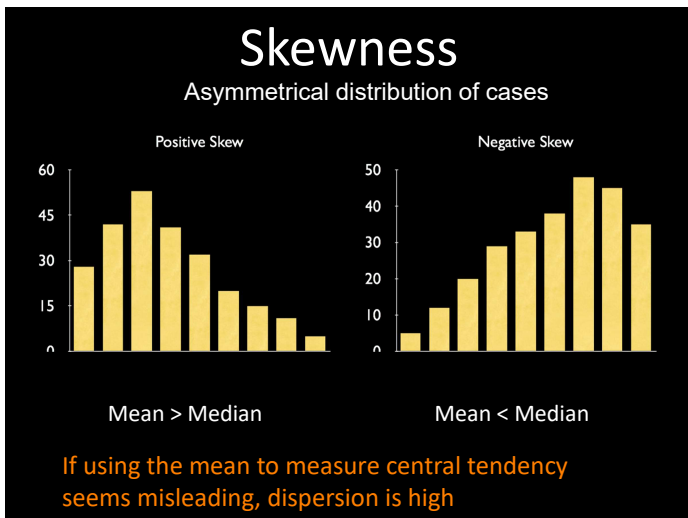
Mean: arithmetic average \rightarrow ordinal (if many values), interval;
To an variable x with n values, if each value in the variable is denoted as $x_1, x_2, \dots, x_{n-1}, x_n$ and the mean is denoted as \bar{x} , then we have:

$$\bar{x} = \frac{x_1 + x_2 + x_3 \dots + x_{n-1} + x_n}{n} \quad (1)$$

Dispersion

- number of modes (unimodal, bimodal) – how many peaks?
- skewness (positive, negative)
- standard deviation (will discuss later)

Dispersion: Skewness



Dispersion: High or Low?

High vs. Low Dispersion

High Dispersion

Cases evenly spread across values. No clear mode.

or

Multi-modal. Mode and median split apart.

Mean is not typical due to skewness or multi-modality.

Low Dispersion

Cases clustered around mean or median value

and

Single-peaked (unimodal)

Mean is typical

Read Wedeen (1999) and Fenno (1986)

- 1 How do the authors collect data?
- 2 What is the main finding of Wedeen (1999)?

[entry]nyt/global//global/global

PSC 202

Introduction to Political Analysis

Lecture 12

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Department of Political Science
Maxwell School of Citizenship and Public Affairs
Syracuse University

June 12, 2018

Goals

Goals

- 1 Understand the concepts of observation, sample and population
- 2 Understand how to calculate means, and standard deviation
- 3 Understand what is normal distribution
- 4 Learn how to calculate z-score and interpret it

Basic concepts

Basic concepts

- ① *population*: the group of (people/countries/wars/revolutions) we want to study
- ② *sample*: the subgroup from which we collect data; the goal of statistics is to use the features of samples to estimate the those of the population; and we need to assess how reliable such estimation is;
- ③ *observation*: each data point in the sample; it is also usually the unit of analysis;

Mean and Standard Deviation

- 1 Mean and standard deviation are common tools to analyze variables within a sample;
- 2 Mean (μ): the average; To n cases in the sample, mean μ equals:

$$\mu = \frac{x_1 + x_2 + x_3 + x_4 \dots + x_n}{n};$$

- 3 standard deviation(σ): the amount by which a **typical** observation differs from the mean;

$$\sigma = \sqrt{\frac{(x_1 - \mu)^2 + (x_2 - \mu)^2 + (x_3 - \mu)^2 + \dots + (x_n - \mu)^2}{n}}$$

- 4 variance (σ^2): the standard deviation squared

Calculate the Standard Deviation

$$\sigma = \sqrt{\frac{(x_1 - \mu)^2 + (x_2 - \mu)^2 + (x_3 - \mu)^2 + \dots + (x_n - \mu)^2}{n}}$$

- 1 Calculate the mean. Sum up all n values and divide by n .
- 2 Find deviations from the mean by subtracting the mean from each value.
- 3 Square each mean deviation.
- 4 Sum up the squared deviations and divide by N . This is the variance.
- 5 Take the square root.

Understand Standard Deviation

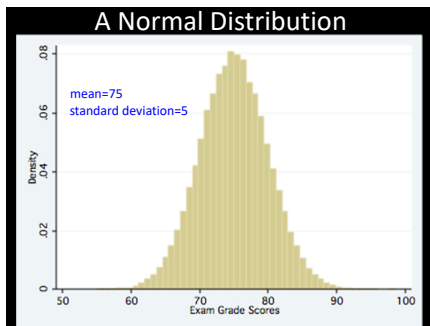
$$\sigma = \sqrt{\frac{(x_1 - \mu)^2 + (x_2 - \mu)^2 + (x_3 - \mu)^2 + \dots + (x_n - \mu)^2}{n}}$$

- 1 For each observation, calculate the distance between the mean and itself; (i.e. $(x_1 - \mu)$)
- 2 Since the results could be positive or negative, but distance can only be positive, so we use square and square root to make them positive;
- 3 The total “distance” divided by number of observation (n) is like a “average distance” of each observation from the mean

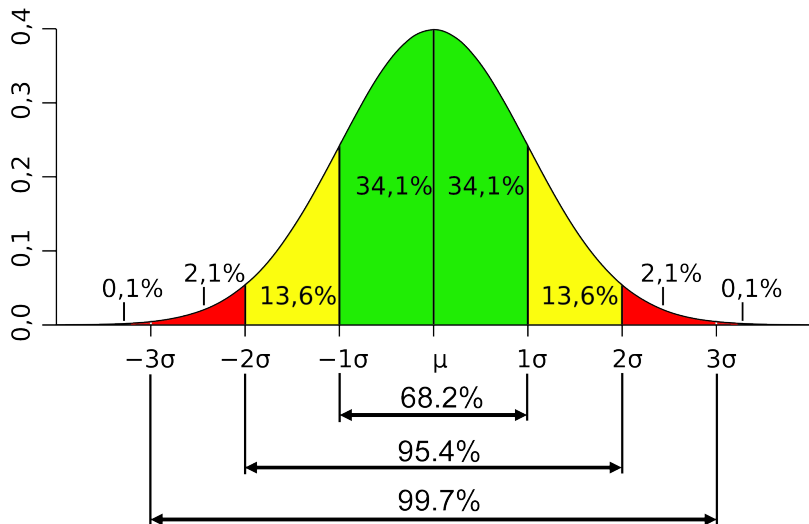
Normal Distribution

Normal Distribution

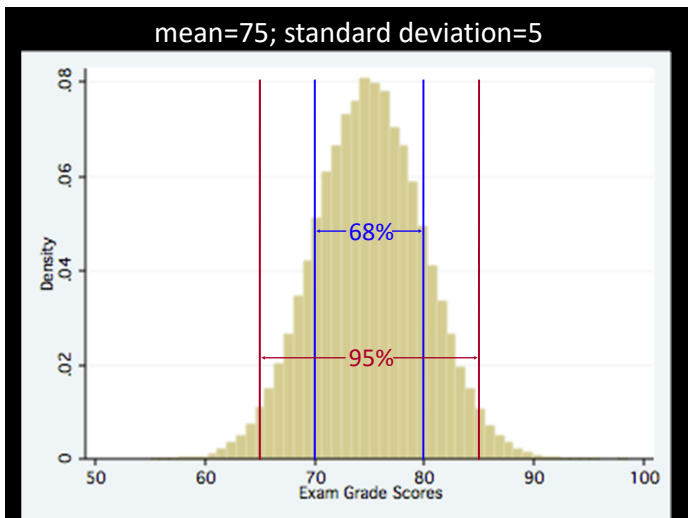
- 1 Properties of a normal distribution;
 - 1 Data cluster around the mean in a symmetric manner
 - 2 Density of the data decreases when moving away from the mean, making the “bell curve”
 - 3 Can be converted to standard normal distribution (Z scale)
 - 4 Can use it to determine how unusual a particular value may be;



The Proportion of Data Points in a ND



The Proportion of Data Points in a ND



Understand Normal Distribution

- 1 Normal distribution is a **model**, to approximate the distribution normally seen in the real world. e.g. height;

Remark

All models are wrong, but some are useful;

- 2 standard normal distribution: mean is zero, standard deviation is 1; “Z distribution”;
- 3 z score: A “standardized” value for each observation: it tells us how many standard deviations the observation is from the mean.
- 4 The sign(+/-) indicates whether the observation is less than or greater than the mean.

How to Calculate z-score

To an observation with value x ,

$$z = \frac{x - \mu}{\sigma}$$

Interpreting z-score

- 1 For each value of z-score (z), there is a corresponding value p to show the proportion of observations that fall above the given value of z ;
- 2 You can use Z Table (P.143, Pollock) to look up the relation between z and p ;
- 3 For negative values of z , p means the proportion of observations that fall below the given value of z ;

Example of z-score

- Suppose $x = 80$
- Find Z by subtracting the mean (75) and dividing by the standard deviation (5)
- $Z=1.00$
- Look on the Z table for $Z=1.00$

Example of z-score

Figure: z-score Example

Table 5-2 Proportions of the Normal Curve above the Absolute Value of Z

First digit and first decimal of Z	Second decimal of Z									
	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
0.0	.5000	.4960	.4920	.4880	.4840	.4801	.4761	.4721	.4681	.4641
0.1	.4602	.4562	.4522	.4483	.4443	.4404	.4364	.4325	.4286	.4247
0.2	.4207	.4168	.4129	.4090	.4052	.4013	.3974	.3936	.3897	.3859
0.3	.3821	.3783	.3745	.3707	.3669	.3632	.3594	.3557	.3520	.3483
0.4	.3446	.3409	.3372	.3336	.3300	.3264	.3228	.3192	.3156	.3121
0.5	.3085	.3050	.3015	.2981	.2946	.2912	.2877	.2843	.2810	.2776
0.6	.2743	.2709	.2676	.2643	.2611	.2578	.2546	.2514	.2483	.2451
0.7	.2420	.2389	.2358	.2327	.2296	.2266	.2236	.2206	.2177	.2148
0.8	.2119	.2090	.2061	.2033	.2005	.1977	.1949	.1922	.1894	.1867
0.9	.1841	.1814	.1788	.1762	.1736	.1711	.1685	.1660	.1635	.1611
1.0	.1587	.1562	.1539	.1515	.1492	.1469	.1446	.1423	.1401	.1379
1.1	.1357	.1335	.1314	.1292	.1271	.1251	.1230	.1210	.1190	.1170
1.2	.1151	.1131	.1112	.1093	.1075	.1056	.1038	.1020	.1003	.0985
1.3	.0968	.0951	.0934	.0918	.0901	.0885	.0869	.0853	.0838	.0823
1.4	.0808	.0793	.0778	.0764	.0749	.0735	.0721	.0708	.0694	.0681
1.5	.0668	.0655	.0643	.0630	.0618	.0606	.0594	.0582	.0571	.0559
1.6	.0548	.0537	.0526	.0516	.0505	.0495	.0485	.0475	.0465	.0455

Example of Exercise

- 1 A sample Of hourly income for lawyers have 5 values, 100, 600, 300, 400, 700. Calculate the standard Deviation of this sample.

Example of Exercise

- ① A sample Of hourly income for lawyers have 5 values, 100, 600, 300, 400, 700. Calculate the standard Deviation of this sample.

$$\mu = \frac{100 + 600 + 300 + 400 + 700}{5} = 420$$

$$\sigma = \sqrt{\frac{(100-420)^2 + (600-420)^2 + (300-420)^2 + (400-420)^2 + (700-420)^2}{5}} \approx 213.5$$

- 1 Assume that the mean and stand deviation are true for the entire population of lawyers. How rare is it to have an hourly income for 400? How rare to have it for 900?

- ① Assume that the mean and stand deviation are true for the entire population of lawyers. How rare is it to have an hourly income for 400? How rare to have it for 900?

$$z_{400} = \frac{x - \mu}{\sigma} = \frac{400 - 420}{213.5} \approx -0.09$$

$$z_{900} = \frac{x - \mu}{\sigma} = \frac{900 - 420}{213.5} \approx 2.25$$

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- ② We use this website to illustrate. http://onlinestatbook.com/2/calculators/normal_dist.html

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- ② We use this website to illustrate. http://onlinestatbook.com/2/calculators/normal_dist.html
- ③ When $z_{400} = -0.09$, $p(z \leq -0.09) = 0.4641$. Thus, There are 46.4% lawyers have income *less* than 400 dollars. (Less because of the negative sign!)
- ④ When $z_{900} = 2.25$, $p(z \geq 2.25) = 0.0122$; i.e. there are 1.22% lawyers have income higher than 900 per hour!

- 1 If there are 100,000 lawyers in the population, How many people will get the hourly income between 500 and 600?

- ① If there are 100,000 lawyers in the population, How many people will get the hourly income between 500 and 600?

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- ② When $z_{500} = 0.37$, $p(z \geq 0.37) = 0.3557$. Thus, There are 35.6% lawyers have income *more* than 500 dollars.

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- ① 4. How many lawyers will get the hourly income between 300 and 800?

$$z_{300} = \frac{x - \mu}{\text{sigma}} = \frac{300 - 420}{213.5} \approx -0.56$$

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- ② When $z_{300} = -0.56$, $p(z \leq -0.56) = 0.2877$. Thus, There are 28.8% lawyers have income *less* than 300 dollars.

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- ⑤ The number of lawyers is $100,000 \times 67.5\% = 67500$;

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PSC 202

Introduction to Political Analysis

Lecture 18

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June 21, 2018

Goals

Goals

- 1 Interpret the coefficients
- 2 Interpret the significance level
- 3 Make predictions according to the model

Marginal Effect Interpretation

- 1 The Model: $y = a + bx$
- 2 Marginal Effect: b One unit increase of x will cause b units increase/decrease of y , when other variables remain the same;

Prediction

- 1 The Model: $y = a + bx$
- 2 When we know an actual value of x , or actual values of x s, we use the model to predict y ;

An Example

- 1 Hypothesis: Across countries, greater democracy will be positively associated with higher levels of education in the population. What is the unit of analysis, x and y ?
- 2 Data
 - 1 YearsEduc: average years of education in the population (Barro-Lee)
 - 2 Democracy: scale from 0-10 (Polity dataset)
 - 3 Wealth: log GDP/capita, rescaled to run from 0-6 (Penn World Tables)
 - 4 OilProduction: barrels/person/day, ranges from 0 to 1.2 (BP Statistical Review)
- 3 Model:
$$\text{YearsEduc} = a + b_1 \cdot \text{Democracy} + b_2 \cdot \text{Wealth} + b_3 \cdot \text{OilProduction}$$

The Results

Table: Regression Results

Variable	Coefficient	Standard Error	t	p
Intercept	1.35	0.43	3.11	0.002
Democracy	0.15	0.06	2.4	0.018
Wealth	1.4	0.15	9.28	0.000
OilProduction	-2.93	0.43	-6.81	0.002

Questions

- 1 What is the partial effect of Democracy?
- 2 What is the predicted education level for a country that is rated 10 on Democracy, 4 on Wealth and 1 on OilProduction?
- 3 How much is education predicted to differ in two countries that are identical except that one is 3 units higher on wealth?

Interpret Significance

- 1 Interpreting coefficients also needs to interpret its level of significance, i.e. whether it is significantly different from zero.
- 2 To a coefficient β_0 , the null hypothesis is that the coefficient has no difference from zero. The alternative hypothesis is that it equals to value we estimated.
- 3 Similarly, we treat the coefficient as the “mean”, and use the standard error to calculate its p-value or confidence interval.
- 4 the rule of thumb and the theories of t-distribution can still applied here.

Interpret Significance

- 1 If we can reject the null hypothesis, we will accept the alternative hypothesis. We have sufficient evidence to show that β_0 equals the value estimated from the formula. Then, we are confident that y and x have association, and the change of x will change y .
- 2 If we cannot reject the null hypothesis. We have not enough evidence and confidence to tell that β_0 is different from 0. Then, we do not have enough evidence to show the association between y and x .
- 3 significance interpretation has nothing to do with the sign of the coefficient

Exercise

Part I. Regression Analysis

Professor Strange uses multiple regression analysis to study what factors account for variation among Olympic weightlifters. The dependent variable, Competition, is the total number of weightlifting competitions an athlete enters during the year. There are several independent variables that are hypothesized to affect the number of times an athlete competes. Steroids is measured on a scale from 0 to 4, with higher values meaning greater steroid usage. Nutrition ranges from 0 to 10, with higher values corresponding to healthier eating patterns. Finally, Coach is a dichotomous variable that equals 1 if the athlete has a coach and 0 otherwise. The regression equation is presented below:

$$\text{Competition} = a + b_1 \cdot \text{Steroids} + b_2 \cdot \text{Nutrition} + b_3 \cdot \text{Coach}$$

Table of regression coefficients:

Variable	Coefficient	Standard Error
Intercept	1.0	0.4
Steroids	2.0	0.8
Nutrition	1.5	1.0
Coach	-0.5	0.7

$R^2 = .63$

1) According to these estimates, what is the effect of steroids on the total number of competitions an athlete enters? Explain this in a way that would be understood by someone unfamiliar with regression.

2) Suppose an athlete is rated at 3 on the steroid usage scale, 2 on the nutrition scale, and has a coach assisting them during training. What is the predicted number of competitions she will enter?

3) A Russian weightlifter is rated 3 on the nutrition scale while a Chinese weightlifter is rated at 7. The athletes are identical in other respects. What is the predicted difference in the total number of competitions they will enter?

4) Which of these four coefficients are statistically significant at the .05 level?

Name:

SUID:

PSC202 Summer 2018 Final Exam (100 points, 10 points bonus)

1. Suppose that approval of Congress is measured on a scale from 0 to 100, with higher numbers meaning higher approval. Assuming that these approval ratings have a normal distribution in the American population with a mean of 32 and a standard deviation of 8, answer the following questions: (20 points)

- (a) What percentage of people give Congress an approval rating greater than 30? (5 points)
- (b) What percentage of people give Congress an approval rating between 30 and 40? (10 points)
- (c) If the Z score from a person picked at random is 0.5, what is the person's approval rating of Congress? (5 points)

Name:

SUID:

2. Professor Sampson hypothesizes that union members are more supportive of the federal bailout of American automobile companies than non-union members. Her research assistant, Delilah, recommends that she control for party identification, since support for the bailout is likely affected by partisanship and since union members are disproportionately likely to be Democrats. Sampson does what Delilah asks. Her results are presented below. The cells, each of which contains at least 500 cases, give the percentage of respondents in each category that support the bailout. (15 points)

Supports Bailout	Democratic		Republican	
	Union	Non-Union	Union	Non-Union
Yes	50%	36%	34%	20%
No	50%	64%	66%	80%

- (a) Which variable is the dependent variable in this analysis? The independent variable? (4 points)
- (b) What are the partial effects (also known as the controlled effect) of union membership on support for the bailout? Discuss the effects within two subsamples of partisanship separately. (6 points)
- (c) What type of relationship exists between union membership and support for the bailout? Explain your answer (Is it spurious, additive or interactive?) (5 points)

Name:

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3. Professor Jenny Rollins is studying whether watching Fox News affects the mean number of hours per month spent on political activities. Rollins' results are presented below: (20 points)

Watches Fox News	Mean Hours Spent on Political Activities	Standard Error	Frequency
Yes	12	3	500
No	6	5	400

- What is the standard error of the difference in the mean number of hours spent on political activities? (6 points)
- If we want to do a two-sample t-test to compare Fox-News watching's effects on political activities, what is the degree of freedom? (4 points)
- Can we be 95% confident that individuals who watch Fox News and individuals who do not watch Fox News differ in terms of their time spent on political activities? Explain your reasoning. You can use the eye-ball test threshold. (10 points)

Name:

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4. Professor John hypothesizes that, in comparing individuals, those with higher intelligence will have higher incomes. He has two different methods of measuring intelligence: years of education and SAT scores. He finds that the Pearson's r correlation coefficient between education and income is 0.8 ($p = .02$). Likewise, the correlation coefficient between SAT scores and income is: -0.15 ($p = 0.98$). (10 points)

- (a) Interpret the correlation coefficient between education and income. Can we reject the null hypothesis?
- (b) Interpret the correlation coefficient between SAT scores and income. Can we reject the null hypothesis?

Name:

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5. Professor LaFleur Armstrong is studying what factors account for variation across countries in the level of military spending. She uses multiple regression analysis to estimate the effects of democracy, oil export revenues, and interstate rivalry on the percentage of the government's budget devoted to the military. The variable Democracy ranges from 0 to 10, with higher values meaning greater democracy. The variable Oil is the percentage of a country's export revenues that come from oil [0-100]. Finally, Rivalry is a dummy variable that equals 1 if the country has a military rivalry with another country and 0 otherwise. The regression equation and a table of regression coefficients are presented below: (30 points)

$$\text{Percentage of Budget to Military}[0-100] = a + b_1 \cdot \text{Democracy} + b_2 \cdot \text{Oil} + b_3 \cdot \text{Rivalry}$$

Variable	Coefficient	Standard Error
Intercept	20	5
Democracy	-3	1.2
Oil	1.2	0.8
Rivalry	10	3

- Write down the regression function (formula) by replacing a , b_1 , b_2 and b_3 with the real number. (5 points)
- Interpret the meaning of the intercept. (5 points)
- According to these estimates, what is the effect of oil export revenue on military spending? State your answer in a way that would be understood by someone unfamiliar with regression. (5 points)
- Country A has no rivalry countries, democracy score is 5 and has 20% oil. What is the predicted percentage of budget to military (10 points)
- Which of the three coefficients (other than the intercept) are statistically significant at the .05 level? You can use the eye-ball test. (5 points)

(a)

(b)

Name:

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Answer 5(c), 5(d) and 5(e) on this page

Name:

SUID:

6. In early 2018, Professor G. wanted to test the theory: “Drug abuse will cause lower voting turnout”. He conducted a representative survey (randomly pick **1600** respondents national wide) across United States. The independent variable he used is the question “Have you abused drugs for entertaining purpose in the recent 2 years”, with the option “Yes” and “No”. The dependent variable he used is the question “Did you vote in the 2016 presidential election”. He finds that the average probability of voting turnout is **0.3** (standard deviation=**0.8**) among those who abuse drugs. (15 points)

(1) Calculate the 95% confidence interval of voting turnout probability among those who abuse drugs. You can use $t=2$. (5 points)

(2) In the regression analysis that controls gender, age, education, income and partisanship, Professor G. finds that drug abuse indeed lower the probability of going to vote by 15% (with standard error 7%). Can he be confident that drug abuse truly has the causal effects over voting turnout? If yes, explain; if no, discuss three problems of his analysis. (10 points)