## 

# 2019/03/18

Og1 reading

## Nineteenth-Century Politics in the United States

The development of the modern presidency in the United States began with Andrew Jackson who swept to power in 1829 at the head of the Democratic Party and served until 1837.

During his administration, he immeasurably enlarged the power of the presidency.

"The President is the direct representative of the American people," he lectured the Senate when it opposed him.

"He was elected by the people, and is responsible to them." With this declaration, Jackson redefined the character of the presidential office and its relationship to the people.

During Jackson's second term, his opponents had gradually come together to form the Whig party.

Whigs and Democrats held different attitudes toward the changes brought about by the market, banks, and commerce.

The Democrats tended to view society as a continuing conflict between "the people”—farmers, planters, and workers—and a set of greedy aristocrats.

This "paper money aristocracy" of bankers and investors manipulated the banking system for their own profit, Democrats claimed, and sapped the nation's virtue by encouraging speculation and the desire for sudden, unearned wealth.

The Democrats wanted the rewards of the market without sacrificing the features of a simple agrarian republic.

They wanted the wealth that the market offered without the competitive, changing society; the complex dealing; the dominance of urban centers; and the loss of independence that came with it.

Whigs, on the other hand, were more comfortable with the market.

For them, commerce and economic development were agents of civilization.

Nor did the Whigs envision any conflict in society between farmers and workers on the one hand and businesspeople and bankers on the other.

Economic growth would benefit everyone by raising national income and expanding opportunity.

The government's responsibility was to provide a well-regulated economy that guaranteed opportunity for citizens of ability.

Whigs and Democrats differed not only in their attitudes toward the market but also about how active the central government should be in people's lives.

Despite Andrew Jackson's inclination to be a strong President, Democrats as a rule believed in limited government.

Government's role in the economy was to promote competition by destroying monopolies' and special privileges.

In keeping with this philosophy of limited government, Democrats also rejected the idea that moral beliefs were the proper sphere of government action.

Religion and politics, they believed, should be kept clearly separate, and they generally opposed humanitarian legislation.

The Whigs, in contrast, viewed government power positively.

They believed that it should be used to protect individual rights and public liberty, and that it had a special role where individual effort was ineffective.

By regulating the economy and competition, the government could ensure equal opportunity.

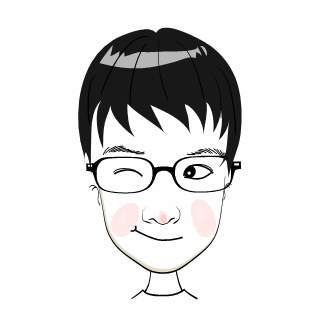
Indeed, for Whigs the concept of government promoting the general welfare went beyond the economy.

In particular, Whigs in the northern sections of the United States also believed that government power should be used to foster the moral welfare of the country.

They were much more likely to favor social-reform legislation and aid to education.

In some ways the social makeup of the two parties was similar.

To be competitive in winning votes, Whigs and Democrats both had to have significant support among farmers, the largest group in society, and workers.

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Neither party could win an election by appealing exclusively to the rich or the poor.

The Whigs, however, enjoyed disproportionate strength among the business and commercial classes.

Whigs appealed to planters who needed credit to finance their cotton and rice trade in the world market, to farmers who were eager to sell their surpluses, and to workers who wished to improve themselves.

Democrats attracted farmers isolated from the market or uncomfortable with it, workers alienated from the emerging industrial system, and rising entrepreneurs who wanted to break monopolies and open the economy to newcomers like themselves.

The Whigs were strongest in the towns, cities, and those rural areas that were fully integrated into the market economy, whereas Democrats dominated areas of semisubsistence farming that were more isolated and languishing economically.

Paragraph 1: The development of the modern presidency in the United States began with Andrew Jackson who swept to power in 1829 at the head of the Democratic Party and served until 1837. During his administration, he immeasurably enlarged the power of the presidency. "The President is the direct representative of the American people," he lectured the Senate when it opposed him. "He was elected by the people, and is responsible to them." With this declaration, Jackson redefined the character of the presidential office and its relationship to the people.

# 2019/03/19

Og1 reading

## The Expression of Emotions

Joy and sadness are experienced by people in all cultures around the world, but how can we tell when other people are happy or despondent?

It turns out that the expression of many emotions may be universal.

Smiling is apparently a universal sign of friendliness and approval.

Baring the teeth in a hostile way, as noted by Charles Darwin in the nineteenth century, may be a universal sign of anger.

As the originator of the theory of evolution, Darwin believed that the universal recognition of facial expressions would have survival value.

For example, facial expressions could signal the approach of enemies (or friends) in the absence of language.

---- 表情是相通的

Most investigators concur that certain facial expressions suggest the same emotions in all people.

Moreover, people in diverse cultures recognize the emotions manifested by the facial expressions.

In classic research Paul Ekman took photographs of people exhibiting the emotions of anger, disgust, fear, happiness, and sadness.

He then asked people around the world to indicate what emotions were being depicted in them.

Those queried ranged from European college students to members of the Fore, a tribe that dwells in the New Guinea highlands.

All groups, including the Fore, who had almost no contact with Western culture, agreed on the portrayed emotions.

The Fore also displayed familiar facial expressions when asked how they would respond if they were the characters in stories that called for basic emotional responses.

Ekman and his colleagues more recently obtained similar results in a study of ten cultures in which participants were permitted to report that multiple emotions were shown by facial expressions.

The participants generally agreed on which two emotions were being shown and which emotion was more intense.

----- 不同地方的人的表情是相似的

Psychological researchers generally recognize that facial expressions reflect emotional states.

In fact, various emotional states give rise to certain patterns of electrical activity in the facial muscles and in the brain.

The facial-feedback hypothesis argues, however, that the causal relationship between emotions and facial expressions can also work in the opposite direction.

According to this hypothesis, signals from the facial muscles ("feedback") are sent back to emotion centers of the brain, and so a person's facial expression can influence that person's emotional state.

Consider Darwin's words: "The free expression by outward signs of an emotion intensifies it.

On the other hand, the repression, as far as possible, of all outward signs softens our emotions.

" Can smiling give rise to feelings of good will, for example, and frowning to anger?

----- 表情可以影响心情

Psychological research has given rise to some interesting findings concerning the facial-feedback hypothesis.

Causing participants in experiments to smile, for example, leads them to report more positive feelings and to rate cartoons (humorous drawings of people or situations) as being more humorous.

When they are caused to frown, they rate cartoons as being more aggressive.

What are the possible links between facial expressions and emotion?

One link is arousal, which is the level of activity or preparedness for activity in an organism.

Intense contraction of facial muscles, such as those used in signifying fear, heightens arousal.

Self-perception of heightened arousal then leads to heightened emotional activity.

Other links may involve changes in brain temperature and the release of neurotransmitters (substances that transmit nerve impulses.)

The contraction of facial muscles both influences the internal emotional state and reflects it.

Ekman has found that the so-called Duchenne smile, which is characterized by ''crow’s feet" wrinkles around the eyes and a subtle drop in the eye cover fold so that the skin above the eye moves down slightly toward the eyeball, can lead to pleasant feelings.

Ekman’s observation may be relevant to the British expression “keep a stiff upper lip” as a recommendation for handling stress.

It might be that a “stiff” lip suppresses emotional response—as long as the lip is not quivering with fear or tension.

But when the emotion that leads to stiffening the lip is more intense, and involves strong muscle tension, facial feedback may heighten emotional response.

Paragraph 1: Joy and sadness are experienced by people in all cultures around the world, but how can we tell when other people are happy or despondent? It turns out that the expression of many emotions may be universal. Smiling is apparently a universal sign of friendliness and approval. Baring the teeth in a hostile way, as noted by Charles Darwin in the nineteenth century, may be a universal sign of anger. As the originator of the theory of evolution, Darwin believed that the universal recognition of facial expressions would have survival value. For example, facial expressions could signal the approach of enemies (or friends) in the absence of language.

# 2019/03/20

Og1 listening

### Advice About Graduate School Application

Narrator: Listen to a conversation between a student and a professor.

Professor: Hey, Ellen. How are you doing?

Student: Oh, pretty good, thanks. How are you?

Professor: OK.

Student: Did you, um, have a chance to look at my grad school application ... you know, the statement of purpose I wrote?

Professor: Well, yeah. In fact, here it is, I just read it.

Student: Oh, great! What did you think?

Professor: Basically, it’s good. What you might actually do is take some of these different points here, and actually break them out into separate paragraphs. So, um, one: your purpose for applying for graduate study-uh, why do you want to go to graduate school- and an area of specialty; and, uh, why you want to do the area you’re specifying; um, and what you want to do with your degree once you get it.

Student: OK.

Professor: So those are ... they’re pretty clear on those four points they want.

Student: Right.

Professor: So you might just break them out into, uh . . . you know, separate paragraphs and expand on each point some. But really what's critical with these is that, um, you’ve gotta let yourself come through.See, you gotta let them see you in these statements. Expand some more on what’s happened in your own life and what shows your ...your motivation and interest in this area-in geology. Let’ em see what really, what ...what captures your imagination about this field.

Student: OK, so make it a little more ... personal? That's OK?

Professor: That's fine. They look for that stuff. You don’t wanna go overboard …

Student: Right.

Professor: ...but it’s critical that. . . that somebody sees what your passion is-your personal motivation for doing this.

Student: OK.

Professor: And that’s gotta come out in here. Um, and let’s see, uh, you might also give a little, uh-since this is your only chance to do it, you might give a little more explanation about your unique undergraduate background. So, you know, how you went through, you know, the music program; what you got from that; why you decided to change. I mean it’s kind of unusual to go from music to geology, right?

Student: Yeah. I was …I was afraid that, you know, maybe the personal-type stuff wouldn’t be what they wanted, but...

Professor: No, in fact it’s ... um, give an example: I... I had a friend, when I was an undergrad, um, went to medical school. And he put on his med school application-and he could actually tell if somebody actually read it cause, um, he had asthma and the reason that he wanted to go to med school was he said he wanted to do sports medicine because he, you know, he had this real interest. He was an athlete too, and . . . and wanted to help athletes who had this physical problem. And he could always tell if somebody actually read his letter, because they would always ask him about that.

Student: ...Mmm ... so something unique.

Professor: Yeah. So see, you know, that’s what’s good and, and, I think for you probably, you know, your music background's the most unique thing that you’ve got in your record.

Student: Right.

Professor: ... Mmm ... so you see, you gotta make yourself stand out from a couple hundred applications. Does that help any?

Student: Yeah, it does. It gives me some good ideas.

Professor: And ... what you might also do too is, you know, uh, you might get a friend to proof it or something at some point.

Student: Oh, sure ... sure.

Professor: Also, think about presentation-how the application looks. In a way, you're actually showing some other skills here, like organization. A lot of stuff that's ... that they're not... they’re not formally asking for, they’re looking at. So your presentation format, your grammar, all that stuff, they're looking at in your materials at the same time.

Student: Right. OK.

# 2019/03/21

Og1 listening

### Method to Manage Water Supplies

Listen to part of a talk in an environmental science class.

Professor: So I wanted to discuss a few other terms here ... actually, some, uh, some ideas about how we manage our resources.

Let’s talk about what that …what that means. If we take a resource like water. ..well, maybe we should get a little bit more specific here-back up from the more general case-and talk about underground water in particular.

So hydrogeologists have tried to figure out... how much water can you take out from underground sources? This has been an important question.Let me ask you guys: how much water, based on what you know so far, could you take out of, say, an aquifer... under the city?

Male Student: As ... as much as would get recharged?

Professor: OK. So we wouldn't want to take out any more than naturally comes into it. The implication is that, uh, well, if you only take as much out as comes in, you're not gonna deplete the amount of water that’s stored in there, right?

Wrong, but that’s the principle. That’s the idea behind how we manage our water supplies. It’s called "safe yield.“Basically what this method says is that you can pump as much water out of a system as naturally recharges ... as naturally flows back in.

So this principle of safe yield-it's based on balancing what we take out with what gets recharged. But what it does is, it ignores how much water naturally comes out of the system.

In a natural system, a certain amount of recharge comes in and a certain amount of water naturally flows out through springs, streams, and lakes. And over the long term the amount that’s stored in the aquifer doesn’t really change much. It's balanced. Now humans come in . . . and start taking water out of the system. How have we changed the equation?

Female Student: It’s not balanced anymore?

Professor: Right. We take water out, but water also naturally flows out. And the recharge rate doesn’t change, so the result is we’ve reduced the amount of water that’s stored in the underground system.

If you keep doing that long enough-if you pump as much water out as naturally comes in-gradually the underground water levels drop. And when that happens, that can affect surface water. How? Well, in underground systems there are natural discharge points-places where the water flows out of the underground systems, out to lakes and streams.

Well, a drop in the water level can mean those discharge points will eventually dry up. That means water’s not getting to lakes and streams that depend on it. So we’ve ended up reducing the surface water supply, too.

You know，in the state of Arizona we’re managing some major water supplies with this principle of safe yield, under a method that will eventually dry up the natural discharge points of those aquifer systems.

Now, why is this an issue? Well, aren’t some of you going to want to live in this state for a while? Want your kids to grow up here, and your kids' kids? You might be concerned with . . . does Arizona have a water supply which is sustainable-key word here? What that means . . . the general definition of sustainable is will there be enough to meet the needs of the present without compromising the ability of the future to have the availability ... to have the same resources?

Now, I hope you see that these two ideas are incompatible: sustainability and safe yield. Because what sustainability means is that it's sustainable for all systems dependent on the water-for the people that use it and for... uh, for supplying water to the dependent lakes and streams.

So I’m gonna repeat this: so if we're using a safe-yield method, if we're only balancing what we take out with what gets recharged, but-don’t forget, water's also flowing out naturally. Then the amount stored underground is gonna gradually get reduced and that’s gonna lead to another problem. These discharge points-where the water flows out to the lakes and streams-they’re gonna dry up. OK.

# 2019/03/22

## Nature of Human Soul

Narrator: Listen to part of a lecture in a philosophy class. The professor has been talking about ethics.

Professor: OK, if we’re going to discuss goodness and justice - what makes an individual good or a society just or virtuous-then we need to start with the ancient Greeks. So we'll start with Plato-Plato's philosophy. Now, some of you may have studied Plato's philosophy in some other course, so this might be easy. OK, at the risk of boring you, let me give you just an overview of Plato’s ethical theory. Plato says the soul has-and by "soul" he simply means that which animates the body, gives it life-anyway, he says that the soul has three separate parts …called, um, "faculties," which I’ll come back to. He believed that goodness in an individual was to be found when the three parts of the soul worked together, when they weren't in conflict, but existed in harmony. A good or just person will have a soul in which the three faculties work well together.

So how does he arrive at that analysis? Well, he starts out in his very famous work The Republic, um, he starts out by saying it's very difficult to get a grasp on what the individual's soul looks like. So, to get some idea of what the individual human soul is like, he says we should study the structure of society-what kinds of people and activities every society has to have. He argues that every society has to have three groups of people: workers, soldiers, and leaders. And each has a sort of defining characteristic.

Every society has to have workers like farmers or, um, people who work in factories, producing all the things that we need for everyday life. And according to Plato, the key feature of workers is that they’re focused on their own desires or appetites- interested in satisfying the needs of the body. So workers are associated with desire... OK?

Now, if you live in a society that has a good amount of wealth-um, good agriculture, good industry-other societies are probably going to try to take it. So you need a class of soldiers, who are supposed to protect the state from external threats. Well, these soldiers, well, they're going to be in dangerous situations quite frequently, so you need people with, um, a ... a lot of high spirit-uh, an emotional type of individual. Emotion is what characterizes this group.

And then, Plato says, the third group you need is leaders. Their main role will be to think rationally, to use their reason or intellect to make decisions. As decision makers, leaders determine what the state is to do, how the affairs of the citizens are to be run.

Plato then asks himself: OK, assume we’ve got such a society with these three groups. When will this society be a good, um, a ... a just society? Well, you can only have a good society when its three parts are working well together-each doing its proper thing. And Plato believes this can only happen if workers and soldiers learn moderation, or self-control.

But why? Why do workers and soldiers have to learn self-control? Well, how can a society flourish if the workers and soldiers don’t control their desires and emotions? Plato thinks that if they aren't under control, workers will sleep too much and play too much, so they’re not going to get their jobs done. And soldiers need to channel their high-spiritedness in a certain direction, precisely by being courageous.

But you're not going to get that automatically. You need to teach them this kind of moderation. So you need an educational system that first of all will train the leaders, so that they’ll make good decisions, so they’ll know what's wise. Then make leaders responsible-um, uh, turn over to them the education of the other two groups. And through education, build a society so that the workers and soldiers learn to use their intellect to control their desires and emotions. If you had all that, then, for Plato, you'd have a good or just society.

Now, take that picture - that social, political picture-and apply it to the individual person. You remember about the soul? That it consists of three separate parts, or faculties? Can you guess what they are? Desires, emotions, and intellect-the characteristics associated with the three groups of society. And can you guess how Plato defines a good or just person? Well, it’s parallel to how he characterizes a good or just society. The three parts have to be in harmony. In each of us, our desires and emotions often get the better of us, and lead us to do foolish things. They're in conflict with the intellect. So, to get them to all work together, to coexist in harmony, every person needs to be shaped in the same way that we’ve shaped society-through the educational system. Individuals must be educated to use their intellect to control their emotions and desires. That’s harmony in the soul.

# 2019/03/25

### Review for a Biology Examination

Narrator: Listen to part of a conversation between two students. The woman is helping the man review for a biology examination.

Male Student: OK, so ... what do you think we should go over next?

Female Student: How about if we go over this stuff about how bacteria become resistant to antibiotics.

Male Student: OK.

Female Student: Um, but first of all, though, how many pages do we have left? I told my roommate I’d meet her at the library at seven o’clock.

Male Student: Ummm ... There's only a few pages left. We should be finished in a few minutes.

Female Student: OK. So, ummm ...

Male Student: About how bacteria become resistant to antibiotics.

Female Student: Oh yeah, OK. So you know that some bacteria cells are able to resist the drugs we use against them, and that’s because they have these special genes that, like, protect them from the drugs.

Male Student: Right. If I remember correctly, I think the genes, like ... weaken the antibiotics, or, like ... stop the antibiotics from getting into the bacteria cell, something like that?

Female Student: Exactly. So when bacteria have these genes, it's very difficult for the antibiotics to kill the bacteria.

Male Student: Right.

Female Student: So do you remember what those genes are called?

Male Student: Umm…

Female Student: Resistance genes.

Male Student: Resistance genes. Right. Resistance genes. OK.

Female Student: And that makes sense, right? Because they help the bacteria resist the antibiotics.

Male Student: Yeah, that makes sense. OK.

Female Student: OK. But the question is: how do bacteria get the resistance genes?

Male Student: How do they get the resistance genes? They just inherit them from the parent cell, right?

Female Student: OK, yeah, that's true. They can inherit them from the parent cell, but that's not what I’m talking about.

Male Student: OK.

Female Student: I’m talking about how they get resistance genes from other cells in their environment, you know, from the other cells around them.

Male Student: Oh, I see what you mean. Umm, is that that stuff about “hopping genes," or something like that?

Female Student: Right. Although actually they’re called "jumping genes,” not "hopping genes.”

Male Student: Oh, OK. Jumping genes.

Female Student: Yeah, but they have another name, too, that I can’t think of. Umm ... let me see if I can find it here in the book ...

Male Student: I think it’s probably on…

Female Student: Oh, OK, here it is. Transposons. That’s what they’re called.

Male Student: Let me see. OK. Trans …po ... sons …trans... posons. So "transposon" is another name for a jumping gene?

Female Student: Right. And these transposons are, you know, like, little bits of DNA that are able to move from one cell to another. That’s why they’re called "jumping genes." They kind of, you know, “jump” from one cell to another.

Male Student: OK.

Female Student: And these transposons are how resistance genes are able to get from one bacteria cell to another bacteria cell. What happens is that a resistance gene from one cell attaches itself to a transposon and then, when the transposon jumps to another cell...

Male Student: The other cell gets the resistance gene and...

Female Student: Right.

Male Student: That's how it becomes resistant to antibiotics.

Female Student: Right.

Male Student: Wow. That's really cool. So that's how it happens.

Female Student: That’s how it happens.

# 2019/03/26

### Size of Root Systems

Narrator: Listen to part of a talk in a botany class.

Professor: OK, so we've talked about some different types of root systems of plants, and I’ve shown you some pretty cool slides, but now I want to talk about the extent of the root system-the overall size of the root system ... the depth. I want to tell you about one particular experiment. I think you're going to find this pretty amazing. OK, so there was this scientist...this very meticulous scientist decided that the best place to see a whole root system-to actually see how big the entire system got-the best place would be to grow it... where?

Female Student: Um, water?

Professor: In water. So he took rye plants-it was rye plants-and he started growing them in water. Now, you’ve all heard of growing stuff in water before, right?

Male Student: It's done commercially, right? Uh, like to grow vegetables and flowers?

Professor: Right.They grow all kinds of commercial crops in water. So if you're growing things in water, you can add the fertilizer. What do you need to do to that water besides put fertilizer in it? Anyone ever actually tried to grow plants in water? You must bubble water through it. Bubble gas through it. I’m sorry, you must bubble gas through it. So, gas, you have to bubble through. Think about the soil we talked about last week, about growing plants in soil. Think about some of you who have killed your favorite houseplants, 'cause you loved them too much. If you overwater, why do your favorite houseplants die?

Female Student: Oh, no oxygen.

Professor: Not enough oxygen for the roots ... which do what twenty-four hours a day in all seasons?

Female Student: Respiration?

Professor: Respire ... respiration ... they breathe. So if you just stick rye plants in water, it doesn't make a difference how much fertilizer you add, you also need to bubble gas through the water, so they have access to that oxygen. If they don’t have that, they're in big trouble. OK. So this guy this scientist-grew a rye plant in water so he could see the root system, how big it got-its surface area. I read about this and the book said one thousand kilometers of roots. I kept thinking: this has to be a mistake. It just doesn’t make any sense to me that... that …that could be right. But that’s what all the books have, and no one's ever corrected it. So let me explain to you about this rye plant. If you take a little seed of many grasses-and remember rye is a grass; if you take a tiny little seed and you germinate it - actually, take one of my least favorite grasses that starts growing about May. What's my least favorite grass that starts growing about May?

Male Student: Crabgrass.

Professor: Crabgrass.

Remember how I showed you in the lab, one little seed starts out producing one little shoot. Then at a week or so later you’ve got about six shoots, and then, three weeks later you’ve got about fifteen shoots coming out all directions like this- all those little shoots up there? Well, that’s what they did with the rye. And the little seedling started and pretty soon there were several shoots, and then more shoots. In the end, that one single seed produced eighty shoots, with an average of fifty centimeters of height ... from one seed. Eighty shoots coming out, average fifty centimeters high. When they looked at the shoot versus the root surface, they found that the shoot surface, with all of its leaves, had a total surface area of about five square meters. Now, here’s the biggie: when they looked at the root surface area, you would expect that the root and the shoot would be in balance, right? So they should be pretty close in terms of surface area, right?

Male Student: Uh-un.

Professor: What’s that? Did somebody say "no"? Well, you're absolutely correct. Instead of five square meters, the root system was found to have more than two hundred square meters of surface area. Where did all of that extra surface area come from? Who did it? Who was responsible for all those extra square meters of surface area? What did roots do to increase their surface area?

Female Student: Root hairs.

Professor: Root hairs, that’s exactly it. So those root hairs were responsible for an incredible chunk of surface area. They constantly have to be spread out in the water so they can absorb minerals from the fertilizer, and of course they need oxygen access as well.