

Sujet Alg1901

Dans cet exercice, on considère l'espace vectoriel \mathbb{R}^n muni de son produit scalaire canonique noté $\langle \cdot, \cdot \rangle$. La norme associée est notée $\| \cdot \|$.

On note $\mathcal{B} = (e_1, e_2, \dots, e_n)$ la base canonique de \mathbb{R}^n , $A = (a_{i,j})_{\substack{1 \leq i \leq n \\ 1 \leq j \leq n}}$ une matrice **symétrique réelle** et f

l'endomorphisme de \mathbb{R}^n dont la matrice dans la base \mathcal{B} est A .

On note enfin $\lambda_n \leq \lambda_{n-1} \leq \dots \leq \lambda_1$ les valeurs propres de A et $\mathcal{B}' = (\varepsilon_1, \varepsilon_2, \dots, \varepsilon_n)$ une base orthonormale de \mathbb{R}^n constituée de vecteurs propres de f avec, pour tout i de $\llbracket 1, n \rrbracket$, $f(\varepsilon_i) = \lambda_i \varepsilon_i$.

Le but de cet exercice est d'établir le résultat suivant :

$$\forall k \in \llbracket 1, n \rrbracket, \quad \sum_{j=1}^k a_{j,j} \leq \sum_{j=1}^k \lambda_j$$

1. Que dire de l'inégalité dans le cas $k = n$?
2. Établir, pour tout j appartenant à $\llbracket 1, n \rrbracket$, l'inégalité suivante :

$$a_{j,j} \leq \sum_{i=1}^k \langle e_j, \varepsilon_i \rangle^2 \lambda_i + \lambda_k \sum_{i=k+1}^n \langle e_j, \varepsilon_i \rangle^2$$

3. En déduire, pour $j \in \llbracket 1, n \rrbracket$, l'inégalité suivante :

$$a_{j,j} \leq \sum_{i=1}^k (\lambda_i - \lambda_k) \langle e_j, \varepsilon_i \rangle^2 + \lambda_k$$

4. Conclure.

1. Soit H un hyperplan de $\mathcal{M}_n(\mathbf{C})$ ne contenant aucune matrice inversible. Montrer qu'il contient toutes les matrices nilpotentes.
 2. Montrer qu'en réalité il n'existe pas de tel hyperplan.
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Sujet Analyse1901

On considère la suite de fonctions $(f_n)_{n \geq 2}$ définies par :

$$\forall x \in \mathbb{R}_+, \quad f_n(x) = \begin{cases} \left(1 - \frac{x}{n}\right)^n & \text{si } 0 \leq x < n \\ 0 & \text{si } x \geq n \end{cases}$$

1. Montrer que (f_n) converge simplement vers une fonction f que l'on déterminera.
2. On pose $g_n = f - f_n$.
 - (a) Déterminer $\sup_{x \in [n, +\infty[} g_n(x)$.
 - (b) Montrer qu'il existe un unique réel t_n appartenant à $[0, n]$ tel que $g'_n(t_n) = 0$.
 - (c) Montrer que, pour tout réel x positif, $0 \leq f(x) - f_n(x) \leq \max(e^{-n}, \frac{1}{ne})$.
3. (a) Établir, pour tout réel x de $]0, 1]$, l'encadrement suivant :

$$\frac{1 - e^{-x}}{x} \leq \frac{1 - \left(1 - \frac{x}{n}\right)^n}{x} \leq 1$$

- (b) En déduire le résultat suivant :

$$\lim_{n \rightarrow +\infty} \int_0^1 \frac{1 - \left(1 - \frac{x}{n}\right)^n}{x} dx = \int_0^1 \frac{1 - e^{-x}}{x} dx$$

On considère une suite $\{u_n\}$ définie par la relation de récurrence :

$$u_{n+1} = u_n + \frac{1}{n^\alpha u_n}, \text{ avec } u_1 > 0 \text{ et } \alpha > 0.$$

1. Étudier la nature de cette suite.
 2. Donner un équivalent, quand $n \rightarrow +\infty$:
 - de $l - u_n$ quand la suite converge vers l
 - et de u_n quand elle diverge.
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Sujet N°P1905

On considère une suite de variables aléatoires $(X_n)_{n \in \mathbb{N}^*}$, indépendantes, identiquement distribuées et définies sur un même espace probabilisé $(\Omega, \mathcal{A}, \mathbb{P})$. et suivant toutes la loi uniforme sur $[0, 1]$.

Pour tout entier naturel n non nul, on pose $S_n = \sum_{k=1}^n X_k$ et T est le plus petit entier aléatoire k vérifiant $S_k > 1$, si

un tel entier existe.

On pose $T = -1$ si un tel indice n'existe pas.

Partie 1

On suppose dans cette partie que la loi commune des X_k est la loi uniforme sur $[0, 1]$.

1. Que vaut $\mathbb{P}(T = 1)$?
2. (a) Déterminer une densité de S_2 .
(b) En déduire la probabilité $P([T = 2])$.
3. (a) Calculer, pour $x \in [0, 1]$, $\mathbb{P}([S_n \leq x])$.
(b) Calculer $\mathbb{P}([T = -1])$.
4. Donner la loi de T .
5. Soit α un réel. Établir l'inégalité suivante :

$$\lim_{n \rightarrow +\infty} P(S_n \geq 1) \geq \frac{1}{\sqrt{2\pi}} \int_{\alpha}^{+\infty} e^{-\frac{t^2}{2}} dt.$$

Retrouver alors le résultat de la question 4.

Partie 2

6. On conserve les notations de cette partie, mais on suppose que les variables X_k suivent toutes la loi exponentielle de paramètre 1.
On admet toujours que T est une variable aléatoire et que de plus $\mathbb{P}([T = -1]) = 0$.
 - (a) Donner une densité de S_n .
 - (b) Déterminer la loi de $T - 1$.

Sujet N°P1906

Soit a et r deux réels strictement positifs.

On dit qu'une variable aléatoire T suit la loi $\mathcal{P}(a, r)$ si une densité de T est donnée par :

$$f_T(x) = \begin{cases} \frac{ar^a}{(x+r)^{a+1}} & \text{si } x > 0 \\ 0 & \text{sinon} \end{cases}$$

Soit a, b, c, r quatre réels strictement positifs et A, B, C trois variables aléatoires à densité indépendantes, définies sur le même espace probabilisé $(\Omega, \mathcal{A}, \mathbb{P})$ telles que $A \hookrightarrow \mathcal{P}(a, r)$, $B \hookrightarrow \mathcal{P}(b, r)$, $C \hookrightarrow \mathcal{P}(c, r)$.

On pose $X = \min(B, C)$, $Y = \min(A, C)$, $Z = \min(A, B)$ et on admet que X, Y, Z sont des variables aléatoires, définies sur le même espace probabilisé $(\Omega, \mathcal{F}, \mathbb{P})$.

1. Déterminer les lois de X, Y, Z .
2. Calculer $\mathbb{P}([X = Y])$.
3. Soit $(U_n)_{n \in \mathbb{N}^*}$ une suite de variables aléatoires définies sur le même espace probabilisé $(\Omega, \mathcal{A}, \mathbb{P})$, telles que $U_n \hookrightarrow \mathcal{P}(n, \frac{n}{\lambda})$, où λ désigne un réel strictement positif.
Montrer que la suite (U_n) converge en loi vers une loi limite que l'on précisera.

Dans un jeu de hasard (par exemple au grattage), on mise à chaque instant une somme c . On gagne X_i . On suppose que les X_i sont des **variables aléatoires indépendantes et de même loi**, à valeurs entières pour simplifier.

Le **gain cumulé** au bout de n coups est : $G_n = -cn + \sum_{i=1}^n X_i$.

Le joueur adopte la stratégie suivante : il joue tant que son gain cumulé ne diminue pas strictement. Il s'arrête dès que celui-ci diminue. On note N la variable aléatoire représentant l'instant d'arrêt.

1. Calculer la loi de N .
 2. Calculer l'espérance du gain cumulé obtenu par cette stratégie.
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Sujet 1

Exercice 1 (10 pts)

Un consommateur a des préférences relatives à sa consommation sur deux périodes 1 et 2 : $u = u(q_1, q_2)$, où q_1 représente le montant de sa consommation en première période et q_2 celui de sa consommation en deuxième période. Il sait disposer, pour chacune des périodes, de consommations correspondant au vecteur (\bar{q}_1, \bar{q}_2) . Soit p_1 et p_2 les prix correspondant à la consommation de chaque période.

1) Ecrire, en fonction de \bar{q}_1, \bar{q}_2 , p_1 et p_2 la contrainte de budget du consommateur et représentez la graphiquement. Représenter l'équilibre du consommateur et indiquer si, d'après votre graphique, le consommateur emprunte ou épargne. (2,5 pts)

2) Le prix p_2 diminue. Quelles circonstances peuvent-elles expliquer ce phénomène ? Comment la contrainte de budget et l'équilibre du consommateur se modifient-ils ? Expliquer les changements en les détaillant. (3,5 pt)

3) Donner l'équation de Slutsky dans le cas général. Dériver l'équation de Slutsky de ce modèle.

Si, à l'équilibre initial, on avait $q_1 < \bar{q}_1$, la diminution de p_2 accroît-elle ou diminue-t-elle le bien-être du consommateur ? (4 pts)

Exercice 2 (10 pts)

Confirmer ou infirmer à l'aide/ d'une discussion approfondie, appuyée si nécessaire de représentations graphiques, chacune des affirmations suivantes :

- 1) Pour certaines technologies de production, il est possible d'observer à la fois une productivité marginale décroissante de l'un des facteurs de production et des rendements d'échelle croissants. (2 pts)
- 2) L'élasticité de substitution d'une fonction de production à rendements d'échelle constants utilisant deux facteurs est toujours égale à 1. (2 pts)
- 3) La fonction de coût d'une entreprise est $c(w_1, w_2, y) = y(w_1 + w_2)$. La fonction de production correspondante est $y = x_1 + x_2$. (2 pts)
- 4) Le tableau suivant donne deux observations de la demande de facteurs x_1 , x_2 , des prix des facteurs, w_1 et w_2 , et de l'output y . Ces observations sont-elles compatibles avec la minimisation des coûts ? (2 pts)

Obs	y	w_1	w_2	x_1	x_2
A	200	2	1	20	40
B	220	1	2	28	20

- 5) Une entreprise a une fonction de production $y = x_1^{1/2} x_2^{1/2}$. Si le coût minimum de production pour un prix des facteurs de $p_1 = p_2 = 1$ est de 8, alors le niveau de production $y = 4$. Si le coût minimum aux mêmes prix est multiplié par k , le niveau de production sera également multiplié par k (2 pts).

Sujet 2

Exercice 1 (7 pts)

La fonction d'utilité d'un consommateur est $u = x^{0.2} \cdot y^{0.8}$, où x désigne des biens de consommation de prix $p_x = 2\text{€}$ l'unité, et y des biens culturels, de prix unitaire $p_y = 4\text{€}$. Son revenu est $R = 20\text{€}$.

- 1) Quelles quantités de biens de consommation et de biens culturels le consommateur achètera-t-il à l'équilibre ? (2 pts)
- 2) Le conseil municipal de la ville où ce consommateur habite décide d'accorder à certains habitants, dont lui, une allocation de 10€. Comment cette allocation modifie-t-elle sa consommation ? Que pouvez-vous dire de l'effet-revenu pour chacun des biens et à quel type de bien a-t-on affaire ici ? (2 pts)
- 3) Le même conseil municipal se demande cependant si, au lieu d'une allocation, il ne serait pas préférable d'attribuer gratuitement 4 unités de biens de consommation et 0,5 unités de biens culturels supplémentaires. L'allocation et l'attribution gratuite représentent chacune un coût identique pour la municipalité. Quelle est la mesure qui apportera le plus haut niveau d'utilité au consommateur considéré ? (3 pts)

Exercice 2 (13 pts)

On considère la fonction de coût suivante, où y correspond à la quantité d'output produite, w_1 et w_2 correspondant au prix unitaire des facteurs x_1 et x_2 respectivement :

$$C(y, w_1, w_2) = y^2 \frac{w_1 w_2}{w_1 + w_2}$$

- 1) Rappelez les propriétés générales d'une fonction de coût et vérifiez les dans la mesure du possible pour la fonction ci-dessus. (2 pts)
- 2) Déterminez les fonctions de demande conditionnelles de facteurs correspondantes. Quelle propriété utilisez-vous ? (2 pts)
- 3) Ecrivez le système permettant d'en déduire la fonction de production, et calculez-la ici. (2 pts)
- 4) En supposant que l'entreprise vend son produit au prix p sur un marché de concurrence, déterminez la fonction d'offre de l'entreprise (2 pts)
- 5) Déterminez la fonction de profit et vérifiez ses propriétés. (2 pts)
- 6) Retrouvez la fonction d'offre et déterminez de deux façons différentes les fonctions de demande (inconditionnelles) de facteurs. (3 pts)

(NB Les réponses aux questions 4) et 5) et 6) sont indépendantes des résultats du 3)).

Sujet 3

Exercice 1 (11 pts)

Un consommateur a une fonction d'utilité indirecte v de la forme (1):

$$v(p_1, p_2, R) = A(p_1, p_2)R$$

où la fonction d'utilité directe s'écrit $u(q_1, q_2)$, où p_1, p_2 sont les prix unitaires respectifs des biens q_1 et q_2 , R représente le revenu du consommateur et A une fonction quelconque de p_1, p_2 .

1) Donner la définition de la fonction v dans le cas général. Comment l'obtient-on lorsque la fonction d'utilité correspondante u est connue ? Donner ses propriétés générales. (2 pts).

2) Quelle est la fonction de dépense correspondant à la forme générale (1)? Montrer qu'elle peut se mettre sous la forme $e(p_1, p_2, u) = B(p_1, p_2)u$. (2 pts)

3) Montrer que la fonction d'utilité indirecte correspondant à la fonction d'utilité :

$u(q_1, q_2) = \min \{q_1, q_2\}$ est bien de la forme (1). Montrer que la fonction u est homogène de degré 1. Quelles sont les fonctions $A(p_1, p_2)$ et $B(p_1, p_2)$ dans ce cas ? (3 pts)

4) Calculer en fonction de A les fonctions de demande hicksiennes, puis marshalliennes dans le cas général de la forme (1). Quelle(s) propriété(s) utilisez-vous ? En déduire que, pour ce type de fonction, la part du budget consacrée à chaque bien est indépendante du revenu. Vérifier cette propriété dans le cas particulier de la fonction :

$$u(q_1, q_2) = \min \{q_1, q_2\}. (4 \text{ pts})$$

Exercice 2 (9 pts)

Deux entreprises en concurrence produisent un bien homogène. Les deux entreprises ont un coût marginal constant $C_m = 40$ euros. Décrivez dans chacune des trois situations suivantes (1) 2) 3)) comment évoluent la production et les prix si les entreprises sont : (i) à l'équilibre de Cournot (ii) à l'équilibre de collusion et (iii) à l'équilibre de Bertrand.

- 1) L'entreprise A doit augmenter ses salaires à la suite de quoi son coût marginal passe à 80 euros (3 pts)
- 2) Le coût marginal des deux entreprises augmente de la même façon (3 pts)
- 3) La courbe de demande se déplace vers la droite (3 pts)

Sujet 4

Exercice 1 (6 pts)

On considère un marché de concurrence pure et parfaite à court terme, où sont présentes 60 firmes. La fonction de coût de court terme des firmes est identique et s'écrit, pour chacune :

$$CT(q) = q^3 - 9q^2 + 25q + 40$$

Où q est la quantité produite par la firme considérée. La demande globale sur le marché a pour expression :

$$D(p) = 510 - 6p$$

Où p est le prix unitaire du bien et D la quantité demandée.

- 1) Donnez les expressions du coût moyen, du coût marginal et du coût variable moyen (1.5 pts).
- 2) Déterminez la fonction d'offre de chaque firme à court terme (1.5 pt) (prix en fonction de la quantité), puis l'offre de marché (même formulation, quantité globale notée Q) (1 pt).
- 3) Vérifiez qu'à l'équilibre de court terme, le prix de vente $p=20$. Que vaut alors la quantité globale produite et vendue Q ? La quantité produite par chaque firme q ? (2 pts)

Exercice 2 (14 pts)

On considère un individu dont la fonction d'utilité indirecte s'écrit $u(w) = \sqrt{w}$ où w est la richesse entièrement consommée. On suppose que les préférences de cet individu vérifient les postulats de l'utilité espérée. L'individu fait face à un risque de perte (vol) aux caractéristiques suivantes : probabilité d'occurrence de la perte $p=0,1$ et dommage en cas de survenance de la perte : $X=100$.

- 1) Rappelez en quoi consiste l'utilité espérée (2 pts).
- 2) Définissez puis calculez l'aversion relative au risque (RRA) puis l'aversion absolue au risque (ARA). Essayez de donner une caractérisation intuitive de chacune des deux formes d'aversion au risque (2 pts).
- 3) Dans cette question, la richesse initiale de l'agent est $W_0 = 100$.
 - a. Calculez l'utilité espérée de l'individu face au risque et en l'absence d'assurance (1 pt).
 - b. Si un assureur proposait d'assurer complètement l'individu contre le risque de perte (auquel cas l'indemnité en cas de survenance de la perte compenserait intégralement cette dernière) moyennant le paiement d'une prime d'assurance P , quelle serait la prime maximale P_{max}^1 que l'individu accepterait de payer ? (2 pts)
 - c. Que vaut la prime actuariellement neutre, i.e. la prime d'assurance qui correspond à la perte espérée ? Si l'assureur proposait une prime de ce niveau, l'individu l'achèterait-il ? Des calculs sont-ils nécessaires pour répondre à cette question ? Expliquez. (2 pts)
- 4) Dans cette question, la richesse initiale de l'agent est $W_0 = 200$.
 - a. Calculez l'utilité espérée de l'individu face au risque et en l'absence d'assurance. (1 pt)
 - b. Quelle serait la prime maximale P_{max}^2 que l'individu serait prêt à payer ? Pour le calcul, on pourra se satisfaire de l'approximation finale $\sqrt{2} \approx 1,4$. (2 pts)
 - c. Comparez P_{max}^2 à P_{max}^1 et expliquez la différence. (2 pts)

Bernie Sanders and the Myth of the 1 Percent

The very rich are richer than people imagine.



By Paul Krugman
Opinion Columnist

April 18, 2019

A peculiar chapter in the 2020 presidential race ended Monday, when Bernie Sanders, after months of foot-dragging, finally released his tax returns. The odd thing was that the returns appear to be perfectly innocuous. So what was all that about?

The answer seems to be that Sanders got a lot of book royalties after the 2016 campaign, and was afraid that revealing this fact would produce headlines mocking him for now being part of the 1 Percent. Indeed, some journalists did try to make his income an issue.

This line of attack is, however, deeply stupid. Politicians who support policies that would raise their own taxes and strengthen a social safety net they're unlikely to need aren't being hypocrites; if anything, they're demonstrating their civic virtue.

But failure to understand what hypocrisy means isn't the only way our discourse about politics and inequality goes off the rails. The catchphrase "the 1 Percent" has also become a problem, obscuring the nature of class in 21st-century America.

Focusing on the top percentile of the income distribution was originally intended as a corrective to the comforting but false notion that growing inequality was mainly about a rising payoff to education. The reality is that over the past few decades the typical college graduate has seen only modest gains, with the big money going to a small group at the top. Talking about "the 1 Percent" was shorthand for acknowledging this reality, and tying that reality to readily available data.

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But putting Bernie Sanders and the Koch brothers in the same class is obviously getting things wrong in a different way.

True, there's a huge difference between being affluent enough that you don't have to worry much about money and living with the financial insecurity that afflicts many Americans who consider themselves middle class. According to the Federal Reserve, 40 percent of U.S. adults

don't have enough cash to meet a \$400 emergency expense; a much larger number of Americans would be severely strained by the kinds of costs that routinely arise when, say, illness strikes, even for those who have health insurance.

So if you have an income high enough that you can easily afford health care and good housing, have plenty of liquid assets and find it hard to imagine ever needing food stamps, you're part of a privileged minority.

But there's also a big difference between being affluent, even very affluent, and having the kind of wealth that puts you in a completely separate social universe. It's a difference summed up three decades ago in the movie "Wall Street," when Gordon Gekko mocks the limited ambitions of someone who just wants to be "a \$400,000-a-year working Wall Street stiff flying first class and being comfortable."



Private jets were the preferred mode of transportation of the elite attending the annual Allen & Company conference in Sun Valley, Idaho. Drew Angerer/Getty Images

Even now, most Americans don't seem to realize just how rich today's rich are. At a recent event, my CUNY colleague Janet Gornick was greeted with disbelief when she mentioned in passing that the top 25 hedge fund managers make an average of \$850 million a year. But her number was correct.

One survey found that Americans, on average, think that corporate C.E.O.s are paid about 30 times as much as ordinary workers, which hasn't been true since the 1970s. These days the ratio is more like 300 to 1.

Why should we care about the very rich? It's not about envy, it's about oligarchy.

With great wealth comes both great power and a separation from the concerns of ordinary citizens. What the very rich want, they often get; but what they want is often harmful to the rest of the nation. There are some public-spirited billionaires, some very wealthy liberals. But they aren't typical of their class.

The very rich don't need Medicare or Social Security; they don't use public education or public transit; they may not even be that reliant on public roads (there are helicopters, after all). Meanwhile, they don't want to pay taxes.

Sure enough, and contrary to popular belief, billionaires mostly (although often stealthily) wield their political power on behalf of tax cuts at the top, a weaker safety net and deregulation. And financial support from the very rich is the most important force sustaining the extremist right-wing politics that now dominates the Republican Party.

That's why it's important to understand who we mean when we talk about the very rich. It's not doctors, lawyers or, yes, authors, some of whom make it into "the 1 Percent." It's a much more rarefied social stratum.

None of this means that the merely affluent should be exempt from the burden of creating a more decent society. The Affordable Care Act was paid for in part by taxes on incomes in excess of \$200,000, so 400K-a-year working stiffs did pay some of the cost. That's O.K.: They (we) can afford it. And whining that \$200,000 a year isn't really rich is unseemly.

But we should be able to understand both that the affluent in general should be paying more in taxes, and that the very rich are different from you and me — and Bernie Sanders. The class divide that lies at the root of our political polarization is much starker, much more extreme than most people seem to realize.

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A version of this article appears in print on April 19, 2019, on Page A25 of the New York edition with the headline: Bernie Sanders And the Myth Of the 1 Percent

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Five Lies Our Culture Tells

The cultural roots of our political problems.



By **David Brooks**

Opinion Columnist

April 15, 2019

Four years ago, in the midst of the Obama presidency, I published a book called “The Road to Character.” American culture seemed to be in decent shape and my focus was on how individuals can deepen their inner lives. This week, in the midst of the Trump presidency, I’ve got another book, “The Second Mountain.” It’s become clear in the interim that things are *not* in good shape, that our problems are societal. The whole country is going through some sort of spiritual and emotional crisis.

College mental health facilities are swamped, suicide rates are spiking, the president’s repulsive behavior is tolerated or even celebrated by tens of millions of Americans. At the root of it all is the following problem: We’ve created a culture based on lies.

Here are some of them:

Career success is fulfilling. This is the lie we foist on the young. In their tender years we put the most privileged of them inside a college admissions process that puts achievement and status anxiety at the center of their lives. That begins advertising’s lifelong mantra — if you make it, life will be good.

Everybody who has actually tasted success can tell you that’s not true. I remember when the editor of my first book called to tell me it had made the best-seller list. It felt like ... nothing. It was external to me.

The truth is, success spares you from the shame you might experience if you feel yourself a failure, but career success alone does not provide positive peace or fulfillment. If you build your life around it, your ambitions will always race out in front of what you’ve achieved, leaving you anxious and dissatisfied.

I can make myself happy. This is the lie of self-sufficiency. This is the lie that happiness is an individual accomplishment. If I can have just one more victory, lose 15 pounds or get better at meditation, then I will be happy.

But people looking back on their lives from their deathbeds tell us that happiness is found amid thick and loving relationships. It is found by defeating self-sufficiency for a state of mutual dependence. It is found in the giving and receiving of care.

It's easy to say you live for relationships, but it's very hard to do. It's hard to see other people in all their complexity. It's hard to communicate from your depths, not your shallows. It's hard to stop performing! No one teaches us these skills.

Life is an individual journey. This is the lie books like Dr. Seuss' "Oh, the Places You'll Go" tell. In adulthood, each person goes on a personal trip and racks up a bunch of experiences, and whoever has the most experiences wins. This lie encourages people to believe freedom is the absence of restraint. Be unattached. Stay on the move. Keep your options open.

In reality, the people who live best tie themselves down. They don't ask: What cool thing can I do next? They ask: What is my responsibility here? They respond to some problem or get called out of themselves by a deep love.

By planting themselves in one neighborhood, one organization or one mission, they earn trust. They have the freedom to make a lasting difference. It's the chains we choose that set us free.

You have to find your own truth. This is the privatization of meaning. It's not up to the schools to teach a coherent set of moral values, or a society. Everybody chooses his or her own values. Come up with your own answers to life's ultimate questions! You do you!

The problem is that unless your name is Aristotle, you probably can't do it. Most of us wind up with a few vague moral feelings but no moral clarity or sense of purpose.

The reality is that values are created and passed down by strong, self-confident communities and institutions. People absorb their values by submitting to communities and institutions and taking part in the conversations that take place within them. It's a group process.

Rich and successful people are worth more than poorer and less successful people. We pretend we don't tell this lie, but our whole meritocracy points to it. In fact, the meritocracy contains a skein of lies.

The message of the meritocracy is that you are what you accomplish. The false promise of the meritocracy is that you can earn dignity by attaching yourself to prestigious brands. The emotion of the meritocracy is conditional love — that if you perform well, people will love you.

The sociology of the meritocracy is that society is organized around a set of inner rings with the high achievers inside and everyone else further out. The anthropology of the meritocracy is that you are not a soul to be saved but a set of skills to be maximized.

No wonder it's so hard to be a young adult today. No wonder our society is fragmenting. We've taken the lies of hyper-individualism and we've made them the unspoken assumptions that govern how we live.

We talk a lot about the political revolution we need. The cultural revolution is more important.

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David Brooks has been a columnist with The Times since 2003. He is the author of “The Road to Character” and the forthcoming book, “The Second Mountain.” @nytdavidbrooks

A version of this article appears in print on April 16, 2019, on Page A25 of the New York edition with the headline: Five Lies Our Culture Tells Us

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People Can Savage Social Norms, but Also Revive Them

Individuals can change the way we see.



By David Brooks
Opinion Columnist

April 8, 2019

When Cass Sunstein was a young law professor, he happened to come across an older male professor talking to a young female student in a hallway. To Sunstein's astonishment, the professor was stroking the student's hair.

Sunstein later went up to her and said: "That was completely inappropriate. He shouldn't have done that." The student brushed him off: "It's fine. He's an old man. It's really not a problem."

Thirty minutes later the same student appeared in his office, in tears. "He does that all the time," she cried out. "It's horrible. My boyfriend thinks I should make a formal complaint, but I don't want to do that. ... I don't want to make a fuss."

In his new book, "How Change Happens," Sunstein uses this story to make a few points. First, sometimes people's private reactions differ from how society tells them they're supposed to react to a given situation. Second, if you give people permission to express how they really feel, they will sometimes take you up on it. Third, if there is mass dissonance between how people feel they're supposed to act and their actual feelings, then you've got a situation ripe for radical and sudden social change.

Sunstein's book is illuminating because it puts norms at the center of how we think about change. A culture is made up of norms — simple rules that govern what thoughts, emotions and behaviors are appropriate at what moment. It's appropriate to be appalled when people hit their dogs. It's inappropriate to ask strangers to tell you their income.

Most norms are invisible most of the time. They're just the water in which we swim. We unconsciously absorb them by imitating those around us. We implicitly know that if we violate a norm, there will be a social cost, maybe even ostracism.

From time to time, a norm stops working or comes into dispute. People are slow to challenge a broad norm, because they don't want to say anything that might make them unpopular. But eventually some people notice that, actually, there are a lot of people who secretly think a certain norm is wrong or outdated.

When this happens, permission is granted to go public with your private thoughts. More and more people speak up and you get rapid, cascading change. There used to be a social penalty for supporting gay marriage. Now there's a social penalty for not supporting it.

Sunstein points to the importance of "norm entrepreneurs," people who challenge old norms and create new ones. I'd add that there are at least five different kinds of norm-shifters, though often one person can perform several of these roles:

Namers. These are people who describe the context in some new way. They describe the reality around us in a way that makes visible what had previously been invisible or taken for granted. Charles Dickens made the poor visible to Victorian England.

Confrontationalists. Social movements move forward by declaring disgraceful things that had formerly been acceptable: segregation, littering, sexual harassment, etc. They wake people up to the ways an old norm is disgraceful by actively and visibly confronting it. The civil rights movement had a strategy aimed at creating a soap opera every day: Do something every day that forces the segregationists to display their own hatefulness and the unjustness of their norms. This is how you rouse people.

Illuminators. If confrontationalists tear down old norms, illuminators lift up new ones. They do this by showing how cool and just the norm breakers are and thus encourage others to copy them. The 1960s radicals violated all sorts of norms, but it was illuminators like Ken Kesey, Bob Dylan and Janis Joplin who created the counterculture identity: This is who we are. This is the story we are all a part of. This is how we behave.

Conveners. These are people who organize gatherings for those who want to shift the same norm. These gatherings embolden change agents by reminding them, "There are a lot of us!" They sponsor specific actions you can do to embody new norms. Everybody should recycle.

Celebrities. When famous, good-looking or cool people embrace a norm-shift, you get a mass cascade. That's when you win over all the people who may not be intrinsically interested in the cause, they just know that this is how the cool people think and act, so they want to do it, too.

We're living in a moment when norms are in maximum flux. Donald Trump has smashed through hundreds of our established norms and given people permission to say things that were unsayable just a decade ago. Especially in politics, the old rules of decorous behavior no longer apply.

But we all have the power to create cultural microclimates around us, through the way we act and communicate. When a small group of people shift the way they show approval and disapproval, it can shift the social cues among wider and wider circles. Suddenly, revolutions. The whole school of fish has shifted course in rapid ways that would have astounded us beforehand.

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A version of this article appears in print on April 9, 2019, on Page A27 of the New York edition with the headline: People Can Savage Social Norms, but Also Revive Them

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The New York Times

Why Housing Policy Is Climate Policy

In California, where home prices are pushing people farther from their jobs, rising traffic is creating more pollution.

By Scott Wiener and Daniel Kammen

Senator Wiener is the chairman of the California Senate's Housing Committee. Dr. Kammen is a professor of energy at the University of California, Berkeley.

March 25, 2019



Richard Vogel/Associated Press

California has long been seen as a leader on climate change. The state's history of aggressive action to reduce air pollution, accelerate the use of renewable energy and speed the transition to a low-carbon, climate-resilient economy has inspired governments around the world to set more ambitious climate goals.

But there is trouble on the horizon, and California's climate leadership is at risk.

Across most of the state's economy, greenhouse gas emissions have been trending steadily down. But ballooning car traffic on city streets and freeways is negating much of that progress. In California, about 40 percent of greenhouse gas emissions are from transportation, and they

are increasing. In some California counties, two-thirds of emissions are from vehicles.

In November, the California Air Resources Board released an update on efforts to reduce pollution from transportation. The numbers were alarming. Despite headlines about California’s push for more electric vehicles, pollution from cars is still climbing. “With emissions from the transportation sector continuing to rise, California will not achieve the necessary greenhouse gas emissions reductions to meet mandates for 2030,” the board warned.

The solution? “Significant changes to how communities and transportation systems are planned, funded and built,” the board said.

Put more directly, in order to solve the climate crisis, we have to solve the housing crisis.

Numerous climate researchers have a similar conclusion. In an assessment of the carbon footprint of 700 California cities, experts with the Renewable and Appropriate Energy Laboratory at the University of California, Berkeley, including one of us (Dr. Kammen), found that, for most coastal California cities, “infill” housing — that is, housing built in urban areas, near transit, jobs and services — can reduce greenhouse gas pollution more effectively than any other option.

Other research has confirmed this work, and bolstered the case for using denser housing and public transportation as weapons against climate change.

The relationship between housing and transportation emissions is not complicated. The housing crisis in our cities and job centers — California is short 3.5 million homes, according to a report by the McKinsey Global Institute — is forcing more workers to “drive till they qualify,” the term used by real estate agents for what a growing number of Californians have to do to find housing they can afford. As cities that are job centers make it hard or impossible to build housing — for example, through de facto bans on apartment buildings in areas zoned for single-family homes — people who are priced out move further away, resulting in sprawl that covers up farmland and open space, clogs freeways and increases greenhouse gas emissions.

Cities With the Most ‘Super-Commuters’

Of the 100 largest U.S. metropolitan areas, these are the 20 with the greatest proportion of residents working full-time who spend 90 minutes or more getting to their jobs. (Nationally, 72 percent of these super-commuters drive.) Eight of these areas are in California; the San Francisco area has seen the most growth in ultra-commuters since 2005.

PERCENTAGE OF RESIDENTS WORKING FULL-TIME WHO ARE SUPER-COMMUTERS		CHANGE IN NUMBER OF SUPER-COMMUTERS, 2005-17
Stockton-Lodi, Calif.	11%	+65%
Modesto, Calif.	9	+80
Riverside-San Bernardino-Ontario, Calif.	8	+34
New York-Newark-Jersey City	7	+34

Bridgeport-Stamford-Norwalk, Conn.	7	+42
San Francisco-Oakland-Hayward	5	+170
Washington-Arlington-Alexandria	5	+65
Baltimore-Columbia-Towson	5	+38
Allentown-Bethlehem-Easton, Pa.-N.J.	4	+8
Boston-Cambridge-Newton	4	+69
Sacramento-Roseville	4	+64
Atlanta-Sandy Springs-Roswell	3	+22
Chicago-Naperville-Elgin	3	-6
Los Angeles-Long Beach-Anaheim	3	+32
Seattle-Tacoma-Bellevue	3	+114
Oxnard-Thousand Oaks-Ventura, Calif.	3	+7
Philadelphia-Camden-Wilmington	3	+44
Bakersfield, Calif.	3	+43

By The New York Times | Source: Apartment List

The results are anything but equitable. By making housing shockingly expensive near jobs and transit, cities force low-income and working-class people to live far away from where they work. Our communities lose their economic diversity, while the abundant opportunities, services and neighborhood amenities of cities are walled off to all but the very wealthy.

Low-density, single-family-home zoning is effectively a ban on economically diverse communities.

Californians need more and better alternatives to cars for transportation, and easier access to walkable communities and affordable housing near mass transit. Of course, we also have to accelerate the electrification of our vehicles, another way to reduce pollution from cars. But, as the air resources board has found, electrification alone cannot happen fast enough to solve the problem, and we need to reduce the number of miles people drive by 25 percent.

In his first major speech since taking office, Gov. Gavin Newsom placed solving the housing crisis at the top of his agenda. Under his proposed budget, cities that don't build enough housing will lose state transportation funding.

And this legislative session, a bipartisan coalition of California legislators is supporting the More Homes Act, which is sponsored by one of us (Senator Wiener). The bill would override local restrictive zoning by legalizing small to midsize apartment buildings (up to five stories) near job centers and public transportation and set minimum affordability standards for some of those units. The legislation would also help existing renters keep their homes in areas that

qualify for new housing. The measures are intended to stem the growth of super-commuters — workers who are priced out of areas near their jobs and forced to drive long distances to get to work.

Cities across the United States face issues similar to those in California, too many of which have largely closed the doors to new residents — only to force them into similar patterns of crushing commutes and worsening pollution.

Measures like the More Homes Act offer a road map to cities and states that want to address these issues head-on. In fact, we'd argue that surging interest in urban housing and transportation issues, and the rise of the grass roots Yes in My Back Yard movement that's behind it, is perhaps the most hopeful development in the American climate movement in recent years.

Unlike many of our climate policy challenges, housing and transit are largely controlled by cities and states. If we can build more momentum for more homes near transit and jobs, we can continue to reduce greenhouse gas emissions, in California and around the country, and make sure our progress continues apace.

Scott Wiener, a Democrat, represents San Francisco in the California Senate, where he is chairman of the Housing Committee. Daniel Kammen is a professor and chairman of the Energy and Resources Group at the University of California, Berkeley.

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