

Міністерство освіти і науки України
Рівненський державний гуманітарний університет
Кафедра практики англійської мови

О.В. Касаткіна, Ю.В. Курята, Р.В. Хомицька

Методичний посібник для домашнього читання з англійської
мови (II курс, факультет іноземної філології)

Рівне - 2005

Методичний посібник для домашнього читання з англійської мови (II курс, факультет іноземної філології)/ Укладачі: О.В. Касаткіна, Ю.В. Курята, Р.В. Хомицька. – Рівне: РДГУ, 2005. – 68 с.

Укладачі: О.В. Касаткіна, Ю.В. Курята, Р.В. Хомицька – викладачі
кафедри практики англійської мови
РДГУ;

Рецензенти: Є.М.Васильєв – кандидат філологічних наук, доцент,
завідувач кафедри іноземних мов РІС „КІСУ”;
Н.І.Гаєва – кандидат педагогічних наук, доцент кафедри
практики англійської мови РДГУ

Відповідальний за випуск: О.В.Касаткіна – викладач кафедри
практики англійської мови РДГУ

Методичний посібник містить передмову, 15 різностильових текстів та чітко розроблену структуру вправ для розвитку лексичних, граматичних, мовленнєвих (монологічного та діалогічного) та письмових вмінь.

Затверджено на засіданні кафедри практики англійської мови, протокол № _____ від 2005 року.

Рекомендовано до друку науково-методичною радою РДГУ, протокол № _____ від _____ 2005 року.

Рівненський державний гуманітарний університет, 2005

ЗМІСТ

ПЕРЕДМОВА.....	4
ТЕКСТИ ТА ВПРАВИ:	
1. Who Saw Murder Didn't Call the Police <i>by Martin Gansberg</i>	5
2. A Brother's Dreams <i>by Paul Aronowitz</i>	8
3. The World War I Los Angeles Airplane.....	11
4. Waiting in Line All Night for Cure Tickets <i>by Chris Hernandez</i>	14
5. Oma: Portrait of a Heroine <i>by Maria Scamacca</i>	19
6. Comets, Meteors and Myth <i>by Robert Roy Britt</i>	22
7. A Time to Live, a Time to Die.....	26
8. Charles <i>by Shirley Jackson</i>	29
9. America is in the Heart <i>by Carlos Bulosan</i>	34
10. Artist Wants to Paint Moon, but Physics May Foil Plan <i>by Robert Roy Bill</i>	40
11. The Nuclear Winter <i>by Carl Sagan</i>	44
12. The Warming of the World <i>by Carl Sagan</i>	50
13. Gender Roles <i>by Bethany Dever</i>	55
14. There Will Come Soft Rains <i>by Ray Bradbury</i>	58
15. How to Poison Earth <i>by Linnea Saukko</i>	67

Передмова

Читання відіграє важливу роль в житті сучасної людини. Читання – це письмова форма спілкування, яка забезпечує нас інформацією з таких джерел як книги, журнали, газети тощо. Читаючи, ми взаємодіємо не з бумажними сторінками, не зі строчками літер, тобто не просто з книгою, а з людьми, які написали твір, з їх думками та переживаннями, поглядами та переконаннями. Сучасна методика викладання іноземних мов визначає читання не лише як засіб, але і як ціль навчання. На формування інтересу до читання та основних вмінь читання спрямована дана методична розробка.

Методична розробка призначена для студентів II курсу факультету іноземної філології.

Призначення методичної розробки – досягнення глибокого розуміння публіцистичного, художнього, наукового тексту і забезпечення цього розуміння в мовленнєвій діяльності студентів.

Посібник спрямований на розвиток навичок читання та формування основних вмінь, необхідних для ефективного читання, а саме: вмінь читати текст самостійно, не користуючись поясненнями; вміння здогадуватись про значення незнайомих слів, зміст тексту за заголовком; вміння передбачати зміст тексту за його назвою або передбачати фінал твору; вміння слідкувати за розвитком лінії сюжету; вміння читати тексти різних жанрів – художні, наукові, публіцистичні – і враховувати їх характер; вміння розуміти основну ідею і зміст твору; вміння розуміти загальний зміст тексту; вміння вибирати головне (необхідне) з тексту; вміння користуватись словником та іншими довідковими виданнями при читанні текстів, які своєю лексикою виходять за межі вивченого матеріалу, тобто наголос здійснюється саме на вмінні працювати самостійно, що відповідає основним засадам та вимогам Болонського процесу. Адже сучасні тенденції розвитку України пов'язані з інтеграційними процесами та впровадженням європейських норм і стандартів в освіту, науку та техніку.

Оволодіння даними вміннями здійснюється у вирішенні задач, які необхідно усвідомити як свої власні, а цього, за умови сформованої внутрішньої мотивації, можна досягти за рахунок їх пояснення (пояснення необхідності того чи іншого вміння), а також за рахунок правильної оцінки роботи студентів, їх успіхів або невдач.

Методична розробка включає в себе різностильові тексти та системи завдань, які складаються з чотирьох частин: *вокабуляра*, призначеного для активізації лексики, *граматичних завдань*, спрямованих на закріплення граматичних явищ, *мовних та мовленнєвих вправ*, спрямованих на сприйняття і розуміння тексту з метою глибшого проникнення в його зміст, формування вмінь застосування нової лексики у монологічному чи діалогічному мовленні; матеріал сприяє творчим видам роботи студентів, розвитку вмінь непідготовленого мовлення. Крім того методичний посібник містить завдання для розвитку вмінь *письма*.

1. Who Saw Murder Didn't Call the Police

Martin Gansberg

Martin Gansberg was a reporter and editor at The New York Times when he wrote "38 Who Saw Murder Didn't Call the Police" for that newspaper in 1964. This story about the murder of a young woman is doubly terrifying, for the thirty-eight witnesses to the crime might very well have saved her life if only they had had the courage to become involved.

For more than half an hour 38 respectable, law-abiding citizens in Queens watched a killer stalk and stab a woman in three separate attacks in Kew Gardens.

Twice their chatter and the sudden glow of their bedroom lights interrupted him and frightened him off. Each time he returned, sought her out, and stabbed her again. Not one person telephoned the police during the assault; one witness called after the woman was dead.

That was two weeks ago today.

Still shocked is Assistant Chief Inspector Frederick M. Lussen, in charge of the borough's detectives and a veteran of 25 years of homicide investigations. He can give a matter-of-fact recitation on many murders. But the Kew Gardens slaying baffles him— not because it is a murder, but because the "good people" failed to call the police.

"As we have reconstructed the crime," he said, "the assailant had three chances to kill this woman during a 35-minute period. He returned twice to complete the job. If we had been called when he first attacked, the woman might not be dead now."

This is what the police say happened beginning at 3:20 A.M. in the staid, middle-Hass, tree-lined Austin Street area:

Twenty-eight-year-old Catherine Genovese, who was called Kitty by almost everyone in the neighborhood, was returning home from her job as manager of a bar in Hollis. She parked her red Fiat in a lot adjacent to the Kew Gardens Long Island Railroad Station, facing Mowbray Place. Like many residents of the neighborhood, she had parked there day after day since her arrival from Connecticut a year ago, although the railroad frowns on the practice.

She turned off the lights of her car, locked the door, and started to walk the 100 feet to the entrance of her apartment at 82-70 Austin Street, which is in a Tudor building, with stores in the first floor and apartments on the second.

The entrance to the apartment is in the rear of the building because the front is rented to retail stores. At night the quiet neighborhood is shrouded in the slumbering darkness that marks most residential areas.

Miss Genovese noticed a man at the far end of the lot, near a seven-story apartment house at 82-40 Austin Street. She halted. Then, nervously, she headed up Austin Street toward Lefferts Boulevard, where there is a call box to the 102nd Police Precinct in nearby Richmond Hill.

She got as far as a street light in front of a bookstore before the man grabbed her. She screamed. Lights went on in the 10-story apartment house at 82-67 Austin Street, which faces the bookstore. Windows slid open and voices punctuated the early-morning stillness.

Miss Genovese screamed: "Oh, my God, he stabbed me! Please help me! Please

help me!"

From one of the upper windows in the apartment house, a man called down: "Let that girl alone!"

The assailant looked up at him, shrugged and walked down Austin Street toward a white sedan parked a short distance away. Miss Genovese struggled to her feet.

Lights went out. The killer returned to Miss Genovese, now trying to make her way around the side of the building by the parking lot to get to her apartment. The assailant stabbed her again.

"I'm dying!" She shrieked. "I'm dying!"

Windows were opened again, and lights went on in many apartments. The assailant got into his car and drove away. Miss Genovese staggered to her feet. A city bus, Q-10, the Lefferts Boulevard line to Kennedy International Airport, passed. It was 3:35 A.M.

The assailant returned. By then, Miss Genovese had crawled to the back of the building, where the freshly painted brown doors to the apartment house held out hope for safety. The killer tried the first door; she wasn't there. At the second door, 82-62 Austin Street, he saw her slumped on the floor at the foot of the stairs. He stabbed her a third time—fatally.

It was 3:50 by the time the police received their first call, from a man who was a neighbor of Miss Genovese. In two minutes they were at the scene. The neighbor, a 70-year-old woman, and another woman were the only persons on the street. Nobody else came forward.

The man explained that he had called the police after much deliberation. He had phoned a friend in Nassau County for advice and then he had crossed the roof of the building to the apartment of the elderly woman to get her to make the call.

"I didn't want to get involved," he sheepishly told the police.;

Six days later, the police arrested Winston Moseley, a 29-year-old business-machine operator, and charged him with homicide. Moseley had no previous record. He is married, has two children and owns a home at 133-19 Sutler Avenue, South Ozone Park, Queens. On Wednesday, a court committed him to Kings County Hospital for psychiatric observation.

When questioned by the police, Moseley also said that he had slain Mrs. Annie May ; Johnson, 24, of 146-12 133rd Avenue, Jamaica, on Feb. 29 and Barbara Kralik, 15, of 174-17 140th Avenue, Springfield Gardens, last July. In the Kralik case, the police are holding Alvin L. Mitchell, who is said to have confessed to that slaying.

The police stressed how simple it would have been to have gotten in touch with them. "A phone call," said one of the detectives, "would have done it." The police may be reached by dialing "O" for operator or SPring 7-3100.

Today witnesses from the neighborhood, which is made up of one-family homes in: the \$35,000 to \$60,000 range with the exception of the two apartment houses near the railroad station, find it difficult to explain why they didn't call the police.

A housewife, knowingly if quite casually, said, "We thought it was a lover's quarrel." A husband and wife both said, "Frankly, we were afraid." They seemed aware of the fact that events might have been different. A distraught woman, wiping her hands on her apron, said, "I didn't want my husband to get involved."

One couple, now willing to talk about that night, said they heard the first screams. The husband looked thoughtfully at the bookstore where the killer first grabbed Miss Genovese.

"We went to the window to see what was happening," he said, "but the light from our bedroom made it difficult to see the street." The wife, still apprehensive, added: "I put out the light and we were able to see better."

Asked why they hadn't called the police, she shrugged and replied: "I don't know."

A man peeked out from the slight opening in the doorway to his apartment and rattled off an account of the killer's second attack. Why hadn't he called the police at the time? "I was tired," he said without emotion. "I went back to bed."

It was 4:25 A.M. when the ambulance arrived to take the body of Miss Genovese. It drove off. "Then," a solemn police detective said, "the people came out."

Exercises

Vocabulary Exercises

1. Find in the text the English for:

напад, законопослушный, повзти, зупинитись, вбивство (3 слова), дивитись крадькома, спантеличити.

2. Give synonyms of the following words:

to stab, to scream, fatally, deliberation, sheepish, slaying, willing, solemn.

3. Explain the following words and word combinations:

respectable, to stalk, to grab, to shrug, to struggle to feet, to be slumped on the floor, to charge smb. with smth., witness, psychiatric observation.

4. Comment on the sentences:

1. He can give a matter-of-fact recitation on many murders.
2. Windows slid open and voices punctuated the early-morning stillness.
3. The freshly painted brown doors to the apartment house held out hope for safety.
4. They seemed aware of the fact that events might have been different.

Grammar Exercises

1. Find in the text sentences with direct speech and rewrite them using indirect speech.

2. Analyze the language of the text and prove that it is American English.

3. Comment on the grammatical figures in the following sentences:

1. If we had been called when he first attacked, the woman might not be dead now.
2. The man explained that he had called the police after much deliberation.
3. The police stressed how simple it would have been to have gotten in touch with them.
4. We went to the window to see what was happening, but the light from our bedroom made it difficult to see the street.

Questions for discussion:

1. Define all problems revealed in the story. Which one is most important? Why?
2. Why does Martin Gansberg describe the events in great detail?

3. What is Gansberg's reaction to the incident? What is his purpose in writing this story?
4. Do you consider the neighbours responsible for a young woman?
5. Were the thirty-eight witnesses able to save her life?
6. Why did the witnesses avoid getting involved? Is it natural for people?
7. Make up a list of factors which form a human being and influence the character and behaviour.
8. Look through newspapers to find any incident and try your hand in writing an impressive story describing it.

2. A Brother's Dreams

Paul Aronowitz

Each time I go home to see my parents at their house near Poughkeepsie, N.Y., my brother, a schizophrenic for almost nine years now, comes to visit from the halfway house where he lives nearby. He owns a car that my parents help him to maintain, and his food and washing are taken care of by the halfway house. Somewhere, somehow along the way, with the support of a good physician, a social worker and my ever-resilient parents, he has managed to carve a niche for himself, to bite off some independence and, with it, elusive dreams that, to any healthy person, might seem trivial.

My brother sits in a chair across from me, chain-smoking cigarettes, trying to take the edge off the medications he'll be on for the rest of his life. Sometimes his tongue hangs loosely from his mouth when he's listening or pops out of his mouth as he speaks—a sign of tardive dyskinesia, an often-irreversible side effect of his medication.

He draws deeply on his cigarette and tells me he can feel his mind healing—cells being replaced, tissue being restored, thought processes returning. He knows this is happening because he dreams of snakes, and hot, acrid places in which he suffocates if he moves too fast. When he wakes, the birds are singing in the trees outside his bedroom window. They imitate people in his halfway house, mocking them and calling their names. The birds are so smart, he tells me, so much smarter than we are.

His face, still handsome despite its puffiness (another side effect of the medications that allow him to function outside the hospital), and warm brown eyes are serious. When I look into his eyes I imagine I can see some of the suffering he has been through. I think of crossed wires, of receptors and neurotransmitters, deficits and surpluses, progress and relapse, and I wonder, once again, what has happened to my brother.

My compassion for him is recent. For many years, holidays, once happy occasions for our family of seven to gather together, were emotional torture sessions. My brother would pace back and forth in the dining room, lecturing us, his voice loud, dominating, crushing all sound but his own, about the end of the world, the depravity of our existences. His speeches were salted with paranoid delusions: our house was bugged by the F.B.I.; my father was Josef Mengele; my mother was selling government secrets to the Russians.

His life was decaying before my eyes, and I couldn't stand to listen to him. My 6 resentment of him grew as his behavior became more disruptive and aggressive. I saw him as being ultimately responsible for his behavior. As my anger increased, I withdrew from him, avoiding him when I came home to visit from college, refusing to discuss the bizarre ideas he brought up over the dinner table. When I talked with my sister or other two brothers about him, our voices always shadowed in whispers, I talked of him as of a young man who had chosen to spend six months of every year in a pleasant, private hospital on the banks of the Hudson River, chosen to alienate his family with threats, chosen to withdraw from the stresses of the world. I hated what he had become. In all those years, I never asked what his diagnosis was.

Around the fifth year of his illness, things finally changed. One hot summer night, 7 he attacked my father. When I came to my father's aid, my brother broke three of my ribs and nearly strangled me. The State Police came and took him away. My father's insurance coverage had run out on my brother, so this time he was taken to a locked ward at the state hospital where heavily sedated patients wandered aimlessly in stockinged feet up and down long hallways. Like awakening from a bad dream, we gradually began talking about his illness. Slowly and painfully, I realized that he wasn't responsible for his disease any more than a cancer patient is for his pain.

As much as I've learned to confront my brother's illness, it frightens me to think that one day, my parents gone from the scene, my siblings and I will be responsible for portions of my brother's emotional and financial support. This element of the future is one we still avoid discussing, much the way we avoided thinking about the nature of his disease and his prognosis. I'm still not capable of thinking about it.

Now I come home and listen to him, trying not to react, trying not to show disapproval. His delusions are harmless and he is, at the very least, communicating. When he asks me about medical school, I answer with a sentence or two—no elaboration, no revelations about the dreams I cradle in my heart.

He talks of his own dreams. He hopes to finish his associate's degree—the same one he has been working on between hospitalizations for almost eight years now—at the local community college. Next spring, with luck, he'll get a job. His boss will be understanding, he tells me, cutting him a little slack when he has his "bad days," letting him have a day off here or there when things aren't going well. He puts out his cigarette and lights another one.

Time stands still. This could be last year, or the year before, or the year before that, I'm within range of becoming a physician, of realizing something I've been working toward for almost five years, while my brother still dreams of having a small job, living in his own apartment and of being well. As the smoke flows from his nose and mouth, I recall an evening some time ago when I drove upstate from Manhattan to tell my parents and my brother that I was getting married (an engagement later severed). My brother's eyes lit up at the news, and then a darkness fell over them.

"What's wrong?" I asked him.

"It's funny," he answered matter-of-factly. "You're getting married, and I've never i: even had a girlfriend." My mother's eyes filled with tears, and she turned away. She was trying her best to be happy for me, for the dreams I had—for the dreams so many of us take for granted.

"You still have us," I stammered, reaching toward him and touching his arm. All of a sudden my dreams meant nothing; I didn't deserve them and they weren't worth talking about. My brother shrugged his shoulders, smiled and shook my hand, his large, tobacco-stained fingers wrapping around my hand, dwarfing my hand.

Exercises

Vocabulary Exercises

1. Find in the text the English for:

Сильний духом, побічний ефект, клітина, тканина, співчуття, діагноз, обурення, віддаляти, страховка, поступово, несхвалення.

2. Give synonyms of the following words:

To carve, trivial, tardive dyskinesia, to heal, to mock, illness, to react, harmless.

3. Explain the following words and word combinations: halfway house, to chain-smoke, loosely, to imitate, puffiness, receptors, disruptive behavior, to withdrew, bizarre ideas, to wander aimlessly, to confront, a locked ward, siblings, to cradle, to cut somebody a little slack.

4. Comment on the sentences:

- For many years, holidays, once happy occasions 5 for our family of seven to gather together, were emotional torture sessions.

- Now I come home and listen to him, trying not to react, trying not to show disapproval.

- Time stands still.

- I saw him as being ultimately responsible for his behavior.

- His life was decaying before my eyes, and I couldn't stand to listen to him.

Grammar exercises

1. Write out all words ending in –ing and define a part of speech for each of them.

2. Rewrite the third paragraph changing the verbs used in Present Tense Form into the verbs in Past Tense Form.

3. Translate the following sentences into English:

1. Якби я раніше здогадався, як боляче моєму брату чути про моє одруження, я б ніколи не розповідав про це.

2. Я працюю вже 5 років, в той час як брат все ще мріє отримати будь-яку роботу.

3. Відверто кажучи, я боявся, що через кілька років батьків не стане і мені доведеться опікуватись братом.

4. Коли б ви не заглянули в його очі, ви завжди побачите страждання.

5. Я спостерігав як мій брат крокував по кімнаті взад і вперед, бурмочучи незрозумілі слова.

6. Хотілося б знати, що я відчував би, будучи на місці брата.

7. Почувши зворушливі слова сина, мати, не відповіши, відвела очі повні сліз.

Questions for discussion:

1. How do you understand the words "The birds are so smart, so much smarter than we are."?

2. Do you consider the way the ill man's relatives treat him right or

wrong?

3. Why is it so difficult to have relationship with such ill people?
4. Comment on the title of the story.
5. The man was dreaming to have a girlfriend. Was he able to love?
6. Why did the author never ask what his brother's diagnosis was?
7. Did he realize his being ill?
8. Why was gathering together emotional torture sessions for the family?
9. Write a short article "Who is responsible for helping ill people?"

3. THE WORLD WAR I LOS ANGELES AIRPLANE

HE was found lying dead near the television set on the front room floor of a small rented house in Los Angeles. My wife had gone to the store to get some ice cream. It was an early-in-the-night-just-a-few-blocks-away store. We were in an ice-cream mood. The telephone rang. It was her brother to say that her father had died that afternoon. He was seventy. I waited for her to come home with the ice cream. I tried to think of the best way to tell her that her father was dead with the least amount of pain but you cannot camouflage death with words. Always at the end of the words somebody is dead.

She was very happy when she came back from the store.

"What's wrong?" she said.

"Your brother just called from Los Angeles," I said.

"What happened?" she said.

"Your father died this afternoon."

That was in 1960 and now it's just a few weeks away from 1970. He has been dead for almost ten years and I've done a lot of thinking about what his death means to all of us.

1. He was born from German blood and raised on a farm in South Dakota. His grandfather was a terrible tyrant who completely destroyed his three grown sons by treating them exactly the way he treated them when they were children. They never grew up in his eyes and they never grew up in their own eyes. He made sure of that. They never left the farm. They of course got married but he handled all of their domestic matters except for the siring of his grandchildren. He never allowed them to discipline their own children. He took care of that for them. Her father thought of his father as another brother who was always trying to escape the never-relenting wrath of their grandfather.

2. He was smart, so he became a schoolteacher when he was eighteen and he left the farm which was an act of revolution against his grandfather who from that day forth considered him dead. He didn't want to end up like his father, hiding behind the barn. He taught school for three years in the Midwest and then he worked as an automobile salesman in the pioneer days of car selling.

3. There was an early marriage followed by an early divorce with feelings afterward that left the marriage hanging like a skeleton in her family's closet because he tried to keep it a secret. He probably had been very much in love.

4. There was a horrible automobile accident just before the First World War in which everybody was killed except him. It was one of those automobile accidents

that leave deep spiritual scars like historical landmarks on the family and friends of the dead.

5. When America went into the First World War in 1917, he decided that he wanted to be a pilot, though he was in his late twenties. He was told that it would be impossible because he was too old but he projected so much energy into his desire to fly that he was accepted for pilot training and went to Florida and became a pilot.

In 1918 he went to France and flew a De Havilland and bombed a railroad station in France and one day he was flying over the German lines when little clouds began appearing around him and he thought that they were beautiful and flew for a long time before he realized that they were German anti-aircraft guns trying to shoot him down.

Another time he was flying over France and a rainbow appeared behind the tail of his plane and every turn that the plane made, the rainbow also made the same turn and it followed after him through the skies of France for part of an afternoon in 1918.

6. When the war was over he got out a captain and he was travelling on a train through Texas when the middle-aged man sitting next to him and with whom he had been talking for about three hundred miles said, "If I was a young man like you and had a little extra cash, I'd go up to Idaho and start a bank. There's a good future in Idaho banking."

7. That's what her father did.

8. He went to Idaho and started a bank which soon led to three more banks and a large ranch. It was by now 1926 and everything was going all-right.

9. He married a schoolteacher who was sixteen years his junior and for their honeymoon they took a train to Philadelphia and spent a week there.

10. When the stock market crashed in 1929 he was hit hard by it and had to give up his banks and a grocery store that he had picked up along the way, but he still had the ranch, though he had to put a mortgage on it.

11. He decided to go into sheep raising in 1931 and got a big flock and was very good to his shepherders. He was so good to them that it was a subject of gossip in his part of Idaho. The sheep got some kind of horrible sheep disease and all died.

12. He got another big flock of sheep in 1933 and added more fuel to the gossip by continuing to be so good to his men. The sheep got some kind of horrible sheep disease and all died in 1934.

13. He gave his men a big bonus and went out of the sheep business.

14. He had just enough money left over after selling the ranch to pay off all his debts and buy a brand-new Chevrolet which he put his family into and he drove off to California to start all over again.

15. He was forty-four, had a twenty-eight-year-old wife and an infant daughter.

16. He didn't know anyone in California and it was the Depression.

17. His wife worked for a while in a prune shed and he parked cars at a lot in Hollywood.

18. He got a job as a bookkeeper for a small construction company.

19. His wife gave birth to a son.

20. In 1940 he went briefly into California real estate, but then decided not to pursue it any further and went back to work for the construction company as a

bookkeeper.

21. His wife got a job as a checker in a grocery store where she worked for eight years and then an assistant manager quit and opened his own store and she went to work for him and she still works there.

22. She has worked twenty-three years now as a grocery checker for the same store.

23. She was very pretty until she was forty.

24. The construction company laid him off. They said he was too old to take care of the books. "It's time for you to go out to pasture," they joked. He was fifty-nine.

25. They rented the same house they lived in for twenty-five years, though they could have bought it at one time with no down payment and monthly payments of fifty dollars.

26. When his daughter was going to high-school he was working there as the school janitor. She saw him in the halls. His working as a janitor was a subject that was very seldom discussed at home.

27. Her mother would make lunches for both of them.

28. He retired when he was sixty-five and became a very careful sweet wine alcoholic. He liked to drink whiskey but they couldn't afford to keep him in it. He stayed in the house most of the time and started drinking about ten o'clock, a few hours after his wife had gone off to work at the grocery store.

29. He would get quietly drunk during the course of the day. He always kept his wine bottles hidden in a kitchen cabinet' and would secretly drink from them, though he was alone.

He very seldom made any bad scenes and the house was always clean when his wife got home from work. He did though after a while take on that meticulous manner of walking that alcoholics have when they are trying very carefully to act as if they aren't drunk.

30. He used sweet wine in place of life because he didn't have any 'more life to use.

31. He watched afternoon television. ,

32. Once he had been followed by a rainbow across the skies of France while flying a World War I airplane carrying bombs and machine guns.

33. "Your father died this afternoon." . . .

Exercises

Vocabulary Exercises

1. Find in the text the English for: народити на світ, новенький, відчайдушно, нерухомість, двірник, бухгалтер, звільнитися з роботи, злигодні, контролер, пасовище, парковка, будівельна компанія, тиран.

2. Explain the following words and word combinations:

to lay somebody off, scar, gossip, rented house, to treat somebody, domestic matters, never-renting wrath, to start a bank, to give a big bonus, to pay off one's debts, meticulous manner.

3. Comment on the sentences:

We were in an ice-cream mood.

Her father was dead with the least amount of pain.

You cannot camouflage death with wards.

I've done a lot of thinking.
He didn't want to end up like his father.
The pioneer days of car selling.
He projected so much energy into his desire to fly.
There is a good future in Idaho banking.
He had picked up along the way.
He added more fuel to the gossip.
It's time for you to go out to pasture.

Grammar exercises

1. Fill in prepositions: to be ___ mood; to make sure ___ that; an act ___ revolution ___ his grandfather; to shoot somebody ___; to fly ___ France; the man sitting next ___ him; to be hit ___ it; to put a mortgage ___ it; to be good ___ men; to go ___ the business; to start all ___ again; to park cars ___ a lot; to give birth ___ a son; to lay somebody ___.

2. Comment on the grammatical figures in the following sentences:

1. He waited for her to come home.
2. He was told that it would be impossible because he was too old.
3. One day he was flying over the German lines when little clouds began appearing around him.
4. His working as a janitor was a subject that was very seldom discussed at home.
5. He started drinking about ten o'clock, a few hours after his wife had gone off to work at the grocery store.

Questions for discussion

1. Who is the main character? Do you know his name?
2. Why didn't the author mention his name?
3. Is the story written in optimistic mood?
4. Describe the childhood of the character.
5. What jobs did he try himself in?
6. Which was his family life?
7. Tell about the happy moments in his life.
8. How did he end up?
9. What could he feel being old?
10. Do you think his life was unusual?
11. Why does the author write about a rainbow in the end of the story?
12. Choose certain moment in the man's life at which everything could change and describe another way of his living.

4. Waiting in Line All Night for Cure Tickets

Chris Hernandez

In this selection, student writer Chris Hernandez examines a favorite pastime of America's music lovers: waiting in line to get concert tickets. He also discusses his love of the English rock band The Cure, and the fanaticism that prompted him to wait up all night for tickets to one of the band's concerts.

Five years, five years I had to wait for this night to happen, and it's finally here, The Cure is actually coming to California and I'm waiting in line to buy a ticket. It's

about 9 o'clock on a warm Friday night; I'm patiently sitting in front of a Blockbuster Music store waiting for thirteen hours 'til 11 o'clock the next morning. I know this is going to be an extremely long night, but with my girlfriend by my side, and other hopeless Cure fans surrounding me, I couldn't wish to be in a happier place.

But before I explain to you what a thrill this night was for me, I must first take you back to the very first time I ever heard The Cure's music. This was five years ago, and I was only a mere freshman in high school. My brother was playing a tape of The Cure on his stereo when I ventured by and heard my very first song. The song was titled "Why can't I be you?" and let me tell you I was immediately taken aback by this song that was so unlike anything else I have ever heard. And being so unfamiliar with something I didn't quite understand, I naturally made fun of it.

Like a young child watching two teenagers indulge in a long passionate kiss, I was absolutely appalled at the idea of anything so mysterious and obscure. But the more I noticed ..., the more curious I would become, eventually giving in and experiencing firsthand exactly what it was I was missing out on. In this case, it was the perfect form of music that seemed to actually breathe into me the power to move me, excite me, depress me, and even love.

The Cure's amazingly original blend of music contained not only rich and colorful melodies but also painfully dark and emotional lyrics that could sometimes leave me feeling emotionally vulnerable as the music overpowered my own senses. Their music can capture any emotion I have ever felt, and accurately play a song that would enhance that feeling several times over. I could fall in love twelve times in a row just by listening to a single album.

Now that I had my first taste of The Cure, I wanted it all. So the next step was to try to buy a few more Cure albums. Well, it wasn't really a few albums I bought, it was some T-shirts, and some postcards, a few books, posters, buttons, patches, stickers, and eventually even a comic book.

Now that I owned just about everything with the name "Cure" on it, I was slowly realizing that I was on my way to being a fanatic. Ahhh! Now I don't know about you, but when I hear the word "fanatic" I automatically think of an overweight woman kneeling down inside her run-down trailer worshipping a bottle of Elvis sweat. This was definitely not where I wanted to end up, so with a quick halt on my minor obsession with Robert Smith I was in the clear.

After a few months (or was it years?) of being a semi-fanatic, I realized I should focus my attention on what really got me started as a fan in the first place, and that was the music. Coming full circle from music lover to obsessed fan and back to music lover did take me quite awhile but I figure I'm a better person for it. So now that you know what a rather deranged person I must be, you should also be able to understand why this night was so important to me.

Now back to the parking lot. So there I am sitting on the concrete walkway in front of a Blockbuster Music center resembling a homeless vagrant with nothing better to do but sit and aimlessly daydream. Of course this vagrant had a purpose for being there, and that was to get my tickets, go to the concert, and get a quick glimpse of the Cure just before fainting.

While waiting in line—I was sixth—I occasionally looked around at all the other

fans, and tried to make eye contact with someone in order to strike up a conversation. The only problem was that I kept looking away out of simple shyness. After about three hours of almost total silence, this guy about two spots in front of me commented on a bumper sticker that was on the back of my girlfriend's car. Now you must understand that this was no ordinary bland "I Love My Dog" kinda sticker. Oh no, this was a tribute to the exceptionally great piece of work that only the very coolest of the cool would recognize. Yes sir, I'm talking about one of the greatest movies ever produced: Quentin Tarantino's own "Reservoir Dogs." And this guy commented on its greatness! We immediately struck up an involved conversation on movie directors and their films. After about thirty minutes of just talking with one another, we were practically best friends. James, the guy I just met, invited some of his friends from the front of the line over to our little camp. Eventually our once straight and orderly line turned into a small crowd of people all gathered together indulging in the wonderful art of conversation. Man was this night turning out great!

After about an hour of talking, my brother thought it was a good idea to go out for an always mood-ruining beer run. I personally didn't want alcohol to be any part of this night, but my brother is twenty-one, and at that age people are always so proud to display the fact that they can now buy it legally. Shortly after his return, several participants began showing obvious signs of inebriation, and began acting like a couple of fifteen-year-olds at a high school ditching party.

Eventually those silly people wandered off to either pass out, or be alone, my brother being one of them. Feeling the silence from the sudden disappearance of about half our group, I decided to cruise over to my car and search for the ultimate Cure tape that I so proudly pieced together myself. After that puppy was found, I handed the tape over to this chap named Nathan who had a stereo system in his truck. Within seconds The Cure's music began joyously playing through the truck speakers miraculously transforming the scene into a miniature party that only the very best of friends attended. This was an absolutely beautiful moment. Unfortunately the long night did begin to take its toll on us, and the party slowly diminished to a few passed out people scattered throughout the cold concrete walkway. Those of us who weren't passed out could only wish we were, but instead lay awake dreaming of the concert to come.

"Hurry, hurry wake her up or she's gonna die!" Was the next thing I remember hearing. When I drearily looked around me to see what the commotion was about, I saw Nathan trying to pick up an almost lifeless looking body off the ground. Everyone there either started asking about what was going on, or telling each other what was going on. The story instantly flew my way that this unknown girl apparently drank an entire bottle of Robitussin, and passed out. Nathan was afraid that she was going to die unless she woke up immediately and start walking around the parking lot.

After about ten minutes of watching Dr. Nathan ; stumble around the dark lot with this mildly coherent girl in his grasp, I realized that this would be a perfect time to take a nice quiet stroll around the premises. Two of my newly found friends also felt this important need to take a walk, and quickly accompanied me. One of the two friends didn't want to just walk around aimlessly, so he set up a self-proclaimed

mission to find my missing brother. After only a few minutes of walking, we turned around a dimly lit corner of the building, and to my surprise, found my brother sitting on the ground with his back against the wall. After that not much happened for the rest of the night, which wasn't that long, because morning was only about an hour away.

The next day rolled on by, and the sun quickly rose to savagely burn everyone there wearing the color black. This was pretty much everyone, with the exception of the Hootie and the Blowfish fans that began arriving around 9 o'clock. When they first arrived, a few of them slowly joined our scattered little line with a hint of caution on their faces. Constantly staring at our dark clothing and original dressing attire, the Hootie fans actually seemed a little fearful of us. One would think that these deprived people had never seen another human being wear something other than a T-shirt and jeans. After about fifteen minutes of watching the frightened Hooties quietly stand behind us, we noticed some of them turn around and leave altogether. These "dedicated" Hootie fans actually left the line, the parking lot, and the entire Blockbuster area just because of the way we looked. Those who didn't leave the line felt it would somehow be safer if they formed their own line on the other side of the door.

Now that our line was segregated into two parts, a mysterious ticket scalper approached the lot. This ticket scalper, who looked uncannily like Weird Al Yankovich, decided to hit the Cure line first. What this evil man proposed was to have the first four people in line buy tickets for him to resell, with an additional 25 bucks for their services. At first this may not seem like such a big deal, but this does pose a big problem for the rest of us in line. Ticket Master only lets each person purchase a maximum of four tickets. This is so a scalper can't buy all the tickets first, and then later sell them to others at an unreasonably high price. Not only is this conniving plan just plain unfair, but it would also diminish everyone else's chance of getting good seats. I, being only sixth in line, was beginning to get extremely uneasy about the thought of my fellow fans buying extra tickets for Mr. Evil Scalper and destroying our chance at getting decent seats for ourselves.

What had happened, to my surprise, was that every single person the scalper approached turned him down. Their reason: "Why should I sell out to you when you didn't even wait in line like the others?" The guy didn't even know who The Cure was. The only thing he wanted was money, and that's not what true fans are about.

After miserably failing with our line, the corrupt little scalper cruised on over to the Hootie line. This was a much different scenario. Whoever the devious scalper approached promptly sold out and bought however many tickets he wanted them to. The Cure group just defined fan loyalty, while the Hooties had something completely different to say. What that statement is, I'll probably never know.

11 o'clock eventually rolled around and the tickets finally went on sale! I was close to the front of the line, so my seats were positively excellent. I was going to be so close to the stage, I'd be able to see every expression on Robert's face. Regardless of where my seats were, I would have been completely satisfied with sitting in the parking lot listening to the music, which is where I could have easily ended up, since the concert sold out in about ten minutes. You see, the whole idea of going to see The

Cure live wasn't just to see them in person. It was to experience the bonding I felt with the people at Blockbuster, only this time it was going to be with several thousand other people. There is this indescribable feeling of unity with everyone else there that seems to say that no matter who you are, or what you look like, we're all going to simply have a great time. This is an absolutely beautiful experience that I wish everyone to feel at least once.

Exercises

Vocabulary Exercises

1. Find in the text the English for: палкий, таємничий, беззахисний, збільшувати, аля, послідовний, пристойний, розкидати, очевидно, жорстокий, обездолений, спотикатись, спекулянт, лукавий, точний, схопити, бетонний.

2. Give synonyms from the text to the following words: spending a good time; excitement; simple; different from; hard for understanding; interesting; increase; advertising; to be devoted to; to concentrate; to lose consciousness; without any purpose; to begin a conversation; to demonstrate; to look for; lorry; to get smaller; walk; to be afraid of; spooky; whole.

3. Explain the following words and word combinations: unfamiliar, to be appalled at, obsession, to be a fanatic, a vagrant, a hint of caution, corrupt, decent seats.

4. Give the names to some persons (from the text):

1. A person who is fond of music.
2. A person who is worshipping somebody.
3. A person who has no home.
4. A person who makes a film.
5. A person who resells goods.

Grammar exercises

1. Write out all adverbs which end in -ly and translate them.

2. Write out all words ended in -ing and define them as

- verbs in the continuous tense form
- participles I
- gerunds

Questions for discussion

1. Where, when and what was the writer waiting for?
2. Describe the very first time Chris heard the Cure's music.
3. In what way did music of the band influence Chris' mind and soul, his emotions?
4. Could Chris be called fanatic? Proof it.
5. Who do the words "an almost lifeless looking body" concern?
6. What is the author's attitude towards the ticket scalper? Which adjectives does he use to describe him?
7. Was this night of great importance for Chris? Why?
8. Write the composition describing any interesting case or event from your life. Use vivid language from the text.

5. Oma: Portrait of a Heroine

Maria Scamacca

When I first met Oma six years ago, she looked about eighty years old, was a few pounds over-weight for her medium frame, and was slightly hunched over. She wore a flowered house dress, a starched white apron, and old, scuffed leather loafers. Oma was deaf in one ear from a neglected childhood ear infection, and half of her face drooped from Bell's palsy. She shuffled her feet and held on to the furniture with swollen, scarred hands as she walked. Despite Oma's disability and the fact that she lived alone, her house looked neat, but there were small crumbs and stains on the tables, and particles of food were stuck to some of the dishes, unnoticed by eyes weakened with age.

That's why I was shocked when she led me through the back door to a garden that she boasted of planting and maintaining alone. It was like no garden I had ever seen, an acre of food and beauty. Ready to be picked and eaten were neat and orderly rows of potatoes, carrots, asparagus, onions, peppers, lettuce, lima beans, and string beans. Her garden also boasted strawberries, blueberries, gooseberries, currant, peach trees, watermelons, and many other fruits. And there were flowers everywhere: zinnias, day lilies, marigolds, irises, and petunias. I sensed immediately that this paradise was the creation of a unique energy, courage, and beauty I came to see in Oma.

Each year the impossible garden yields bushels of fruits and berries for the jams and jellies that Oma cooks and jars herself. She also cans fruit and vegetables, and she uses the fruit in the fillings of luscious pastries that, as I was to learn, have made her famous among friends, family, and neighbors. She still does all of her own cooking and had been known, until only recently, to throw holiday dinners for more than twenty people.

From the day I met Oma, I grew to admire her and have looked forward to visiting. Almost ever)' Sunday after church, my husband's family and I gather around her dining room table for fresh coffee, homemade Prinz Regent Torte (a seven-layer cake), Schwarzwald Kirschtorte (Black Forest cherry cake), warm cookies, and good talk.

Oma dominates the conversation, filling us with stories of her childhood and of World War II; she hardly stops to take a breath unless one of us asks a question or implores her to translate the frequent German or Hungarian phrases that pop out of her mouth. At such times, we play guessing games as Oma tries to explain in broken English a word or expression for which she knows no English equivalent.

Oma was born in Hungary. She was an only child—rare in the early days of this century—the only surviving baby of four pregnancies. Her mother died when Oma was in her teens, and she was left alone to keep house for her father. At eighteen, she married a widower with a young daughter; the couple eventually had three other children. They lived on a farm near the Rumanian border on which they grew and raised all their food, even the grapes from which they made their own wine.

Farm life was hard, but Oma took to it well. In addition to cooking and house-keeping, she had to tend to the horses and other farm animals, bake bread, make sausage, and salt the meats the family would eat year round. Oma is fond of telling me how she force-fed geese by stuffing balls of bread down their long necks with her fingers. Her geese got so fat they couldn't fly, but they brought the best prices at the

market, she often reminds me.

Her family also raised their own pigs. But when it came time to slaughter the animals, her husband, Opa, asked his neighbor to do it. In return, Opa slaughtered the neighbor's pigs. "He felt bad, you know, killing his own pig," Oma said. At times, Oma and Opa hired outside help, whom they paid with bread and salted meat, but they did most of the work themselves, and they prospered

Then the war came. First her horses were stolen by Russian soldiers. Then the family was removed from their farm, and Oma found herself in a Russian concentration camp. The stories from this period of her life are confusing. I have heard bits and pieces of them repeatedly over the past six years, and I have had to reconstruct them myself. Once in a while I ask Oma to clarify the order of events, but she doesn't get very far until she starts an entirely new story.

After the war, the borders of countries were redrawn, and Oma's family was displaced with only a few hours' notice. Allowed to take only the clothes on their backs and whatever they could carry, they were put into a cattle car on a long freight train. The new government provided no compensation for their land and told them to leave all of their possessions behind. The only explanation was that their family had originally come from Germany and that they were required to leave Hungary and return to the land of their ancestors. This was not punishment, the authorities explained; it was "humane displacement."

Before they boarded the train, the family had to collect enough grain and other provisions to feed themselves during the long trip. But they saw little of their food; Oma thinks it was stolen and sold on the black market. "There were no bathrooms on the train," Oma explained. "If someone had to defecate or urinate, they were held by others out of the open doors over the side of the moving train. And they call that humane!"

When they arrived in Germany, Oma and her family were placed in a room in a run-down building that had holes in the walls and was full of rats. Her husband developed pneumonia. Sick for months, he almost lost the will to live and just lay in bed. When he finally recovered, they moved to America, but they had to leave their daughter behind because she had tuberculosis. Oma still weeps openly whenever she recalls being forced to abandon her child. Luckily, however, things turned out well for "Tante Vicki" who still lives in Germany and now has a family of her own.

In time, the family settled in Millstone, New Jersey, and began to build a new life in what was then a small rural community. In the early 1950s, however, Oma and Opa lost their oldest son in the Korean War, so when the other two boys married and moved out of the house, the two old people were on their own.

Several years ago, Opa died of lung cancer contracted from many years of working in an asbestos factory. Oma continues to receive a good pension and health benefits from his employer. They come in handy, for over the past few years she has been hospitalized several times. Last summer she got so sick she couldn't even plant her garden, so all of her grandchildren got together to plant it for her. That is the only request she has ever made of us.

It is hard to see a woman who was once so strong grow old and weak. At times Oma feels quite useless, but she can still tell wonderful stories, and we listen avidly. I

wonder if there will be a garden this year.

Exercises

Vocabulary Exercises

1. Find in the text the English for:

сугулитись, човгати ногами, крихти, бути госпіталізованим, рак легень, концтабір, плями, не дочувати на одне вухо, консервувати овочі, чорний ринок, накрохмалений фартух, виїхати з будинку.

2. Give synonyms of the following words:

slightly, to prosper, to reconstruct, to clarify, entirely, to provide, displacement, provision, to abandon, to be forced, benefit.

3. Explain the following words and word combinations:

run-down-building, neglected childhood ear infection, disability, to maintain, lettuce, paradise, unique, compensation, black market, rural, widower, ancestors, avidly, fillings, humane.

4. Comment on the sentences:

1. Oma dominates the conversation, filling us with stories of the childhood and of World War II.
2. Farm life was hard, but Oma took to it well.
3. It is hard to see a woman who was once so strong grow old and weak.

Grammar exercises:

1. Find in the text Participle II used as an attribute.

2. Put the Infinitive in the correct form:

1. It was like no garden I (to see) ever.
2. Her horses (to steal) Russian soldiers.
3. From the day I (to meet) Oma, I grew to admire her and (to look) forward to (to visit).
4. I (to hear) bits and pieces of them repeatedly over the past six years.
5. She still (to do) all of her own cooking and (to know) until only recently to throw holiday dinners for more than twenty people.

3. State the parts of the speech for the following words, consulting the text:

whenever, guessing, eventually, housekeeping, freight, recovered, raised, back, surviving, at times, repeatedly, unless.

4. Point out the clauses in the following sentences and define the kinds of them:

1. That's why I was shocked when she led me through the backdoor to a garden that she boasted of planting and maintaining alone.
2. The only explanation was that their family had originally come from Germany and that they were required to leave Hungary and return to the land of their ancestors.
3. When he finally recovered, they moved to America, but they had to leave their daughter behind because she had tuberculosis.
4. That is the only request she has ever made of us.

Questions for discussion:

1. Why did the author give such a title to the story?
2. Does Oma like her life? Do you consider it worth living?

3. Does the author reveal any political problems in the text? Which one?
4. Prove that historical events can influence the human life greatly.
5. What destroys human life most of all: wars, poverty or diseases? Explain your opinion.
6. What details used in the text help readers to understand the contests?
7. Write a composition, answering the question “Can a person direct and control her or his life?”

6. Comets, Meteors and Myth

Robert Roy Britt

“...and the seven judges of hell... raised their torches, lighting the land with their livid flame. A stupor of despair went up to heaven when the god of the storm turned daylight into darkness, when he smashed the land like a cup.”

An account of the Deluge from the Epic of Gilgamesh, circa 2200 B.C. if you are fortunate enough to see the storm of shooting stars predicted for the November, 18 peak of the Leonid meteor shower, you’ll be watching a similar but considerably less powerful version of events which some scientists say brought down the world’s first civilizations.

The roof of both: debris from a disintegrating comet.

Biblical stories, apocalyptic visions, ancient art and scientific data all seem to intersect at around 2350 B.C., when one or more catastrophic events wiped out several advanced societies in Europe, Asia and Africa.

Increasingly, some scientists suspect comets and their associated meteor storms were the cause. History and culture provide clues: Icons and myths surrounding the alleged cataclysms persist in cults and religions today and even fuel terrorism. And a newly found 2-mile-wide crater in Iraq, spotted serendipitously in a perusal of satellite images, could provide a smoking gun. The crater’s discovery, which was announced in a recent issue of the journal *Meteoritics and Planetary Science*, is a preliminary finding. Scientists stress that a ground expedition is needed to determine if the landform was actually carved out by an impact.

Yet the crater has already added another chapter to an intriguing overall story that is, at best, loosely bound. Many of the pages are washed away or buried. But several plot lines converge in conspicuous ways.

Too many coincidences.

Archeological findings show that in the space of a few centuries, many of the first sophisticated civilizations disappeared. The Old Kingdom in Egypt fell into ruin. The Akkadian culture of Iraq, thought to be the world’s first empire, collapsed. The settlements of ancient Israel, gone. Mesopotamia, Earth’s original breadbasket, dust.

Around the same time – a period called the Early Bronze Age – apocalyptic writings appeared, fueling religious beliefs that persist today.

The Epic of Gilgamesh describes the fire, brimstone and flood of possibly mythical events. Omens predicting the Akkadian collapse preserve a record that “many stars

were falling from the sky.” The “Curse of Akkad,” dated to about 2200 B.C., speaks of “flaming potsherds raining from the sky.”

Roughly 2000 years later, the Jewish astronomer Rabbi bar Nachmani created what could be considered the first impact theory: that Noah’s Flood was triggered by two “stars” that fell from the sky. “When God decided to bring about the Flood, He took two stars from Khima, threw them on Earth, and brought about the Flood.”

Another thread was woven into the tale when, in 1650, the Irish Archbishop James Ussher mapped out the chronology of the Bible – a feat that included stringing together all the “begats” to count generations – and put Noah’s great flood at 2349 B.C.

All coincidence?

A number of scientists don’t think so. Mounting hard evidence collected from tree rings, soil layers and even dust that long ago settled to the ocean floor indicates there were widespread environmental nightmares in the Near East during the Early Bronze Age: Abrupt cooling of the climate, sudden floods and surges from the seas, huge earthquakes.

Comet as a culprit. In recent years, the fall of ancient civilizations has come to be viewed not as a failure of social engineering or political might but rather the product of climate change and, possibly, heavenly happenstance. As this new thinking dawned, volcanoes and earthquakes were blamed at first. More recently, a 300-year drought has been the likely suspect.

But now more than ever, it appears a comet could be a culprit. One or more devastating impacts could have rocked the planet, chilled the air, and created unthinkable tsunamis – ocean waves hundreds of feet high. Showers of debris wafting through space – concentrated versions of the dust trails that create the Leonids – would have blocked the Sun and delivered horrific rains of fire to Earth for years.

So far, the comet theory lacks firm evidence. Like a crater.

Now, though, there is this depression in Iraq. It was found accidentally by Sharad Master, a geologist at the University of Witwatersrand in South Africa, while studying satellite images. Master says the crater bears the signature shape and look of an impact caused by a space rock.

The findings has not been developed into a full-fledged scientific paper, however, nor has it undergone peer review. Scientist in several fields were excited by the possibility, but they expressed caution about interpreting the preliminary analysis and said a full scientific expedition to the site needs to be mounted to determine if the landforms do in fact represent an impact crater.

Researches would look for shards of melted sand and telltale quartz that had been shocked into existence. If it were a comet, the impact would have occurred on what was once a shallow sea, triggering massive flooding following the fire generated by the object’s partial vaporization as it screamed through the atmosphere. The comet would have plunged through the water and dug from the planet less than 6,000 years ago, Master said, because shifting sediment in the region would have buried anything older.

Arriving at an exact date will be difficult, researchers said. “It’s an exciting crater if it really is of impact origin,” said Bill Napier, an astronomer at the Armagh

Observatory.

Cultural impact. Napier said an impact that could carve a hole this large would have packed the energy of several dozen nuclear bombs. The local effect: utter devastation. “But the cultural effect would be far greater,” Napier said in an e-mail interview. “The event would surely be incorporated into the world view of people in the Near East at that time and be handed down through the generations in the form of celestial myths.”

Napier and others have also suggested that the swastika, a symbol with roots in Asia stretching back to at least 1400 B.C., could be an artist’s rendering of a comet, with jets spewing material outward as the head of the comet points earthward.

But could a single impact of this size take down civilizations on three continents?

No way, most experts say.

Napier thinks multiple impacts, and possibly a rain of other smaller meteors and dust, would have been required. He and his colleagues have been arguing since 1982 that such events are possible. And, he says, it might have happened right around the time the first urban civilizations were crumbling. Napier thinks a comet called Encke, discovered in 1786, is the remnant of a larger comet that broke apart 5,000 years ago. Large chunks and vast clouds of smaller debris were cast into space. Napier said it’s possible that Earth ran through that material during the Early Bronze Age.

The night sky would have been lit up for years by a fireworks-like display of comet fragments and dust vaporizing upon impact with Earth’s atmosphere. The Sun would have struggled to shine through the debris. Napier has tied the possible event to a cooling of the climate, measured in three rings, that ran from 2354-2345 B.C.

Supporting evidence. Through no other craters have been found in the region and precisely dated to this time, there is other evidence to suggest the scenario is plausible. Two large impact craters in Argentina are believed to have been created sometime in the past 5,000 years.

Benny Peiser, a social anthropologist at Liverpool John Moores University in England, said roughly a dozen craters are known to have been carved out during the past 10,000 years. Dating them precisely is nearly impossible with current technology. And, Peiser said, whether any of the impact craters thought to have been made in the past 10,000 years can be tied back to a single comet is still unknown.

But he didn’t discount Napier’s scenario.

“There is no scientific reason to doubt that the break-up of a giant comet might result in a shower of cosmic debris,” Peiser said. He also points out that because Earth is covered mostly by deep seas, each visible crater represents more ominous statistical possibilities.

“For every crater discovered on land, we should expect two oceanic impacts with even worse consequences,” he said.

Tsunamis generated in deep water can rise even taller when they reach a shore.

Exercises

Vocabulary Tasks

1. Find the English equivalents to the following:

Факел; розбивати; всесвітній потоп; уламок; видовище; знищити; імпульс; вплив; поштовх; явний, помітний; збіг; прокляття; складати план; небесний,

Божественний; залишок (пережиток); величезний; правдоподібний; зловісний; випаровування; знецінювати.

2. Give synonyms to the following:

Data; to wipe out; full-fledged; debris; prediction; culprit; to plunge; huge; world view; plausible; ominous.

3. Find the following words and word combinations in the text and explain their meaning in the context of the sentences in which the words appear.

Meteor shower; to fuel terrorism; sophisticated civilization; to collapse; devastating impact; vaporization; shifting sediments; to discount.

4. Comment on the sentences:

1) Many of the pages are washed away or buried. But several plot lines converge in conspicuous ways.

2) The Akkadian culture of Iraq, thought to be the world's first empire, collapsed.

3) Mesopotamia, Earth's original breadbasket, dust.

4) The local effect: utter devastation.

5) Through no other craters have been found in the region, there is other evidence to suggest the scenario is plausible.

6) Peiser didn't discount Napier's scenario.

Grammar Tasks

1. Find in the text sentences with the Future Perfect in the Past and translate them.

2. Put the Infinitive in the correct form:

1) If you (to be) fortunate enough (to see) the storm of shooting stars (to predict) for the Nov.18 peak of the Leonid meteor shower, you (to watch) a similar but considerably less powerful version of events which some scientists (to say) (to bring) down the world's first civilization.

2) Noah's Flood (to trigger) by two "stars" that (to fall) from the sky.

3) In recent years, the fall of ancient civilizations (to come) (to view) not as a failure of social engineering or political (may) but rather the product of climate change.

4) One or more devastating impacts (can) (to rock) the planet, (to chill) the air, and (to create) unthinkable tsunamis.

5) He and his colleagues (to argue) since 1982 that such events (to be) possible.

6) Benny Peiser (to say) roughly a dozen craters (to know) (to carve) out during the past 10,000 years.

3. Complete the following blanks where necessary:

1) ___ stupor of ___ despair went up to ___ heaven when ___ god of ___ storm turned ___ daylight into ___ darkness, when he smashed ___ land like ___ cup."

2) ___ history and ___ culture provide ___ clues: ___ Icons and ___ myths surrounding ___ alleged cataclysms persist in ___ cults and ___ religions today

and even fuel __ terrorism.

3) Scientists stress that __ ground expedition is needed to determine if __ landform was actually carved out by __ impact.

4) When __ God decided to bring about __ Flood, He took __ two stars from __ Khima, threw them on __ Earth, and brought about __ Flood.

5) __ showers of __ debris wafting through __ space – concentrated versions of __ dust trails that create __ Leonids – would have blocked __ Sun and delivered __ horrific rains of __ fire to __ Earth for years.

6) __ swastika, __ symbol with __ roots in __ Asia stretching back to at least 1400 B.C., could be __ artist's rendering of __ comet, with __ jets spewing material outward as __ head of __ comet points earthward.

4. Comment on the grammar in the following sentences:

1) Many of the pages are washed away or buried.

2) If it were a comet, the impact would have occurred on what was once a shallow sea.

3) "It's an exciting crater if it really is of impact origin," said Bill Napier, an astronomer at the Armagh Observatory.

4) Napier says, it might have happened right around the time the first urban civilizations were crumbling.

Discussion

1. What do comets and asteroids consist of? Is any asteroid likely to hit the Earth? Is there any need to worry?
2. Do space solids influence over the life of the Earth? Give specific examples to support your answer.
3. If you had an opportunity to send a Time Capsule representing your century what would you choose? Why? Use specific reasons and details to explain your choice.
4. If it were Time Mashine, and you could know something about the future, what would you choose to know about and why. Support your choice.
5. Are we alone at the Universe? Is it likely that there is life on other planets? Will alien forms look like us?
6. Find the correct answer: *Which planet is the coldest: Neptune, Saturn, Pluto; which one is the biggest: Jupiter, the Earth, Mars?*

7. Written Assignment.

Some people think we should spend as much money as possible exploring outer space. Other people disagree and think we should spend this money for our basic needs on Earth. Which of these two opinions do you agree with? Use specific reasons and details to support your answer.

7. A Time to Live, a Time to Die.

The young person thinks little about death; the middle-aged person tends to fear death; oftentimes, however, the old person comes to accept death calmly, as part of life and the final point in the life cycle. The elderly can offer us a special gift as they

pass on their wisdom about death.

For the young person, death is often an abstraction; it is like color to someone blind from birth. For a spirited adolescent barely able to deal with all the personal concerns that arise or a young adult desperately trying to succeed professionally, death has no place in life. It is something totally unrelated to what the person thinks or does. When a sudden death does occur, one that strikes close to home, the young person is stunned.

“Why did it have to happen?” she asks in a demanding voice. “It is not fair. God is cruel,” he says angrily. Depression often follows. But then the anger and the depression both pass, and the pressing agendas of the adolescent and the young adult again take over, pushing the very idea of death out of the conscious mind.

Eventually, the young person grows older and begins to see the body functioning less and less well. Hair falls out; teeth loosen; wrinkles can no longer be hidden under make-up; bifocals replace regular glasses; the memory slips, just a little, but slips nonetheless; aches and pains in the joints set in. The specter of death thus pushes its way into the consciousness like an unwelcomed visitor from a strange planet. “I don’t want to get old. I don’t want to die,” the woman says. “I’m forty-seven,” the man says. “It is more than half over. This must be happening to someone else. Why? Why I still feel like a little boy inside.’ Little Rufie,’ my mother used to call me. To die? To cease to be? This is really going to happen to me, Rufus Craig, Little Rufie? For God’s sake, not me!” Some people in their middle years start drinking when they think about death. Others revert to their adolescence, trying to relieve their youth so they will not have to think about what is going on. Still others try to build monuments to themselves by achieving great wealth and power so that they will never be forgotten. But none of these things works in the long run. Denial simply postpones despair.

Gradually, almost imperceptibly, the middle-aged person becomes an elderly person – an old man or woman. In many ways life is harder than before. He says, “I can’t stand any more losses. My family has moved away. I have given up my home. The corner grocery store has been turned into a parking lot. I can’t even work part-time anymore. When my body works at all, it creaks.” She says simply, “Old age is not for sissies.” But with the breakdown of the body and in spite of – or maybe because of – all the losses, something remarkable happens.

Death joins the family table, not as a stranger now, but as an old acquaintance, not a friend exactly, more like your childhood doctor – strict but gentle. Death smiles and makes you know that one of these days it will be your turn, just as it has been the turn of everyone else before you. “It is going to be okay,” Death says. “Do not worry.” And the old person finds that he or she is ready. “No, I am not afraid of death,” he says to his grandson who bounces on the bed. “There are many things in the world worse than death,” she explains. “When you get to be my age, you start counting many blessings, and you come to realise that death is part of life. I wish I could help you understand.”

When we learn about death from the elderly, we also learn about life.

Exercises

Vocabulary Tasks

1. Find the English equivalents to the following:

Часто, підліток, бути враженим (приголомшеним), відчайдушно, цікавість, зморшка, зникати, суглоб, віддалені перспективи, відкладати, відчай, поступово, непомітно, скрипіти, стрибати, щастя.

2. Give antonyms to the following:

Oftentime, to cease, wisdom, consciousness, death, unwelcomed, anger.

3. Find the following words and word combinations in the text and explain their meaning in the context of the sentences in which the words appear.

To tend, life cycle, abstraction, conscious mind, the specter of death, imperceptibly, sissy.

4. Comment on the sentences:

1. Others revert to their adolescence, trying to relieve their youth so they will not have to think about what is going on.
2. But none of these things works in the long run.
3. When my body works at all, it creaks.
4. Gradually, almost imperceptibly, the middle-aged person becomes an elderly person.
5. When you get to be my age, you start counting many blessings.

Grammar Tasks.

1. Find in the text derivative and compound adjectives and translate them.

2. Put the Infinitive in the correct form:

1) Eventually, the young person (to grow) older and (to begin) to see the body functioning less and less well.

2) Others (to revert) to their adolescence trying (to relieve) their youth so they (not; to have) to think about what (to go) on.

3) Still others (to try) (to build) monuments to themselves by achieving great wealth and power so that they never (to forget).

4) I (to give up) my home; the corner grocery store (to turn) into a parking lot.

3. Insert the articles where necessary:

1. ___ old person comes to accept ___ death calmly, as part of ___ life and ___ final point in ___ life cycle.

2. For ___ young person, ___ death is often ___ abstraction; it's like ___ colour to someone blind from ___ birth

3. ___ Specter of ___ death thus pushes its way into ___ consciousness like ___ unwelcomed visitor from ___ strange planet.

4. But then ___ anger and ___ depression both pass.

5. Gradually, almost imperceptibly, ___ middle aged person becomes ___ elderly person- ___ old man or ___ old woman.

6. ___ old age is not for ___ sissies.

7. When we learn about ___ death from ___ elderly, we also learn about ___ life.

4. Comment on the grammar in the following sentences:

1) A time to live and a time to die.

2) When a sudden death does occur, the young person is stunned.

3) "Little Rufie," my mother used to say.

4) Death smiles and makes you know that one of these days it will be your turn.

5) I wish I could help you.

Discussion

1. What is the purpose statement? How does the writer carry it out?
2. What words refer to the three stages of life that the author is describing?
3. Do you agree that the young, the middle-aged and the elderly generally perceive death quite differently? If so, would you describe their perceptions of death differently than the writer did? Explain.
4. Should the ending be explained or for this essay is one sentence long enough? Give your reasons.
5. Is the title appropriate? Why did the author give her essay this title?
6. Every generation of people is different in important ways. How is your generation different from your parents' generation? Use specific reasons and examples to explain your answer.
7. In general, people are living longer now. How will this change affect society? Use specific details and examples to develop your answer.

8. Written Assignment.

Do you agree or disagree with the following statement: There is nothing that young people can teach older people. Use specific reasons and examples to support your position.

8. Charles.

Shirley Jackson

The day my son Laurie started Kindergarten he renounced corduroy overalls with bibs and began wearing blue jeans with a belt; I watched him go off the first morning with the older girl next door, seeing clearly that an era of my life was ended, my sweet-voiced nursery-school tot replaced a long-trousered, swaggering character who forgot to stop at the corner and wave good-bye to me.

He came home the same way, the front door slamming open, his cap on the floor, and the voice suddenly become raucous shouting, "Isn't anybody *here*?"

At lunch he spoke insolently to his father, spilled his baby sister's milk, and remarked that his teacher said we were not to take the name of the Lord in vain.

"How *was* school today?" I asked, elaborately casual.

"All right," he said.

"Did you learn anything?" his father asked.

Laurie regarded his father coldly. "I didn't learn nothing," he said.

“Anything,” I said. “Didn’t learn anything.”

“The teacher spanked a boy, though,” Laurie said, addressing his bread and butter. “For being fresh,” he added, with his mouth full.

“What did he do?” I asked. “Who was it?”

Laurie thought. “It was Charles,” he said. “He was fresh. The teacher spanked him and made yim stand in a corner. He was awfully fresh.”

“What did he do?” I asked him again, but Laurie slid off his chair, took a cookie, and left, while his father was still saying, “See here, young man.”

The next day Layrie remarked at lunch, as soon as he sat down, “Well, Charles was bad again today.” He grinned enormously and said, “Today Charles hit the teacher.”

“Good heavens,” I said, mindful of the Lord’s name, “I suppose he got spanked again?”

“He sure did,” Laurie said. “Look up,” he said to his father.

“What?” his father said, looking up.

“Look down,” Laurie said. “Look at my thumb. Gee, you’re dumb.” He began to laugh insanely.

“Why did Charles hit the teacher?” I asked quickly.

“Because she tried to make him color with red crayons,” Laurie said. “Charles wanted to color with green crayons so he hit the teacher and she spanked him and said nobody play with Charles but everybody did.”

The third day – it was Wednesday of the first week – Charles bounced a see-saw onto the head of a little girl and it made her bleed, and the teacher made him stay inside all during recess. Thursday Charles had to stand in the corner during story-time because he kept pounding his feet on the floor. Friday Charles was deprived of blackboard privileges because he threw chalk.

On Saturday I remarked to my husband, “Do you think kindergarten is too unsettling for Laurie? All this toughness, and bad grammar, and this Charles boy sounds like such a bad influence.”

“It’ll be all right,” my husband said reassuringly. “Bound to be people like Charles in the world. Might as well meet them now as later.”

On Monday Laurie came home late, full of news. “Charles,” Laurie yelled all the way up the hill, “Charles was bad again.”

“Come right in,” I said, as soon as he came close enough. “Lunch is waiting.”

“You know wat Charles did?” he demanded, following me through the door. “Charles yelled so in school they sent a boy in from first grade to tell the teacher she had to make Charles keep quiet, and so Charles had to stay after school. And so all the children stayed to watch him.”

“What did he do?” I asked.

“He just sat there,” Laurie said, climbing into his chare at the table. “Hi, Pop, y’old dust mop.”

“Charles had to stay after school today,” I said to my husband. “Everyone stayed with him.”

“What does this Charles look like?” my husband asked Laurie. “What’s his other name?”

“He’s bigger than me, and he doesn’t have any rubbers and he doesn’t ever wear a

jacket,” Laurie said.

Monday night was the first Parent-Teachers meeting, and only the fact that the baby had a cold kept me from going; I wanted passionately to meet Charles’s mother. On Tuesday Laurie remarked suddenly, “Our teacher had a friend come to see her in school today.”

“Charles’s mother?” my husband and I asked simultaneously.

“Naaah,” Laurie said scornfully. “It was a man who came and made us do exercises, we had to touch our toes. Look.” He climbed down from his chair and squatted down and touched his toes. “Like this,” he said. He got solemnly back into his chair and said, picking up his fork, “Charles didn’t even *do* exercises.”

“That’s fine,” I said heartily. “Didn’t Charles want to do exercises?”

“Naaah, Charles was so fresh to the teacher’s friend he wasn’t *let* do exercises.”

“Fresh again?”

“He kicked the teacher’s friend,” Laurie said. “The teacher’s friend told Charles to touch his toes like I just did and Charles kicked him.”

“What are they going to do about Charles, do you suppose?” Laurie’s father asked him.

Laurie shrugged elaborately. “Throw him out of school, I guess,” he said.

Wednesday and Thursday were routine; Charles yelled during story hour and hit a boy in the stomach and made him cry. On Friday Charles stayed after school again and so did all the other children.

With the third week of kindergarten Charles was an institution in iur family; the baby was being a Charles when she cried all afternoon; Laurie did a Charles when he filled his wagon full of mud and pulled it through the kitchen; even my husband, when he caught his elbow in the telephone cord and pulled telephone, ashtray, and a bowl of flowers off the table, said, after the first minute, “Looks like Charles.”

During the third and fourth weeks it looked like a reformation in Charles; Laurie reported grimly at lunch on Thursday of the third week, “Charles was so good today the teacher gave him an apple.”

“What?” I said, and my husband added warily, “You mean Charles?”

“Charles,” Laurie said. “He gave the crayons around and he picked up the books afterward and the teacher said he was her helper.”

“What happened?” I asked incredulously.

“He was her helper, that’s all,” Laurie said and shrugged.

“Can this be true, about Charles?” I asked my husband that night. “Can something like this happen?”

“Wait and see,” my husband said cynically. “When you’ve got a Charles to deal with, this may mean he’s only plotting.”

He seemed to be wrong. For over a week Charles was a teacher’s helper; each day he handed things out and picked things up; no one had to stay after school.

“The P.T.A. meeting’s next week again,” I told my husband one evening. “I’m going to find Charles’s mother there.”

“Ask her what happened to Charles,” my husband said. “I’d like to know.”

“I’d like to know myself,” I said.

On Friday of that week things were back to normal. “You know what Charles did

today?" Laurie demanded at the lunch table, in a voice slightly awed. "He told a little girl to say a word and she said it and the teacher washed her mouth out with soap and Charles laughed."

"What word?" his father asked unwisely, and Laurie said, "I'll have to whisper it to you, it's so bad." He got down off his chair and went around to his father. His father bent his head down and Laurie whispered joyfully. His father's eyes widened.

"Did Charles tell the little girl to say *that*?" he asked respectfully.

"She said it *twice*," Laurie said. "Charles told her to say it twice."

"What happened to Charles?" my husband asked.

"Nothing," Laurie said. "He was passing out crayons."

Monday morning Charles abandoned the little girl and said the evil word himself three or four times, getting his mouth washed out with soap each time. He also threw chalk.

My husband came to the door with me that evening as I set out for the P.T.A. meeting. "Invite her over for a cup of tea after the meeting," he said. "I want to get a look at her."

"If only she is there," I said prayerfully.

"She'll be there," my husband said. "I don't see how they could hold a P.T.A. meeting without Charles's mother."

At the meeting I sat restlessly, scanning each comfortable matronly face, trying to determine which one hid the secret of Charles. None of them looked to me haggard enough. No one stood up in the meeting and apologized for the way her son had been acting. No one mentioned Charles.

After the meeting I identified and sought out Laurie's kindergarten teacher. She had a plate with a cup of tea and a piece of chocolate cake; I had a plate with a cup of tea and a piece of marshmallow cake. We maneuvered up to one another cautiously, and smiled.

"I've been so anxious to meet you," I said. "I'm Laurie's mother."

"We're all so interested in Laurie," she said.

"Well, he certainly likes kindergarten," I said. "He talks about it all the time."

"We have a little trouble adjusting, the first week or so," she said primly, "but now he's a fine little helper. With occasional lapses, of course."

"Laurie usually adjusts very quickly," I said. "I suppose this time it's Charles's influence."

"Charles?"

"Yes," I said, laughing, "you must have your hands full in that kindergarten, with Charles."

"Charles?" she said. "We don't have any Charles in the kindergarten."

Exercises

Vocabulary Tasks.

1. Find the English equivalents to the following:

Малюк; увійти, грюкаючи дверима; хриплий; даремно; говорити образливим чином; говорити про когось без поваги; бути надзвичайно нахабним; грюкати ногою по підлозі; говорити призирливо; хтось, чиє ім'я стало номінальним; неодмінний атрибут; попільничка; гойдалка; голос, що породжує страх;

впертість; плести інтригу; облишити ідею; виявити; заміжня жінка; помилка.

2. Give synonyms and antonyms to the following words:

Tot, fresh, toughness, insane, passionate, to seek out, haggard.

3. Explain the meaning of the following words and word combinations in English:

To slide off the chair; to grin enormously; to be deprived of blackboard privileges; to want passionately to do something; to be routine; to maneuver up to one another cautiously; to have one's hands full in something.

4. Comment on the sentences:

1)The day my son Laurie started kindergarten I saw clearly that an era of my life was ended.

2)Bound to be people like Charles in the world. Might as well meet them now as later.

3)With the third week of kindergarten Charles was an institution in our family.

4)“When you've got a Charles to deal with, this may mean he's only plotting”, my husband said cynically.

5)At the meeting I sat, scanning each comfortable matronly face.

6)Now he's a fine little helper with occasional lapses, of course.

Grammar Tasks

1. Find in the text sentences with the Complex Object.

2. Put the Infinitive in the correct form:

1)At lunch he (to speak) insolently to his father, (to spill) his baby sister's milk and (to remark) that his teacher said we (not to be) to take the name of Lord in vain.

2)Friday Charles (to deprive) of blackboard privileges because he (to throw) chalk.

3)Monday night (to be) the first Parent-Teachers meeting, and only the fact that that the baby (to have) a cold (to keep) me from going; I (to want) passionately (to meet) Charles' mother.

4)Wednesday and Thursday (to be) routine; Charles (to yell) during story hour and (to hit) a boy in the stomach and (to make) him (to cry).

5)No one (to stay up) in the meeting and (to apologize) for the way her son (to act); no one (to mention) Charles.

6)“I (to be) so anxious to meet you”, I (to say). “I (to be) Laurie's mother”.

3. Complete the following blanks where necessary:

3. I watched him go ___ the first morning with the older girl ___ next door, seeing clearly that an era ___ my life was ended; my sweet-voiced nursery-school tot replaced ___ a long-trousered, swaggering character who forgot to stop ___ the corner and wave good-bye ___ me.

4. Thursday Charles had to stand ___ the corner during story-time because he kept pounding his feet ___ the floor.

5. He climbed ___ his chair and squatted ___ and touched his toes, then he got solemnly ___ his chair and said,

picking __ his fork, "Charles didn't even do exercises".

6. __ the third week Charles was an institution __ our family: Laurie did a Charles when he filled his wagon full __ mud and pulled it __ the kitchen; even my husband, when he caught his elbow __ the telephone cord and pulled telephone bowl __ flowers __ the table, said, after the first minute, "Looks like Charles".

4. Comment on the grammar in the following sentences:

1)He remarked that his teacher said we were not to take the name of the Lord in vain.

2)"What are they going to do about Charles, do you suppose?" Laurie's father asked.

3)... the baby was being a Charles when she cried all afternoon.

4)At the meeting I sat restlessly, scanning each comfortable matronly face, trying to determine which one hid the secret of Charles.

Discussion

1. How would you describe Laurie's personality? Is the fact that he has created an imaginary friend unusual?
2. What changes do we see in Laurie's personality as the story progress?
3. There are many things about Laurie's family life that seem quite ordinary. Are there others that strike you as strange?
4. What kind of parents are Laurie's mother and father? Does the fact that they can't see through Laurie's lies seem believable to you? Would you have been able to see through Laurie's lies if you were his parents?
5. Think about your answer to question 4. What is the theme of this story? What does it tell us about human nature?
6. Did you ever have an imaginary friend as a child? If yes, explain why you created this person.

7. Written Assignment.

Sometimes we have difficulty recognizing the truth even when it is right under our noses. Recall an incident from your own experience or from something you've read recently that illustrates this theme. In a brief journal entry, explain in what ways the incident is similar to Shirley Jackson's "Charles".

9. America is in the Heart Carlos Bulosan

I found the dark hole of the steerage and lay on my bunk for days without food, seasick and lonely. I was restless at night and many disturbing thoughts came to my mind. Why had I left home? What would I do in America? I looked into the faces of my companions for a comforting answer, but they were as young and bewildered as I, and my only consolation was their proximity and the familiarity of their dialects. It

was not until we had left Japan that I began to feel better.

One day in mid-ocean, I climbed through the narrow passageway to the deck where other steerage passengers were sunning themselves. Most of them were Ilocanos, who were fishermen in the northern coastal regions of Luzon. They were talking easily and eating rice with salted fish with their bare hands, and some of them were walking, barefoot and unconcerned, in their homemade cotton shorts. The first-class passengers were annoyed, and an official of the boat came down and drove us back into the dark haven below. The small opening at the top of the iron ladder was shut tight, and we didn't see the sun again until we had passed Hawaii.

But before we anchored at Honolulu an epidemic of meningitis spread throughout the boat and concentrated among the steerage passengers. The Chinese waiters stopped coming into our dining room, because so many of us had been attacked by the disease. They pushed the tin plates under the door of the kitchen and ran back to their rooms, afraid of being contaminated. Those hungry enough crawled miserably on their bellies and reached for their plates.

But somewhere in the room a peasant boy was playing a guitar and another was stumming a mandolin. I lay on my bunk listening and wishing I could join them. In the far corner of the dining room, crouched around the dining table, five young students were discussing the coming presidential election in the United States. Not far from them was a duing boy from Pangasinan.

One night when I could no longer stand the heat in the closed room, I screamed aloud and woke up most of the steerage passengers. The boy who had been playing the guitar came to my bed with cold water and rubbed my forehead and back with it. I was relieved of my discomfort a little and told him so.

"My name is Marcelo," he said. "I came from San Manuel, Panganisan."

"*San Manuel?*" I said. "I used to work there – in the *mongo* fields. I'm glad to meet you."

"Go to sleep now," he said. "Call for me if you need my help."

I heard his feet pattering away from me, and I was comforted. It was enough that Marcelo had come from a familiar town. It was a bond that bound us together in our journey. And I was to discover later this same regional friendship, which developed into tribalism, obstructed all efforts toward Filipino unity in America.

There were more than two hundred of us in the steerage. A young doctor and assistant came now and then to check the number of death and to examine those about to die. It was only when we reached Hawaii that the epidemic was checked, and we were allowed to go out again. Some of the stronger passengers carried their sick relatives and friends through the narrow hatch and put them in the sunlight.

I was pleasantly sunning myself one afternoon when Marcelo rolled over on his stomach and touched me. I turned and saw a young white girl wearing a brief bathing suit walking toward us with a young man. They stopped some distance away from us; then as though the girl's moral conscience had been provoked, she put her small hand on her mouth and said in a frightened voice:

"Look at those half-naked savages from the Philippines, Roger! Haven't they any idea of decency?"

"I don't blame them for coming into the sun," the young man said. "I know how it

is below.”

“Roger! Don’t tell me you have been down in that horrible place? I simply can’t believe it!” she said.

The man said something, but they had already turned and the wind carried it away. I was to hear that girl’s voice in many ways afterward in the United States. It became no longer her voice, but an angry chorus shouting:

“Why don’t they ship those monkeys back where they came from?”

We arrived in Seattle on a June day. My first sight of the approaching land was an exhilarating experience. Everything seemed native and promising to me. It was like coming home after a long voyage, although as yet I had no home in this city. Everything seemed familiar and kind – the white faces of the buildings melting in the soft afternoon sun, the gray contours of the surrounding valleys that seemed to vanish in the last periphery of light. With a sudden surge of joy, I knew that I must find a home in this new land.

I had only twenty cents left, not even enough to take me to Chinatown where, I had been informed, a Filipino hotel and two restaurants were located. Fortunately two oldtimers put me in a car with four others, and took us to a hotel on King Street, the heart of Filipino life in Seattle. Marcelo, who was also in the car, had a cousin named Elias who came to our room with another oldtimer. Elias and her unknown friend persuaded my companions to play a strange kind of card game. In a little while Elias got up and touched her friend suggestively; then they disappeared and we never see them again.

It was only when our two countrymen had left that my companions realized what happened. They had taken all their money. Marcelo asked me if I had any money. I gave him my twenty cents. After collecting a few more cents from the others, he went downstairs and when he came back he told us that he had telegraphed for money to his brother in California.

All night we waited for the money to come, hungry and afraid to go out in the street. Outside we could hear shouting and singing; then a woman screamed lustily in one of the rooms down the hall. Across from our hotel a jazz band was playing noisily; it went on until dawn. But in the morning a telegram came to Marcelo which said: YOUR BROTHER DIED AUTOMOBILE ACCIDENT LAST WEEK.

Marcelo looked at us and began to cry. His anguish stirred an aching fear in me. I knelt on the floor looking for my suitcase under the bed. I knew that I had to go out now – alone. I put the suitcase on my shoulder and walked toward the door, stopping for a moment to look back at my friends who were still standing silently around Marcelo. Suddenly a man came into the room and announced that he was the proprietor.

“Well, boys,” he said, looking at our suitcases, “where is the rent?”

“We have no money, sir,” I said, trying to impress him with my politeness.

“That is too bad,” he said quickly, glancing furtively at our suitcases again. “That is just too bad.” He walked outside and went down the hall. He came back with a short, fat Filipino, who looked at us stupidly with his dull, small eyes, and spat his cigar out of the window.

“There they are, Jake,” said the proprietor.

Jake looked disappointed. "They are too young."

"You can break them in, Jake," said the proprietor.

"They will be sending babies next," Jake said.

"You can break them in, can't you, Jake?" the proprietor pleaded.

"This is not the first time you have broken babies in. you've done it in the sugar plantations in Hawaii!"

"Hell," said Jake, striding across the room to the proprietor. He pulled a fat roll of bills from his pocket and gave twenty-five dollars to the proprietor. Then he turned to us and said, "All right, Pinoys, you are working for me now. Get your hats and follow me."

We were too frightened to hesitate. When we lifted our suitcases the proprietor ordered us not to touch them.

"I'll take care of them until you come back from Alaska," he said. "Good fishing, boys."

In this way we were sold for five dollars each to work in the fish canneries in Alaska, by a Visayan from the island of Leyte to an Ilocano from the province of La Union. Both were oldtimers; both were tough. They exploited young immigrants until one of them, the hotel proprietor, was shot dead by an unknown assailant. We were forced to sign a paper which stated that each of us owed the contractor twenty dollars for bedding and another twenty for luxuries. What the luxuries were, I have never found out. The contractor turned out to be a tall, heavy-set, dark Filipino, who came to the small hold of the boat barking at us like a dog. He was drunk and saliva was running down his shirt.

"And get this, you devils!" he shouted at us. "You will never come back alive if you don't do what I say!"

It was the beginning of my life in America, the beginning of a long fight that carried me down the years, fighting desperately to find peace in some corner of life.

I had struck up a friendship with two oldtimers who were not much older than I. One was Conrado Torres, a journalism student at a university in Oregon, who was fired with a dream to unionize the cannery workers. I discovered that he had come from Binalonan, but could hardly remember the names of people there because he had been very young when he had come to America. Conrado was small and dark, with slant eyes and thick eyebrows; but his nose was thin above a wise, sensuous mouth. He introduced me to Paulo Lorca, a gay fellow, who had graduated from law school in Los Angeles. This surreptitious meeting at a cannery in Rose Inlet was the beginning of a friendship that grew simultaneously with the growth of the trade union movement and progressive ideas among the Filipinos in the United States.

In those days labour unions were still unheard of in the canneries, so the contractors rapaciously exploited the workers. They had henchmen in every cannery who saw to it that every attempt at unionization was frustrated and the instigators of the idea punished. The companies also had their share in the exploitation; our bunkhouses were unfit for human habitation. The lighting system was bad and dangerous to our eyes, and those of us who were working in the semi-darkness were severely affected by the strong ammonia from the machinery.

I was working in a section called "wash lye." Actually a certain amount of lye was

diluted in the water where I washed the beheaded fish that came down on a small escalator. One afternoon a cutter above me, working in the poor light, slashed off his right arm with the cutting machine. It happened so swiftly he didn't cry out. I saw his arm floating down the water among the fish heads.

It was only at night that we felt free, although the sun seemed never to disappear from the sky. It stayed on in western horizon and its magnificence inflamed the snows on the island, giving us a world of soft, continuous light, until the moon rose at about ten o'clock to take its place. Then trembling shadows began to form on the rise of the brilliant snow in our yard, and we would come out with baseball bats, gloves and balls, and the Indian girls who worked at the cannery would join us, shouting huskily like men.

We played far into the night. Sometimes a Filipino and an Indian girl would run off into the moonlight; we could hear them chasing each other in the snow. Then we would hear the girl giggling and laughing deliciously in the shadows. Paulo was always running off with a girl named La Belle. How she acquired that name in Alaska, I never found out. But hardly had we started our game when off they ran, chasing each other madly and suddenly disappearing out of sight.

Toward the end of the season La Belle gave birth to a baby. We were sure, however, that the father was not in our group. We were sure that she had got it from one of the Italian fishermen on the island. La Belle didn't come to work for two days, but when she appeared on the third day with the baby slung on her back, she threw water into Conrado's face.

"Are you going to marry me or not?" she asked him.

Conrado was frightened. He was familiar with the ways of Indians, so he said: "Why should I marry you?"

"Well, see about that!" La Belle shouted, running to the door. She came back with an official of the company. "That's the one!" she said, pointing to Conrado.

"You'd better come to the office with us," he said.

Conrado didn't know what to do. He looked at me for help. Paulo left his washing machine and nodded to me to follow him. We went with them into the building which was the town hall.

"You're going to marry this Indian girl and stay on the island for seven years as prescribed by law," said the official to Conrado. "And as the father of the baby, you must support both mother and child, and if you have four more children by the time your turn is up, you will be sent back to the mainland with a bonus."

"But, sir, the baby isn't mine!" Conrado said weakly.

Paulo stepped up quickly beside him and said: "The baby is mine, sir. I guess I'll have to stay."

La Belle looked at Paulo with surprise. After a moment, however, she began to smile with satisfaction. Paulo was well-educated and spoke good English. But I think what finally drove Conrado from La Belle's primitive mind were Paulo's curly hair, even, white teeth. Meekly she signed the paper after Paulo.

"I'll stay here for seven years Paulo," said to me. "I'm in a mess in Los Angeles anyway – so I'll stay with this dirty Indian girl."

"Stop talking like that if you know what is good for you," La Belle said, giving

him the baby.

“I guess you are right,” Paulo said.

“You shouldn’t have done it for me,” Conrado said.

“It’s all right,” Paulo laughed. “I’ll be in the United States before you know it.”

I still don’t understand why Paulo interceded for Conrado. When the season was over Paulo came to our bunks in the boat and asked Conrado to send him something to drink. I didn’t see him again.

Exercises

Vocabulary Tasks.

1. Find the English equivalents to the following:

Койка; втішна відповідь; грітися на сонці; безтурботний погляд; ледь пересувати ноги; лоб; люк; дикун; старожил; страждання; породжувати страх; виховувати, дисциплінувати; консервний завод; безнадійна боротьба; розпочати дружбу; швидкий погляд; таємне товариство; прибічник; безлад.

2. Give antonyms and synonyms to the following words:

Restless; to scream; to check; friendship; an oldtimer; to strike up; surreptitious; henchman; diluted; deliciously; a mess.

3. Explain the meaning of the following words and word combinations in English:

Proximity; barehands; melting buildings; to touch somebody suggestively; to exploit; luxuries; bonus; to be in a mess.

4. Comment on the sentences:

1) My companions were as young and bewildered as I, and my only consolation was their proximity and the familiarity of their dialects.

2) And I was to discover later this same regional friendship, which developed into tribalism, obstructed all efforts toward Filipino unity in America.

3) They stopped some distance away from us; then as though the girl’s moral conscience had been provoked, she put her small hand on her mouth.

4) One was Conrado Torres, a journalism student at a university in Oregon, who was fired with a dream to unionize the cannery workers.

5) They had henchmen in every cannery who saw to it that every attempt at unionization was frustrated and the instigators of the idea punished.

Grammar Tasks

1. Find in the text sentences with the Passive Voice and translate them.

2. Put the Infinitive in the correct form:

1) The boy who (to play) the guitar (to come) to my bed with cold water and (to rub) my forehead with it.

2) I (to sun) pleasantly myself one afternoon when Marcelo (to roll) over on his stomach and (to touch) me.

3) I (to have) only twenty cents left, not even enough (to take) me to Chinatown, where I (to inform) a Filipino hotel and two restaurants (to locate).

4) After collecting a few more cents from the others, he (to go) downstairs and when he (to come) back he (to tell) us that he (to telegraph) for money.

5) I (to strike) up a friendship with two oldtimers who (not, to be) much older than I.

3. Complete the following blanks with articles where necessary:

1) __ first-class passengers were annoyed, and __ official of __ boat came down and drove us back into __ dark haven below.

2) Somewhere in __ room __ peasant boy was playing __ guitar and another was stumming __ mandolin.

3) We arrived in __ Seattle on __ June day; __ everything seemed familiar and kind – __ white faces of __ buildings melting in __ soft afternoon sun, __ gray contours of __ surrounding valleys that seemed to vanish in __ last periphery of __ light.

4) We were sold for __ five dollars each to work in __ fish canneries in __ Alaska, by __ Visayan from __ island of Leyte to __ Ilocano from __ province of __ La Union.

5) This surreptitious meeting at __ cannery in __ Rose Inlet was __ beginning of __ friendship that grew simultaneously with __ growth of __ trade union movement and __ progressive ideas among __ Filipinos in __ United States.

6) Sometimes __ Filipino and __ Indian girl would run off into __ moonlight.

7) As __ father of __ baby, you must support both __ mother and child, and if you have four more children by __ time your turn is up, you will be sent back to __ mainland with __ bonus.

4. Comment on the grammar in the following sentences:

1) I heard his feet pattering away from me, and I was comforted.

2) I had struck up a friendship with two oldtimers who were not much older than I.

3) I turned and saw a young white girl wearing a brief bathing suit walking toward us with a young man.

4) "I don't blame them for coming into the sun," the young man said.

5) "You shouldn't have done it for me," Conrado said.

Discussion

1. What do we call "American Dream"?
2. Do emigrants have any problems about living in another country? What problems? Why?
3. People are never satisfied with what they have. They always want something more or something different. Use specific reasons to support your idea.
4. When people move to another country some of them decide to follow the customs of the new country. Others prefer to keep their own customs. Compare these two choices.
5. What is one of the most important decisions you've made? Why was it important?
6. Many people move to a new country in search of new life. Do they always find what they are looking for?
7. What would you miss most about your country if you

went to live abroad?

8. *Written Assignment.*

Some people enjoy change, and they look forward to new experiences. Others like their lives to stay the same and they don't change their usual habits. Compare these two approaches to life. Which approach do you prefer? Why?

10. Artist Wants to Paint Moon, but Physics May Foil Plan

Robert Roy Bill

An artist hoping to recruit millions of laser-pointer owners to "paint the Moon" may instead be disappointed by physics.

James T. Downey, the artist behind the project, is intent on creating a "collaborative work of celestial art" by illuminating a fleeting red spot on our only natural satellite.

The event, an effort to help people "find the excitement of space," is scheduled for two nights, one in October and another in November. Downey has chosen a target location for the beams on the dark portion of the Moon while it's in first-quarter. Each attempt would last five minutes. A web site, called "Paint the Moon," has been set up with instructions for where and how to point your laser and why you should participate. "Inexpensive yet surprisingly powerful laser-pointing devices have become ubiquitous in America," said Downey. "Millions of people own such a device. Laser light stays coherent over vast distances, the beams spreading very little."

Lasers are powerful devices, concentrated bursts of energy that can damage the eye, cut through metal or, theoretically, shoot down enemy missiles. And all at the speed of light. Astronomers use lasers to measure distances between telescopes and even to enhance observations in order to improve resolution of light coming from distant stars. Experiments planted by Apollo astronauts allow scientists to use lasers to more accurately gauge the distance from Earth to the Moon, and even detect moonquakes.

But all technology has its limits. It seems there are not enough people in North America to make Downey's idea work.

"As I suspected, the number required is not millions of people, but more than millions of millions of millions of people," said Donald Umstadter, a laser expert at the Center for Ultrafast Optical Science at the University of Michigan, Ann Arbor.

The science behind the art. Umstadter became curious about the project when SPACE.com asked him if it was feasible to illuminate the Moon in this way. He asked one of his graduate students, Chad Vandenbosch, to look into the possibility as a mathematical exercise. To calculate how many people it would take to successfully make a temporary red spot on the Moon visible from Earth, Vandenbosch estimated several factors. He considered a typical handheld laser pointer's power and how much of the light would be absorbed by Earth's atmosphere, as well as how much of the laser light would be reflected by the Moon vs. how much would be absorbed.

As a premise, he based the calculations on what would be needed to make the spot visible to people in cities, where bright lights would obscure a faint spot that might otherwise be visible in rural locations.

Vandenbosch said there is a little wiggle room in his calculations due to the estimate of background light.

“The main thing to glean from the calculation is that the divergence of these pointers, due to their small aperture and a basic law of optics governing the diffraction of light, results in a huge diameter beam, and thus very dim beam, by the time it arrives at the Moon,” Umstadter said.

On with the show. Downey, the artist, was intrigued and a bit dismayed when he learned of Vandenbosch’s science, but plans to proceed with the artistic attempt nonetheless.

“I knew that it would be a long shot from the start,” Downey said. “But success is something that can be measured in a lot of ways. We may not be able to accomplish actually painting the Moon, but still the act of participating in something such as this has value.”

In what way? “If I can get people thinking about the Moon as something they might be able to touch, if I can get science teachers to talk about the physics involved, Moon phases, etc., if I can just help people find the excitement of space as part of the human drama again, then the project will have been a grand success.”

Downey also doesn’t want to spoil a good party.

“In e-mails, I hear from people who are planning parties around the event, who become enraptured with the whole notion and tell all their friends,” he said. “Of course, I also hear from people who think the entire idea is just plain lunacy, and tell me I should be locked up for spreading such tripe. But hey, art is like that.”

Downey came up with the idea as part of a novel he’s writing, set 50 years into the future. “A couple of characters are discussing oddball things back in the beginning of the millenium, and this comes up. I thought that it would be fun if someone read my book (asuming I can get it published, of course) and actually tried to organize such an event, thereby having life imitate art.”

Exercises

Vocabulary Tasks

1. Find the English equivalents to the following:

Спроба; засмучувати; астрономічний, небесний; ціль, мішень; прилад; безмежний; реактивна ракета; можливий, вірогідний; пляма; сільський; оцінка; тривога; захоплення; винахід; безумство, божевілья; маячня.

2. Give antonyms to the following:

Natural; fleeting; coherent; powerful; to enhance; to obscure; faint; rural; visible.

3. Find the following words and word combinations in the text and explain their meaning in the context of the sentences in which the words appear:

To recruit; collaborative work; dark portion; feasible; wiggle room; to be intrigued; oddball thing.

4. Comment on the sentences:

1)But all technology has its limits.

2)He asked one of his graduate students, Chad Vandenbosch, to look into the possibility as a mathematical exercise.

3)Downey plans to proceed with the artistic attempt nonetheless.

4)Success is something that can be measured in a lot of ways.

Grammar Tasks

1. Find in the text sentences with the Subjunctive Mood and translate them.
 2. Put the Infinitive in the correct form:
 - 1)Downey (to choose) a target loction for the beams on the dark portion of the Moon while it (to be) in first-quarter.
 - 2)A web site, (to call) “Paint the Moon,” (to set up) with instructions for where and how (to point) your laser and why you (to participate).
 - 3)As a premise, he (to base) the calculations on what (to need) (to make) the spot visible to people in cities.
 - 4)Downey, the artist, (to intrigue) and a bit (to dismay) when he (to learn) of Vandenbosch’s science, but (to plan) to proceed with the artistic attempt nonetheless.
 - 5)A couple of characters (to discuss) oddball things back in the beginning of the millenium, and this (to come up).
 3. Complete the following blanks with articles where necessary:
 - 1)An artist hoping to recruit millions __ laser-pointer owners to “paint the Moon” may instead be disappointed __ physics.
 - 2)James T.Downey, the artist __ the project, is intent __ creating a “collaborative work __ celestial art” __ illuminating a fleeting red spot __ our only natural satellite.
 - 3)The event, an effort to help people “find the exitement __ space,” is scheduled __ two nights, one __ October and another __ November.
 - 4)And all __ the speed __ light.
 - 5)He asked one __ his students, Chad Vandenbosch, to look __ the possibility as a mathematical exercise.
 - 6)The main thing to glean __ the calculation is that the divergence __ these pointers, due to their small aperture and a basic law __ optics governing the diffraction __ light, results __ a huge diameter beam, and thus very dim beam, __ the time it arrives __ the Moon.
 4. Comment on the grammar in the following sentences:
 - 1)Artist wants to paint the Moon, but physics may foil plan.
 - 2)Laser light stays coherent over vast distances, the beams spreading very little.
 - 3)Astronomers use lasers to measure distances between telescopes and even to enhance observations in order to improve resolution of light coming from distant stars.
 - 4)People tell me I should be locked up for spreading such tripe.
- ### Discussion
- 1)If you had time and money to investigate something new, what would it be? Use specific details to explain why this thing is interesting or in need?
 - 2)Where can lasers and laser-devices be used?
 - 3)What are the main obstacles for painting the Moon?
 - 4)There are people who consider Downey’s idea to be plain lunacy. What’s your point of view? Give your reasons.
 - 5)What is the Moon’s influence on the Earth? Is everything connected

with our natural satellite studied?

6) All of us know that what once was fiction now is true. According to the new films and books what is expected for our future?

7) Written Assignment.

Artists are never satisfied with what they've already done or what they have. They always want something more or something different (extraordinary). Use specific reasons to support your answer.

11. The Nuclear Winter

Carl Sagan

Carl Sagan was the David Duncan Professor of Astronomy and Space Sciences and the Director of the Laboratory for Planetary Studies at Cornell University, as well as Distinguished Visiting Professor at Jet Propulsion Laboratories, California Institute of Technology. He cofounded The Planetary Society, the largest space-interest group in the world. Among his many awards is the 1994 Public Welfare Medal, the highest award given by the National Academy of Sciences. His book Cosmos became the best-selling science book ever published in the English language and served as the basis for the TV series seen in 60 countries, by more than 4 million people. He was particularly known for his ability to bring the wonders of the universe down to Earth and to make astronomy understandable to nonscientists. "The Nuclear Winter" appeared in Parade magazine in October, 1983.

Into the eternal darkness, into fire, into ice.

Dante, *The Inferno*

Except for fools and madmen, everyone knows that nuclear war would be an unprecedented human catastrophe. A more or less typical strategic warhead has a yield of 2 megatons, the explosive equivalent of 2 million tons of TNT. But 2 million tons of TNT is about the same as all the bombs exploded in World War II—a single bomb with the explosive power of the entire Second World War but compressed into a few seconds of time and an area 30 or 40 miles across. ...

In a 2-megaton explosion over a fairly large city, buildings would be vaporized, people reduced to atoms and shadows, outlying structures blown down like matchsticks and raging fires ignited. And if the bomb were exploded on the ground, an enormous crater, like those that can be seen through a telescope on the surface of the Moon, would be all that remained where midtown once had been. There are now more than 50,000 nuclear weapons, more than 13,000 megatons of yield, deployed in the arsenals of the United States and the Soviet Union—enough to obliterate a million Hiroshimas.

But there are fewer than 3,000 cities on the Earth with populations of 100,000 or more. You cannot find anything like a million Hiroshimas to obliterate. Prime military and industrial targets that are far from cities are comparatively rare. Thus, there are vastly more nuclear weapons than are needed for any plausible deterrence of a potential adversary.

Nobody knows, of course, how many megatons would be exploded in a real nuclear war. There are some who think that a nuclear war can be "contained," bottled

up before it runs away to involve many of the world's arsenals. But a number of detailed analyses, war games run by the U.S. Department of Defense and official Soviet pronouncements, all indicate that this containment may be too much to hope for: Once the bombs begin exploding, communications failures, disorganization, fear, the necessity of making in minutes decisions affecting the fates of millions and the immense psychological burden of knowing that your own loved ones may already have been destroyed are likely to result in a nuclear paroxysm. Many investigations, including a number of studies for the U.S. government, envision the explosion of 5,000 to 10,000 megatons—the detonation of tens of thousands of nuclear weapons that now sit quietly, inconspicuously, in missile silos, submarines and long-range bombers, faithful servants awaiting orders.

The World Health Organization, in a recent detailed study chaired by Sune K. Bergstrom (the 1982 Nobel laureate in physiology and medicine), concludes that 1.1 billion people would be killed outright in such a nuclear war, mainly in the United States, the Soviet Union, Europe, China and Japan. An additional 1.1 billion people would suffer serious injuries and radiation sickness, for which medical help would be unavailable. It thus seems possible that more than 2 billion people—almost half of all the humans on Earth—would be destroyed in the immediate aftermath of a global thermonuclear war. This would represent by far the greatest disaster in the history of the human species and, with no other adverse effects, would probably be enough to reduce at least the Northern Hemisphere to a state of prolonged agony and barbarism. Unfortunately, the real situation would be much worse.

In technical studies of the consequences of nuclear weapons explosions, there has been a dangerous tendency to underestimate the results. This is partly due to a tradition of conservatism which generally works well in science but which is of more dubious applicability when the lives of billions of people are at stake. In the Bravo test of March 1, 1954, a 15-megaton thermonuclear bomb was exploded on Bikini Atoll. It had about double the yield expected, and there was an unanticipated last-minute shift in the wind direction. As a result, deadly radioactive fallout came down on Rongelap in the Marshall Islands, more than 200 kilometers away. Almost all the children on Rongelap subsequently developed thyroid nodules and lesions, and other long-term medical problems, due to the radioactive fallout.

Likewise, in 1973, it was discovered that high-yield airbursts will chemically burn the nitrogen in the upper air, converting it into oxides of nitrogen; these, in turn, combine with and destroy the protective ozone in the Earth's stratosphere. The surface of the Earth is shielded from deadly solar ultraviolet radiation by a layer of ozone so tenuous that, were it brought down to sea level, it would be only 3 millimeters thick. Partial destruction of this ozone layer can have serious consequences for the biology of the entire planet.

These discoveries, and others like them, were made by chance. They were largely unexpected. And now another consequence—by far the most dire—has been uncovered, again more or less by accident.

The U.S. Mariner 9 spacecraft, the first vehicle to orbit another planet, arrived at Mars in late 1971. The planet was enveloped in a global dust storm. As the fine particles slowly fell out, we were able to measure temperature changes in the

atmosphere and on the surface. Soon it became clear what had happened:

The dust, lofted by high winds off the desert into the upper Martian atmosphere, had absorbed the incoming sunlight and prevented much of it from reaching the ground. Heated by the sunlight, the dust warmed the adjacent air. But the surface, enveloped in partial darkness, became much chillier than usual. Months later, after the dust fell out of the atmosphere, the upper air cooled and the surface warmed, both returning to their normal conditions. We were able to calculate accurately, from how much dust there was in the atmosphere, how cool the Martian surface ought to have been.

Afterwards, I and my colleagues, James B. Pollack and Brian Toon of NASA's Ames Research Center, were eager to apply these insights to the Earth. In a volcanic explosion, dust aerosols are lofted into the high atmosphere. We calculated by how much the Earth's global temperature should decline after a major volcanic explosion and found that our results (generally a fraction of a degree) were in good accord with actual measurements. Joining forces with Richard Turco, who has studied the effects of nuclear weapons for many years, we then began to turn our attention to the climatic effects of nuclear war.

We knew that nuclear explosions, particularly groundbursts, would lift an enormous quantity of fine soil particles into the atmosphere (more than 100,000 tons of fine dust for every megaton exploded in a surface burst). Our work was further spurred by Paul Crutzen of the Max Planck Institute for Chemistry in Mainz, West Germany, and by John Birks of the University of Colorado, who pointed out that huge quantities of smoke would be generated in the burning of cities and forests following a nuclear war.

Groundbursts—at hardened missile silos, for example—generate fine dust. Airbursts—over cities and unhardened military installations—make fires and therefore smoke. The amount of dust and soot generated depends on the conduct of the war, the yields of the weapons employed and the ratio of groundbursts to airbursts. So we ran computer models for several dozen different nuclear war scenarios. Our baseline case, as in many other studies, was a 5,000-megaton war with only a modest fraction of the yield (20 percent) expended on urban or industrial targets. Our job, for each case, was to follow the dust and smoke generated, see how much sunlight was absorbed and by how much the temperatures changed, figure out how the particles spread in longitude and latitude, and calculate how long before it all fell out of the air back onto the surface. Since the radioactivity would be attached to these same fine particles, our calculations also revealed the extent and timing of the subsequent radioactive fallout.

Some of what I am about to describe is horrifying. I know, because it horrifies me. There is a tendency—psychiatrists call it "denial"—to put it out of our minds, not to think about it. But if we are to deal intelligently, wisely, with the nuclear arms race, then we must steel ourselves to contemplate the horrors of nuclear war.

The results of our calculations astonished us. In the baseline case, the amount of sunlight at the ground was reduced to a few percent of normal—much darker, in daylight, than in a heavy overcast and too dark for plants to make a living from photosynthesis. At least in the Northern Hemisphere, where the great preponderance

of strategic targets lies, an unbroken and deadly gloom would persist for weeks.

Even more unexpected were the temperatures calculated. In the baseline case, land temperatures, except for narrow strips of coastline, dropped to minus 25° Celsius (minus 13° Fahrenheit) and stayed below freezing for months—even for a summer war. (Because the atmospheric structure becomes much more stable as the upper atmosphere is heated and the lower air is cooled, we may have severely underestimated how long the cold and the dark would last.) The oceans, a significant heat reservoir, would not freeze, however, and a major ice age would probably not be triggered. But because the temperatures would drop so catastrophically, virtually all crops and farm animals, at least in the Northern Hemisphere, would be destroyed, as would most varieties of uncultivated or undomesticated food supplies. Most of the human survivors would starve.

In addition, the amount of radioactive fallout is much more than expected. Many previous calculations simply ignored the intermediate time-scale fallout. That is, calculations were made for the prompt fallout—the plumes of radioactive debris blown downwind from each target—and for the long-term fallout, the fine radioactive particles lofted into the stratosphere that would descend about a year later, after most of the radioactivity had decayed. However, the radioactivity carried into the upper atmosphere (but not as high as the stratosphere) seems to have been largely forgotten. We found for the baseline case that roughly 30 percent of the land at northern midlatitudes could receive a radioactive dose greater than 250 rads, and that about 50 percent of northern midlatitudes could receive a dose greater than 100 rads. A 100-rad dose is the equivalent of about 1,000 medical X-rays. A 400-rad dose will, more likely than not, kill you.

The cold, the dark and the intense radioactivity, together lasting for months, represent a severe assault on our civilization and our species. Civil and sanitary services would be wiped out. Medical facilities, drugs, the most rudimentary means for relieving the vast human suffering, would be unavailable. Any but the most elaborate shelters would be useless, quite apart from the question of what good it might be to emerge a few months later. Synthetics burned in the destruction of the cities would produce a wide variety of toxic gases, including carbon monoxide, cyanides, dioxins and furans. After the dust and soot settled out, the solar ultraviolet flux would be much larger than its present value. Immunity to disease would decline. Epidemics and pandemics would be rampant, especially after the billion or so unburied bodies began to thaw. Moreover, the combined influence of these severe and simultaneous stresses on life are likely to produce even more adverse consequences—biologists call them synergisms—that we are not yet wise enough to foresee.

So far, we have talked only of the Northern Hemisphere. But it now seems—unlike the case of a single nuclear weapons test—that in a real nuclear war, the heating of the vast quantities of atmospheric dust and soot in northern midlatitudes will transport these fine particles toward and across the Equator. We see just this happening in Martian dust storms. The Southern Hemisphere would experience effects that, while less severe than in the Northern Hemisphere, are nevertheless extremely ominous. The illusion with which some people in the Northern

Hemisphere reassure themselves—catching an Air New Zealand flight in a time of serious international crisis, or the like—is now much less tenable, even on the narrow issue of personal survival for those with the price of a ticket.

But what if nuclear wars can be contained, and much less than 5,000 megatons is detonated? Perhaps the greatest surprise in our work was that even small nuclear wars can have devastating climatic effects. We considered a war in which a mere 100 megatons were exploded, less than one percent of the world arsenals, and only in low-yield airbursts over cities. This scenario, we found, would ignite thousands of fires, and the smoke from these fires alone would be enough to generate an epoch of cold and dark almost as severe as in the 5,000-megaton case. The threshold for what Richard Turco has called the Nuclear Winter is very low.

Could we have overlooked some important effect? The carrying of dust and soot from the Northern to the Southern Hemisphere (as well as more local atmospheric circulation) will certainly thin the clouds out over the Northern Hemisphere. But, in many cases, this thinning would be insufficient to render the climatic consequences tolerable—and every time it got better in the Northern Hemisphere, it would get worse in the Southern.

Our results have been carefully scrutinized by more than 100 scientists in the United States and Europe. There are still arguments on points of detail. But the overall conclusion seems to be agreed upon: There are severe and previously unanticipated global consequences of nuclear war—sub-freezing temperatures in a twilight radioactive gloom lasting for months or longer.

Scientists initially underestimated the effects of fallout, were amazed that nuclear explosions in space disabled distant satellites, had no idea that the fireballs from high-yield thermonuclear explosions could deplete the ozone layer and missed altogether the possible climatic effects of nuclear dust and smoke. What else have we overlooked?

Nuclear war is a problem that can be treated only theoretically. It is not amenable to experimentation. Conceivably, we have left something important out of our analysis, and the effects are more modest than we calculate. On the other hand, it is also possible—and, from previous experience, even likely—that there are further adverse effects that no one has yet been wise enough to recognize. With billions of lives at stake, where does conservatism lie—in assuming that the results will be better than we calculate, or worse?

Many biologists, considering the nuclear winter that these calculations describe, believe they carry somber implications for life on Earth. Many species of plants and animals would become extinct. Vast numbers of surviving humans would starve to death. The delicate ecological relations that bind together organisms on Earth in a fabric of mutual dependency would be torn, perhaps irreparably. There is little question that our global civilization would be destroyed. The human population would be reduced to prehistoric levels, or less. Life for any survivors would be extremely hard. And there seems to be a real possibility of the extinction of the human species.

It is now almost 40 years since the invention of nuclear weapons. We have not yet experienced a global thermonuclear war—although on more than one occasion we

have come tremulously close. I do not think our luck can hold forever. Men and machines are fallible, as recent events remind us. Fools and madmen do exist, and sometimes rise to power. Concentrating always on the near future, we have ignored the long-term consequences of our actions. We have placed our civilization and our species in jeopardy.

Fortunately, it is not yet too late. We can safeguard the planetary civilization and the human family if we so choose. There is no more important or more urgent issue.

Exercise

Vocabulary Exercises

1. Find in the text the English for:

Потужність, наслідки, опади, сажа, переважання, загрозливий, критично (скрупульозно) досліджувати, тягар, щитовидка, піддавати ризику, одночасний, вибух із повітря, вибух із землі.

2. Give all possible synonyms to the words ominous, envision, decline, somber, and antonyms to the words fool, typical, reduce, enormous.

3. Explain the following words and word combinations:

Barbarism, conservatism, rudimentary, pandemic, synergisms, civilization, thermonuclear war, fallible.

4. Comment on these sentences:

- ...Once the bombs begin exploding, communications failures, disorganization, fear, the necessity of making in minutes decisions affecting the fates of millions and the immense psychological burden of knowing that your own loved ones may already have been destroyed are likely to result in a nuclear paroxysm.

- Nuclear war is a problem that can be treated only theoretically.

- Men and machines are fallible, as recent events remind us.

Grammar Exercises

1. Find in the text Passives.

2. Put the infinitives in the correct form:

- And if the bombs (to explode) on the ground, an enormous crater, like those that can (to see) through a telescope on the surface of the Moon, (to be) all that (to remain) where midtown once (to be).

- This (to represent) by far the greatest disaster in the history of the human species and, with no other adverse effects, (to be) probably enough to reduce at least the Northern Hemisphere to a state of prolonged agony and barbarism.

- This (to be) partly due to a tradition of conservatism which generally (to work) well in science but which (to be) of more dubious applicability when the lives of billions of people are at stake.

3. Find the Conditional Mood.

4. Comment on the grammar in the following sentences:

- But a number of detailed analyses, war games run by the U.S. Department of Defense and official Soviet pronouncements, all indicate that this containment may be too much to hope for.

- But the overall conclusion seems to be agreed upon: There are severe and previously unanticipated global consequences of nuclear war – subfreezing temperatures in a twilight radioactive gloom lasting for months or longer.

- Scientists initially underestimated the effects of fallout, were amazed that nuclear explosions in space disabled distant satellites, had no idea that the fireballs from high-yield thermonuclear explosions could deplete the ozone layer and missed altogether the possible climatic effects of nuclear dust and smoke.

Discussion Exercises

1. Describe in your own words the power of a nuclear warhead and the immediate damage such a bomb explosion can cause.
2. According to the World Health Organization, what would be the results of a global thermonuclear war?
3. Explain the “nuclear winter” concept in your own words.
4. Sagan wrote that there is no more important issue than “safeguarding the planetary civilization” from nuclear holocaust. Write an essay about possible ways of doing it.

12. The Warming of the World

Carl Sagan

*The son of a textile worker in New York City, Sagan received his undergraduate and graduate degrees from the University of Chicago. He taught at dozens of universities, including Stanford, UC Berkeley, and Harvard. His books include *Dragons of Eden* and *Cosmos* (1980), and he was narrator and producer of the television series, *Cosmos*.*

When humans first evolved—in the savannahs of East Africa a few million years ago—our numbers were few and our powers feeble. We knew almost nothing about controlling our environment—even clothing had yet to be invented. We were creatures of the climate, utterly dependent upon it.

A few degrees hotter or colder on average, and our ancestors were in trouble. The toll taken much later by the ice ages, in which average land temperatures dropped some 8°C (centigrade, or Celsius), must have been horrific. And yet, it is exactly such climatic change that pushed our ancestors to develop tools and technology, science and civilization. Certainly, skills in hunting, skinning, tanning, building shelters and refurbishing caves must owe much to the terrors of the deep ice age.

Today, we live in a balmy epoch, 10,000 years after the last major glaciation. In this climatic spring, our species has flourished; we now cover the entire planet and are altering the very appearance of our world. Lately—within the last century or so—humans have acquired, in more ways than one, the ability to make major changes in that climate upon which we are so dependent. The Nuclear Winter findings are one dramatic indication that we can change the climate—in this case, in the spasm of nuclear war. But I wish here to describe a different kind of climatic danger, this one slower, more subtle and arising from intentions that are wholly benign.

It is warm down here on Earth because the Sun shines. If the Sun were somehow turned off, the Earth would rapidly cool. The oceans would freeze, eventually the atmosphere itself would condense out and our planet would be covered everywhere by snowbanks of solid oxygen and nitrogen 10 meters (about 30 feet) high. Only the tiny trickle of heat from the Earth's interior and the faint starlight would save our world from a temperature of absolute zero.

We know how bright the Sun is; we know how far from it we are; and we know what fraction of the sunlight reaching the Earth is reflected back to space (about 30 percent). So we can calculate—with a simple mathematical equation—what the average temperature of the Earth should be. But when we do the calculation, we find that the Earth's temperature should be about 20°C below the freezing point of water, in stark contradiction to our everyday experience. What have we done wrong?

As in many such cases in science, what we've done wrong is to forget something—in this case, the atmosphere. Every object in the universe radiates some kind of light to space; the colder the object, the longer the wavelength of radiation it emits. The Earth—much colder than the Sun—radiates to space mainly in the infrared part of the spectrum, not the visible. Were the Sun turned off, the Earth would soon be undetectable in ordinary visible light, though it would be brilliantly illuminated in infrared light.

When sunlight strikes the Earth, part is reflected back into the sky; much of the rest is absorbed by the ground and heats it—the darker the ground, the greater the heating. The ground radiates back upward in the infrared. Thus, for an airless Earth, the temperature would be set solely by a balance between the incoming sunlight absorbed by the surface and the infrared radiation that the surface emits back to space.

When you put air on a planet, the situation changes. The Earth's atmosphere is, generally, still transparent to visible light. That's why we can see each other when we talk, glimpse distant mountains and view the stars.

But in the infrared, all that is different. While the oxygen and nitrogen in the air are transparent in both the infrared and the visible, minor constituents such as water vapor (H₂O) and carbon dioxide (CO₂) tend to be much more opaque in the infrared. It would be useless for us to have eyes that could see at a wavelength, say, of 15 microns in the infrared, because the air is murky black there.

Accordingly, if you add air to a world, you heat it: The surface now has difficulty when it tries to radiate back to space in the infrared. The atmosphere tends to absorb the infrared radiation, keeping heat near the surface and providing an infrared blanket for the world. There is very little CO₂ in the Earth's atmosphere—only 0.03 percent. But that small amount is enough to make the Earth's atmosphere opaque in important regions of the infrared spectrum. CO₂ and H₂O are the reason the global temperature is not well below freezing. We owe our comfort—indeed, our very existence—to the fact that these gases are present and are much more transparent in the visible than in the infrared. Our lives depend on a delicate balance of invisible gases. Too much blanket, or too little, and we're in trouble.

This property of many gases to absorb strongly in the infrared but not in the visible, and thereby to heat their surroundings, is called the "greenhouse effect." A florist's greenhouse keeps its planty inhabitants warm. The phrase "greenhouse effect" is widely used and has an instructive ring to it, reminding us that we live in a planetary-scale greenhouse and recalling the admonition about living in glass houses and throwing stones. But, in fact, florists' greenhouses do not keep warm by the greenhouse effect; they work mainly by inhibiting the movement of air inside, another matter altogether.

We need look only as far as the nearest planet to see an example of an atmospheric

greenhouse effect gone wild. Venus has in its atmosphere an enormous quantity of carbon dioxide (roughly as much as is buried as carbonates in all the rocks of the Earth's crust). There is an atmosphere of CO₂ on Venus 90 times thicker than the atmosphere of the Earth and containing some 200,000 times more CO₂ than in our air. With water vapor and other minor atmospheric constituents, this is enough to make a greenhouse effect that keeps the surface of Venus around 470°C (900T)—enough to melt tin or lead.

When humans burn wood or "fossil fuels" (coal, oil, natural gas, etc.), they put carbon dioxide into the air. One carbon atom (C) combines with a molecule of oxygen (O₂) to produce CO₂. The development of agriculture, the conversion of dense forest to comparatively sparsely vegetated farms, has moved carbon atoms from plants on the ground to carbon dioxide in the air. About half of this new CO₂ is removed by plants or by the layering down of carbonates in the oceans. On human time-scales, these changes are irreversible: Once the CO₂ is in the atmosphere, human technology is helpless to remove it. So the overall amount of CO₂ in the air has been growing—at least since the industrial revolution. If no other factors operate, and if enough CO₂ is put into the atmosphere, eventually the average surface temperature will increase perceptibly.

There are other greenhouse gases that are increasingly abundant in the Earth's atmosphere—halocarbons, such as the freon used in refrigerator cooling systems; or nitrous oxide (N₂O), produced by automobile exhausts and nitrogenous fertilizers; or methane (CH₄), produced partly in the intestines of cows and other ruminants.

But let's for the moment concentrate on carbon dioxide: How long, at the present rates of burning wood and fossil fuels, before the global climate becomes significantly warmer? And what would the consequences be?

It is relatively simple to calculate the immediate warming from a given increase in the CO₂ abundance, and all competent calculations seem to be in good agreement. More difficult to estimate are (1) the rate at which carbon dioxide will continue to be put into the atmosphere (it depends on population growth rates, economic styles, alternative energy sources and the like) and (2) feedbacks—ways in which a slight warming might produce other, more drastic, effects.

The recent increase in atmospheric CO₂ is well documented. Over the last century, this CO₂ buildup should have resulted in a few tenths of a degree of global warming, and there is some evidence that such a warming has occurred.

The National Academy of Sciences estimates that the present atmospheric abundance of CO₂ is likely to double by the year 2065, although experts at the academy predict a one-in-20 chance that it will double before 2035—when an infant born today becomes 50 years old. Such a doubling would warm the air near the surface of the Earth by 2°C or 3°C—maybe by as much as 4°C. These are average temperature values; there would naturally be considerable local variation. High latitudes would be warmed much more, although a baked Alaska will be some time coming.

There would be precipitation changes. The annual discharge of rivers would be altered. Some scientists believe that central North America—including much of the area that is now the breadbasket of the world— would be parched in summer if the

global temperature increases by a few degrees. There would be some mitigating effects; for example, where plant growth is not otherwise limited, more CO₂ should aid photosynthesis and make more luxuriant growth (of weeds as well as crops). If the present CO₂ injection into the atmosphere continued over a few centuries, the warming would be greater than from all other causes over the last 100,000 years.

As the climate warms, glacial ice melts. Over the last 100 years, the level of the world's oceans has risen by 15 centimeters (6 inches). A global warming of 3°C or 4°C over the next century is likely to bring a further rise in the average sea level of about 70 centimeters (28 inches). An increase of this magnitude could produce major damage to ports all over the world and induce fundamental changes in the patterns of land development. A serious speculation is that greenhouse temperature increases of 3°C or 4°C could, in addition, trigger the disintegration of the West Antarctic Ice Sheet, with huge quantities of polar ice falling into the ocean. This would raise sea level by some 6 meters (20 feet) over a period of centuries, with the eventual inundation of all coastal cities on the planet.

There are many other possibilities that are poorly understood, including the release of other greenhouse gases (for example, methane from peat bogs) accelerated by the warming climate. The circulation of the oceans might be an important aspect of the problem. The scientific community is attempting to make an environmental-impact statement for the entire planet on the consequences of continued burning of fossil fuels. Despite the uncertainties, a kind of consensus is in: Over the next century or more, with projected rates of burning of coal, oil and gas, there is trouble ahead.

The problem is difficult for at least three different reasons:

1. We do not yet fully understand how severe the greenhouse consequences will be.
2. Although the effects are not yet strikingly noticeable in everyday life, to deal with the problem, the present generation might have to make sacrifices for the next.
3. The problem cannot be solved except on an international scale: The atmosphere is ignorant of national boundaries...

Fortunately, we have a little time. A great deal can be done in decades. Some argue that government subsidies lower the price of fossil fuels, inviting waste; more efficient usage, besides its economic advantage, could greatly ameliorate the CO₂ greenhouse problem. Parts of the solution might involve alternative energy sources, where appropriate: solar power, for example, or safer nuclear fission reactors, which, whatever their other dangers, produce no greenhouse gases of importance. Conceivably, the long-awaited advent of commercial nuclear fusion power might happen before the middle of the next century.

...During the last few million years, human technology, spurred in part by climatic change, has made our species a force to be reckoned with on a planetary scale. We now find, to our astonishment, that we pose a danger to ourselves. The present world order is, unfortunately, not designed to deal with global-scale dangers. Nations tend to be concerned about themselves, not about the planet; they tend to have short-term rather than long-term objectives. In problems such as the increasing greenhouse effect, one nation or region might benefit while another suffers. In other global environmental issues, such as nuclear war, all nations lose. The problems are

connected: Constructive international efforts to understand and resolve one will benefit the others.

Further study and better public understanding are needed, of course. But what is essential is a global consciousness—a view that transcends our exclusive identification with the generational and political groupings into which, by accident, we have been born. The solution to these problems requires a perspective that embraces the planet and the future. We are all in this greenhouse together.

Exercises

Vocabulary Exercises

1. Find in the text the English for:

Зледеніння, кучугури, земна кора, незворотній, помітно, рясний, жуйні тварини, повінь, торф'яні болота, розпад, переходити межу, інфрачервоний, повністю залежати від, предки, випаровуватися, випромінювати, парниковий ефект.

2. Give synonyms to the words murky, speculation, alter, abundant, and antonyms to the words feeble, flourish, increase.

3. Explain the following words and word combinations:

Glaciations, radiation, fossil fuels, nuclear fission, atmosphere, savannahs, consensus.

4. Comment on these sentences:

- Our lives depend on a delicate balance of invisible gases.
- The phrase “greenhouse effect” is widely used and has an instructive ring to it, reminding us that we live in a planetary-scale greenhouse and recalling the admonition about living in glass houses and throwing stones.
- We now find, to our astonishment, that we pose a danger to ourselves.

Grammar Exercises

1. Find in the text Gerund.

2. Put the infinitives in the correct form:

- The toll (to take) much later by the ice ages, in which average land temperatures (to drop) some 8 centigrade, must (to be) horrific.
- While the oxygen and nitrogen in the air (to be) transparent in both the infrared and the visible, minor constituents such as water vapor (H₂O) and carbon dioxide (CO₂) (to tend) to be much more opaque in the infrared.
- But what is essential is a global consciousness – a view that (to transcend) our exclusive identification with the generational and political groupings into which, by accident, we (to bear).

3. Find the Conditional Mood.

4. Comment on the grammar in the following sentences:

- In this climatic spring, our species has flourished; we now cover the entire planet and are altering the very appearance of our world.
- Were the Sun turned off, the Earth would soon be undetectable in ordinary visible light, though it would be brilliantly illuminated in infrared light.
- Over the last century, this CO₂ buildup should have evidence that such a warming has occurred.

Discussion Exercises

1. Analyze the style of the article.
2. Reread the essay's first paragraph. Did Sagan support the theory of evolution or the belief in creationism? What in the first paragraph suggests his support for either perspective?
3. According to Sagan, what causes the "greenhouse effect", and what will be its effect?
4. Give your own ideas about the ways of solving the greenhouse effect problem.
5. Define global consciousness in your own words.
6. Written task: composition "Current technologies and their role in the present day life "(pro and con assignment).

13. Gender Roles

Bethany Dever

In this selection, student writer Bethany Dever describes "differences between the sexes" and gender-role distinctions based on cultural assumptions, and she offers her own ideas on how members of society should correct their judgments and perceptions.

Most societies commonly assume that differences between the sexes are inherent: physical, biological, genetic, and physiological differences. Such an assumption ignores differences among men and among women, while perpetuating stereotypes about differences between men and women. People acquire their ability to fulfill their gender roles by learning particular social behaviors, not by expressing inborn characteristics.

Changing cultural standards are useful in explaining human traits formerly thought to be sex linked. The development of distinctive motherhood/fatherhood gender roles came about in preindustrial societies. In *Introduction to Sociology*, Henry Tishler contends that the [preindustrial] woman's life is characterized by a continuing cycle of pregnancy, childbearing, and nursing for periods of up to three years. By the time the child is weaned, the mother is likely to be pregnant again. Not until menopause, which frequently coincides with the end of the woman's life itself, is her reproduction role over. In these circumstances it is not surprising that such activities as hunting, fighting, and forest clearing usually are defined as male tasks; whereas gathering grains and vegetables, preparing of small game, tending gardens, and building shelters are typically female activities, as is caring for the young.

This description provides an example of a woman's role as biologically determined for the purpose of survival. Now, in modern society, these role distinctions are far less needed, but because we still maintain these distinctions, we think of them as natural or inborn. . . . The socialization of gender roles can also be seen by observing other cultures. In some cultures, women work alongside men, doing laborious work because women are considered to be physically equal to men.

Many religions around the world teach that males are superior to women by nature. As Tishler explains, "The Judeo-Christian story of creation presents a God-ordained sex-role hierarchy, with man created in the image of God and woman a subsequent and secondary act of creation. Thus the man is superior to woman, who was created

to assist man and bear his children". The Catholic church doesn't allow women to be ordained as priests because men are considered to be closer to God. Women are told, instead, that they should seek meaning in their lives through motherhood. Similarly, Hinduism traditionally sees women as being sexual temptations testing male spirituality; therefore, women are deemed inferior. In some instances, historically, women could not wear certain types of clothing or participate in public affairs. The Muslim religion justifies women's low status by claiming that they are irrational and emotional by nature.

By the nineteenth century, because women were considered more emotional and sensitive than men, "hysteria" was thought to be a woman's disease. However, today we see hysteria in men—as well as women—who experience post traumatic stress syndrome. Whether Hispanic, Asian, Native American, European, African, male or female, we all have the same range of emotions. The only requirement is to be human. The way we express emotions is learned behavior among the sexes.

Society says boys shouldn't play with dolls. But without this practice of caregiving, boys become fathers who, unlike mothers, don't acquire the learned abilities of being sensitive caregivers, providing for a child's emotional needs. Women are taught that being attractive is part of their gender role; and although a slim figure is considered attractive in women, the desire to be slim is learned, not genetically determined.

When men express emotions such, as fear, sadness, or love, or when they are involved in the arts, they are often labeled as being too feminine. When women are aggressive—intellectually or physically—they are often labeled as being too manly. Thus, we send messages that are incorporated into learned behavior. Deborah Tannen emphasizes this point in "Sex, Lies, and Conversation":

In the April issue of *American Psychologist*, Stanford University's Eleanore Maccoby reports the results of her own and others' research showing that children's development is most influenced by the social structure of peer interactions. Boys and girls play with children of their own gender, and their sex-separate groups have different organizational structures and interactive norms.

I believe these systematic differences in childhood socialization make talk between men and women like cross-cultural communication, heir to all the attraction and pitfalls of that enticing but difficult enterprise.

Women and men certainly do possess biological, genetic differences. Women tend to live longer than men, for one thing. As Tishler points out, "Men are more likely to die or suffer serious disability or illnesses than women". One reason for this characteristic may be because women respond differently to stress than do men. They learn (appropriately) to react more slowly to stress, relieving pressure on the blood vessels. On the other hand, men generally develop greater muscle capacity than women; because of this, women are taught, based on the assumption of physical ability, not to attempt certain tasks even though women as a rule possess greater stamina than men. Although female and male gender roles are not as distinct as they once were, there remain unequal distinctions between the sexes because traditional attitudes and expectations persist. Many examples of inequities of opportunity in the workplace can be found, where women, on average, are paid less for comparable work than men, and major professional sports teams don't allow competition between

the sexes. Sometimes our parents and peers, even the media we watch and read, send mixed messages to both sexes about gender role expectations. But as long as men and women lead happy, healthy, productive lives, it shouldn't matter how we express ourselves in terms of our gender. What we are taught about our gender roles is not part of our biological inheritance.

Exercises

Vocabulary Exercises

1. Find in the text the English for:

Задля виживання, чоловіки є вищими над жінками за своєю суттю, статево-ролева ієрархія, знаходити сенс життя у материнстві, брати участь у громадських справах, відлучати від грудей, життєздатність, вимоги, норми взаємодії.

2. Give synonyms to the words assumption, possess, base and antonyms to the words different, ignore, modern and equal.

3. Explain the following words and word combinations:

Stereotypes, gender roles, socialization, inborn characteristics, cultural standards, irrational, feminine, peer interactions, interactive norms, cross-cultural communications, stress (n), stamina, superior.

4. Comment on these sentences:

- ...story of creation presents a God-ordained sex-role hierarchy, with man created in the image of God and woman a subsequent and secondary act of creation.

- The only requirement is to be human.

- ...Eleanore Maccoby reports the results of her own and others' research showing that children's development is most influenced by the social structure of peer interactions.

- I believe these systematic differences in childhood socialization make talk between men and women like cross-cultural communication, heir to all the attractions and pitfalls of that enticing but difficult enterprise.

- ...women as a rule possess greater stamina than men.

- Sometimes our parents and peers, even the media we watch and read, send mixed messages to both sexes about gender role expectations.

Grammar Exercises

1. Find in the text all the cases of the inverted word order.

2. Put the infinitives in the correct form:

- The socialization of gender roles can also (to see) by observing other cultures.

- Similarly, Hinduism traditionally (to see) women as being sexual temptation testing male spiritually; therefore, women (to deem) inferior.

- When men (to express) emotions such, as fear, sadness, or love, or when they (to involve) in the arts, they often (to label) as being too feminine.

- The Muslim religion (to justify) women's low status by claiming that they are irrational and emotional by nature.

- By the nineteenth century, because women (to consider) more emotional and sensitive than men, "hysteria" (to think) to be a women's disease.

3. Change all the cases of the passive voice into the sentences with the active

voice.

4. Comment on the grammar in the following sentences:

- Changing cultural standards are useful in explaining human traits formerly thought to be sex linked.

- But without this practice of caregiving, boys become fathers who, unlike mothers, don't acquire the learned abilities of being sensitive caregivers, providing for a child's emotional needs.

- On the other hand, men generally develop greater muscle capacity than women; because of this, women are taught, based on the assumption of physical ability, not to attempt certain tasks even though women as a rule possess greater stamina than men.

Discussion Exercises

1. Analyze the style and the way the author demonstrates her views.

2. Define the main idea and the key-words of the story.

3. Give a short written report on one of the following topics:

- Gender stereotypes.

- Gender roles in Ukraine.

- "The world desperately needs cross-cultural understanding"

- Comparing gender roles in eastern and western civilizations.

14. There Will Come Soft Rains

Ray Bradbury

Ray Bradbury has published some twenty-five books—novels, stories, plays, and poems—since his first story appeared in Rob Wagner's Script when he was 20 years old. His most well-known works include The Martian Chronicles, Fahrenheit 451 (made into a film by Francois Truffaut in 1967), The Illustrated Man (made into film in 1969), Something Wicked This Way Comes (made into film in 1983), and Dandelion Wine. "There Will Come Soft Rains" is from Bradbury's 1996 collection of short stories, The Stories of Ray Bradbury.

In the living room the voice-clock sang, Tick-took, seven o'clock, time to get up, time to get up, seven o'clock! as if it were afraid that nobody would. The morning house lay empty. The clock ticked on, repeating and repeating its sounds into the emptiness. Seven-nine, breakfast time, seven-nine!

In the kitchen the breakfast stove gave a hissing sigh and ejected from its warm interior eight pieces of perfectly browned toast, eight eggs sunny-side up, sixteen slices of bacon, two coffees, and two cool glasses of milk.

"Today is August 4, 2026," said a second voice from the kitchen ceiling, "in the city of Allendale, California." It repeated the date three times for memory's sake. "Today is Mr. Featherstone's birthday. Today is the anniversary of Tihta's marriage. Insurance is payable, as are the water, gas, and light bills."

Somewhere in the walls, relays clicked, memory tapes glided under electric eyes.

Eight-one, tick-tock, eight-one o'clock, off to school, off to work, run, run, eight-one! But no doors slammed, no carpets took the soft tread of rubber heels. It was raining outside. The weather box on the front door sang quietly: "Rain, rain, go away; rubbers, raincoats for today..." And the rain tapped on the empty house, echoing.

Outside, the garage chimed and lifted its door to reveal the waiting car. After a long wait the door swung down again.

At eight-thirty the eggs were shriveled and the toast was like stone. An aluminum wedge scraped them into the sink where hot water whirled them down a metal throat which digested and flushed them away to the distant sea. The dirty dishes were dropped into a hot washer and emerged twinkling dry.

Nine-fifteen, sang the clock, time to clean.

Out of warrens in the wall, tiny robot mice darted. The rooms were acrawl with the small cleaning animals, all rubber and metal. They thudded against chairs, whirling their mustached runners, kneading the rug nap, sucking gently at hidden dust. Then, like mysterious invaders, they popped into their burrows. Their pink electric eyes faded. The house was clean.

Ten o'clock. The sun came out from behind the rain. The house stood alone in a city of rubble and ashes. This was the one house left standing. At night the ruined city gave off a radioactive glow which could be seen for miles.

Ten-fifteen. The garden sprinklers whirled up in golden founts, filling the soft morning air with scatterings of brightness. The water pelted win-dowpanes, running down the charred west side where the house had been burned evenly free of its white paint. The entire west face of the house was black, save for five places. Here the silhouette in paint of a man mowing a lawn. Here, as in a photograph, a woman bent to pick flowers. Still farther over, their images burned on wood in one titanic instant, a small boy, hands flung into the air; higher up, the image of a thrown ball, and opposite him a girl, hands raised to catch a ball which never came down.

The five spots of paint—the man, the woman, the children, the ball— remained. The rest was a thin charcoaled layer.

The gentle sprinkler rain filled the garden with falling light. Until this day, how well the house had kept its peace. How carefully it had inquired, "Who goes there? What's the password?" and, getting no answer from lonely foxes and whining cats, it had shut up its windows and drawn shades in an old-maidenly preoccupation with self-protection which bordered on a mechanical paranoia.

It quivered at each sound, the house did. If a sparrow brushed a window, the shade snapped up. The bird, startled, flew off! No, not even a bird must touch the house!

The house was an altar with ten thousand attendants, big, small, servicing, attending, in choirs. But the gods had gone away, and the ritual of the religion continued senselessly, uselessly. Twelve noon.

A dog whined, shivering, on the front porch.

The front door recognized the dog voice and opened. The dog, once huge and fleshy, but now gone to bone and covered with sores, moved in and through the house, tracking mud. Behind it whirred angry mice, angry at having to pick up mud, angry at inconvenience.

For not a leaf fragment blew under the door but what the wall panels flipped open and the copper scrap rats flashed swiftly out. The offending dust, hair, or paper, seized in miniature steel jaws, was raced back to the burrows. There, down tubes which fed into the cellar, it was dropped into the sighing vent of an incinerator which sat like evil Baal in a dark corner.

The dog ran upstairs, hysterically yelping to each door, at last realizing, as the house realized, that only silence was here.

It sniffed the air and scratched the kitchen door. Behind the door, the stove was making pancakes which filled the house with a rich baked odor and the scent of maple syrup.

The dog frothed at the mouth, lying at the door, sniffing, its eyes turned to fire. It ran wildly in circles, biting at its tail, spun in a frenzy, and died. It lay in the parlor for an hour.

Two o'clock, sang a voice.

Delicately sensing decay at last, the regiments of mice hummed out as softly as blown gray leaves in an electrical wind.

Two-fifteen.

The dog was gone.

In the cellar, the incinerator glowed suddenly and a whirl of sparks leaped up the chimney.

Two thirty-five.

Bridge tables sprouted from patio walls. Playing cards fluttered onto pads in a shower of pips. Martinis manifested on an oaken bench with egg-salad sandwiches. Music played.

But the tables were silent and the cards untouched.

At four o'clock the tables folded like great butterflies back through the paneled walls.

Four-thirty.

The nursery walls glowed,

Animals took shape: yellow giraffes, blue lions, pink antelopes, lilac panthers cavorting in crystal substance. The walls were glass. They looked out upon color and fantasy. Hidden films clocked through well-oiled sprockets, and the walls lived. The nursery floor was woven to resemble a crisp, cereal meadow. Over this ran aluminum roaches and iron crickets, and in the hot still air butterflies of delicate red tissue wavered among the sharp aromas of animal spoors! There was the sound like a great matted yellow hive of bees within a dark bellows, the lazy bumble of a purring lion. And there was the patter of okapi feet and the murmur of a fresh jungle rain, like other hoofs, falling upon the summer-starched grass. Now the walls dissolved into distances of parched weed, mile on mile, and warm endless sky. The animals drew away into thorn brakes and water holes.

It was the children's hour.

Five o'clock. The bath filled with clear hot water.

Six, seven, eight o'clock. The dinner dishes manipulated like magic tricks, and in the study a click. In the metal stand opposite the hearth where a fire now blazed up warmly, a cigar popped out, half an inch of soft gray ash on it, smoking, waiting.

30

Nine o'clock. The beds warmed their hidden circuits, for nights were cool here.

Nine-five. A voice spoke from the study ceiling:

"Mrs. McClellan, which poem would you like this evening?"

The house was silent.

The voice said at last, "Since you express no preference, I shall select a poem at random." Quiet music rose to back the voice. "Sara Teasdale. As I recall, your favorite. . . .

*There will come soft rains and the smell of the ground,
And swallows circling with their shimmering sound;
And frogs in the pools singing at night,
And wild plum trees in tremulous white;
Robins will wear their feathery fire,
Whistling their whims on a low fence-wire;
And not one will know of the war, not one
Will care at last when it is done.
Not one would mind, neither bird nor tree
, If mankind perished utterly;
And Spring herself, when she woke at dawn
Would scarcely know that we were gone.*

The fire burned on the stone hearth and the cigar fell away into a mound of quiet ash on its tray. The empty chairs faced each other between the silent walls, and the music played.

At ten o'clock the house began to die.

The wind blew. A falling tree bough crashed through the kitchen window. Cleaning solvent, bottled, shattered over the stove. The room was ablaze in an instant!

"Fire!" screamed a voice. The house lights flashed, water pumps shot water from the ceilings. But the solvent spread on the linoleum, licking, eating, under the kitchen door, while the voices took it up in chorus: "Fire, fire, fire!"

The house tried to save itself. Doors sprang tightly shut, but the windows were broken by the heat and the wind blew and sucked upon the fire.

The house gave ground as the fire in ten billion angry sparks moved with flaming ease from room to room and then up the stairs. While scurrying water rats squeaked from the walls, pistoled their water, and ran for more. And the wall sprays let down showers of mechanical rain.

But too late. Somewhere, sighing, a pump shrugged to a stop. The quenching rain ceased. The reserve water supply which had filled baths and washed dishes for many quiet days was gone.

The fire crackled up the stairs. It fed upon Picassos and Matisses in the upper halls, like delicacies, baking off the oily flesh, tenderly crisping the canvases into black shavings.

Now the fire lay in beds, stood in windows, changed the colors of drapes!
And then, reinforcements.

From attic trapdoors, blind robot faces peered down with faucet mouths gushing green chemical.

The fire backed off, as even an elephant must at the sight of a dead snake. Now there were twenty snakes whipping over the floor, killing the fire with a clear cold venom of green froth.

But the fire was clever. It had sent flame outside the house, up through the attic to

the pumps there. An explosion! The attic brain which directed the pumps was shattered into bronze shrapnel on the beams.

The fire rushed back into every closet and felt of the clothes hung there.

The house shuddered, oak bone on bone, its bared skeleton cringing from the heat, its wire, its nerves revealed as if a surgeon had torn the skin off to let the red veins and capillaries quiver in the scalded air. Help, help! Fire! Run, run! Heat snapped mirrors like the first brittle winter ice. And the voices wailed, Fire, fire, run, run, like a tragic nursery rhyme, a dozen voices, high, low, like children dying in a forest, alone, alone. And the voices fading as the wires popped their sheathings like hot chestnuts. One, two, three, four, five voices died.

In the nursery the jungle burned. Blue lions roared, purple giraffes bounded off. The panthers ran in circles, changing color, and ten million animals, running before the fire, vanished off toward a distant steaming river. . . .

Ten more voices died. In the last instant under the fire avalanche, other choruses, oblivious, could be heard announcing the time, playing music, cutting the lawn by remote-control mower, or setting an umbrella frantically out and in, the slamming and opening front door, a thousand things happening, like a clock shop when each clock strikes the hour insanely before or after the other, a scene of maniac confusion, yet unity; singing, screaming, a few last cleaning mice darting bravely out to carry the horrid ashes away! And one voice, with sublime disregard for the situation, read poetry aloud in the fiery study, until all the film spools burned, until all the wires withered and the circuits cracked.

The fire burst the house and let it slam flat down, puffing out skirts of spark and smoke.

In the kitchen, an instant before the rain of fire and timber, the stove could be seen making breakfasts at a psychopathic rate, ten dozen eggs, six loaves of toast, twenty dozen bacon strips, which, eaten by fire, started the stove working again, hysterically hissing!

The crash. The attic smashing into kitchen and parlor. The parlor into cellar, cellar into sub-cellar. Deep freeze, armchair, film tapes, circuits, beds, and all like skeletons thrown in a cluttered mound deep under.

Smoke and silence. A great quantity of smoke.

Dawn showed faintly in the east. Among the ruins, one wall stood alone. Within the wall, a last voice said, over and over again and again, even as the sun rose to shine upon the heaped rubble and steam:

"Today is August 5, 2026, today is August 5, 2026, today is . . ."

Exercises

Vocabulary Exercises

1. Find in the text the English for:

Заклопотаність старої діви, межувати з механічною параноєю, вертїтися у сказї, алюмінійні таргани та залїзні цвїркуни, кїмната у вогні, вогонь нїжно похрускував полотнищами, пїдсилення, їз люка горища виглядали слїпї обличчя роботїв їз вентилями, з яких лїнули зеленї хїмїкалїї, спека трїскала дзеркала, як першїй ламкїй зимовїй лїд, пїд лавиною вогню.

2. Give synonyms to the words insane, quiver, offend, fleshy, dart and

antonyms to the words soft, mysterious, inquire and empty.

3. Explain the following words and word combinations:

Anniversary, insurance, old-maiden, ritual, substance, a city of rubble and ashes, the offending dust.

4. Comment on these sentences:

- Insurance is payable, as are the water, gas, and light bills.
- But the gods had gone away, and the ritual of the religion continued senselessly, uselessly.
- The house shuddered, oak bone on bone, its bare skeletons cringing from the heat, its wire, its nerves revealed as if a surgeon had torn the skin off to let the red veins and capillaries quiver in the scalded air.

Grammar Exercises

1. Find in the text Participle II.

2. Put the infinitives in the correct form:

- An aluminum wedge (to scrape) them into the sink where hot water (to whirl) them down a metal throat which (to digest) and (to flush) them away to the distant sea.

- In the last instant under the fire avalanche, other choruses, oblivious, could (to hear) (to announce) the time, (to play) music, (to cut) the lawn by remote-control mower, or (to set) an umbrella frantically out and in, the slamming and opening front door, a thousand things happening, like a click shop when each clock (to strike) the hour insanely before or after the other, a scene of maniac confusion, yet unity; singing, screaming, a few last cleaning mice darting bravely out to carry the horrid ashes away!

- In the kitchen, an instant before the rain of fire and timber, the stove could (to see) making breakfasts at a psychopathic rate, ten dozen eggs, six loaves of toast, twenty dozen bacon strips, which, (to eat) by fire, (to start) the stove working again, hysterically hissing!

3. Change all the cases of the direct speech into the sentences with indirect speech.

4. Comment on the grammar in the following sentences:

- They thudded against chairs, whirling their mustaches runners, kneading the rug nap, sucking gently at hidden dust.

- Still farther over, their images burned on wood in one titanic instant, a small boy, hands flung into the air; higher up, the image of a thrown ball, and opposite him a girl, hands raised to catch a ball which never came down.

- How carefully it had inquired, "Who goes there? What's the password?" and, getting no answer from lonely foxes and whining cats, it had shut up its windows and drawn shades in an old-maidenly preoccupation with self-protection which bordered on a mechanical paranoia..

Discussion Exercises

1. How does Bradbury's picture of a postnuclear wasteland convey the tragedy and horror of his story? Make a list of the descriptive words and phrases that help readers see and feel the human devastation and horror in the landscape.

2. How does Bradbury's brief description of the family remains affect you? Do you think it is as effective as a more gruesomely detailed description of a bloodier death might be? Why?
3. List and describe features of a self-sustaining cyberhouse of the future.
4. What is ironic about the house still functioning perfectly even after "the dust has settled"?
5. Name the films or books based on the same theme – destructive results of the human activity and civilization.
6. Write a fictional story describing the aftermath of a nuclear holocaust. You might show the struggle of a community of people trying to survive, as many after-the-bomb science-fiction stories do. Be specific and detailed in your description of the landscape, the people in it, and their situation.

15. How to Poison Earth

Linnea Saukko

Student writer Linnea Saukko satirically addresses the willful polluting of Earth by corporations and governments. In the tradition of all good satires, Saukko exposes the inherent folly in polluting our planet without concern for the environment and for future generations of life on Earth.

It can be difficult to poison Earth because Earth is always trying to cleanse and renew itself. Keeping this in mind, we should generate as much waste as possible from substances such as uranium-238, which has a half-life (the time it takes for half of the substance to decay) of 1 million years, or plutonium, which has a half-life of only 0.5 million years but is so toxic that if distributed evenly over the land, 10 pounds of it could kill every person on Earth. Because the United States generates about 18 tons of plutonium per year, it is about the best substance for long-term poisoning of Earth. It would help if we would build more nuclear power plants because each one generates only 500 pounds of plutonium each year. Of course, we must include persistent toxic chemicals such as polychlorinated biphenyl (PCB) and dichlorodiphenyl trichloroethane (DDT) to make sure we have enough toxins to poison Earth from the core to the outer atmosphere. First, we must develop many different ways of putting the waste from these nuclear and chemical substances in, on, and around Earth.

Putting these substances in Earth is a most important step in the poisoning process. With deep-well injection, we can ensure that Earth is poisoned all the way to the core. Deep-well injection involves drilling a hole ... a few thousand feet deep and injecting toxic substances at extremely high pressures so they will penetrate deep into Earth. According to the Environmental Protection Agency (EPA), there are about 360 such deep-injection wells in the United States. We cannot forget the groundwater aquifers that are closer to the surface. These must also be contaminated. This is easily done by shallow-well injection, which operates on the same principle as deep-well injection, only closer to the surface. The groundwater that has been injected with toxins will spread the contamination beneath Earth. The EPA estimates that there are

approximately 500,000 shallow-injection wells in the United States.

The next best method is to bury toxins in Earth. The toxins from landfills, dumps, and lagoons slowly seep into Earth, guaranteeing that contamination will last a long time. Because the EPA estimates [that] there are only about 50,000 of these dumps in the United States, they should be located in areas where they will leak to the surrounding ground and surface water.

Applying pesticides and other poisons on Earth is another part of the poisoning process. This is good for coating Earth's surface so that the poisons will be absorbed by plants, will seep into the ground, and will run off into surface water.

Surface water is very important to contaminate because it will transport the poisons to places that cannot be contaminated directly. Lakes are good for long-term storage of pollutants while they release some of their contamination to rivers. The only trouble with rivers is that they act as a natural cleansing system for Earth. No matter how much poison is dumped into them, they will try to transport it away to reach the ocean eventually.

The ocean is very hard to contaminate because it has such a large volume and a natural buffering capacity that tends to neutralize some of the contamination. So in addition to the pollution from rivers, we must use the ocean as a dumping place for as many toxins as possible. The ocean currents will help transport the pollution to places that cannot otherwise be reached.

Now make sure that the air around Earth is very polluted. Combustion and evaporation are major mechanisms for doing this. We must continuously pollute because the wind will disperse the toxins while rain washes them from the air, but this is good because a few lakes are stripped of all living animals each year from acid rain. Because the lower atmosphere can cleanse itself fairly easily, we must explode nuclear test bombs that shoot radioactive particles high into the upper atmosphere where they will circle Earth for years. Gravity must pull some of the particles to Earth, so we must continue exploding these bombs.

So it is that easy. Just be sure to generate as many poisonous substances as possible, and be sure they are distributed in, on, and around Earth at a greater rate than it can cleanse itself. By following these easy steps, we can guarantee the poisoning of Earth.

Exercises

Vocabulary Exercises

1. Find in the text the English for:
заражати, забруднення, випаровування, розвіювати, горіння, самовідновлення, викиди, атомні станції, свердловина, отруту вберуть рослини, просякатися в ґрунт.
2. Give synonyms to the words generate, toxic, ensure, trouble, and antonyms to the words deep, capacity, cleanse.
3. Explain the following words and word combinations:
The green house effect, ozone layer, pollution, toxic waste, pesticides, fertilizers, fumes, endangered species, extinct species, habitat, rainforest, recycle, acid rain.
4. Comment on these sentences:

- ...Earth is always trying to cleanse and renew itself.
- The only trouble with rivers is that they act as a natural cleansing system for Earth.
- The ocean has a natural buffering capacity that tends to neutralize some of the contamination.

Grammar Exercises

1. Find in the text Conditionals.
2. Put the infinitives in the correct form:
 - The toxins from landfills, dumps, and lagoons slowly (to seep) into Earth, (to guarantee) that contamination (to last) a long time.
 - The ocean currents (to help) transport the pollution to places that cannot otherwise (to reach).
 - We must continuously pollute because the wind (to disperse) the toxins while rain (to wash) them from the air, but this is good because a few lakes (to strip) of all living animals each year from acid rain.
3. Change all the cases of the passive voice into the sentences with the active voice.
4. Comment on the grammar in the following sentences:
 - This is good for coating Earth's surface so that the poisons will be absorbed by plants, will seep into the ground, and will run off into surface water.
 - Surface water is very important to contaminate because it will transport the poison to places that cannot be contaminated directly.
 - Because the lower atmosphere can cleanse itself easily, we must explode nuclear test bombs that shoot radioactive particles high into the upper atmosphere here they will circle Earth for years.
 - It would help if we would build more nuclear power plants because each one generates only 500 pounds of plutonium each year.

Discussion Exercises

1. Our responsibility in the question concerning environmental problems.
2. What can our government do to protect nature (concrete steps)?
3. How can we teach children careful attitude to nature?
4. How do you understand the following: nowadays a new type of interaction appeared – a dialogue between people and nature.
5. Written task:
 - Investigate and write a paper on an environmental issue that concerns you.
 - “Environmental problems of Ukraine”
 - “My native city and environmental questions”

Для нотаток:

Навчальне видання

Методичний посібник для домашнього читання з англійської мови (II курс, факультет іноземної філології)

Укладачі: О.В. Касаткіна, Ю.В. Курята, Р.В. Хомицька

Відповідальний за випуск: О.В. Касаткіна

Підписано до друку 2005 року.

Папір офсет. Формат 60/84/1/16.

Ум.др.арк. 1,66.

Тираж 100. Зам.№ 28/3