The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

REGENTS EXAMINATION

IN

ENGLISH LANGUAGE ARTS

(Common Core)

Monday, January 26, 2015 — 9:15 a.m. to 12:15 p.m., only

The possession or use of any communications device is strictly prohibited when taking this examination. If you have or use any communications device, no matter how briefly, your examination will be invalidated and no score will be calculated for you.

A separate answer sheet has been provided for you. Follow the instructions for completing the student information on your answer sheet. You must also fill in the heading on each page of your essay booklet that has a space for it, and write your name at the top of each sheet of scrap paper.

The examination has three parts. For Part 1, you are to read the texts and answer all 24 multiple-choice questions. For Part 2, you are to read the texts and write one source-based argument. For Part 3, you are to read the text and write a text-analysis response. The source-based argument and text-analysis response should be written in pen. Keep in mind that the language and perspectives in a text may reflect the historical and/or cultural context of the time or place in which it was written.

When you have completed the examination, you must sign the statement printed at the bottom of the front of the answer sheet, indicating that you had no unlawful knowledge of the questions or answers prior to the examination and that you have neither given nor received assistance in answering any of the questions during the examination. Your answer sheet cannot be accepted if you fail to sign this declaration.

DO NOT OPEN THIS EXAMINATION BOOKLET UNTIL THE SIGNAL IS GIVEN.

Part 1

Directions (1–24): Closely read each of the three passages below. After each passage, there are several multiple-choice questions. Select the best suggested answer to each question and record your answer on the separate answer sheet provided for you. You may use the margins to take notes as you read.

Reading Comprehension Passage A

Nine years ago Pyotr Sergeyitch, the deputy prosecutor, and I were riding towards evening in haymaking time to fetch the letters from the station.

The weather was magnificent, but on our way back we heard a peal of thunder, and saw an angry black storm-cloud which was coming straight towards us. The storm-cloud was approaching us and we were approaching it. …

Then the first wave raced through the rye and a field of oats, there was a gust of wind, and the dust flew round and round in the air. Pyotr Sergeyitch laughed and spurred on his horse.

"It's fine!" he cried, "it's splendid!"

Infected by his gaiety, I too began laughing at the thought that in a minute I should be drenched to the skin and might be struck by lightning.

Riding swiftly in a hurricane when one is breathless with the wind, and feels like a bird, thrills one and puts one's heart in a flutter. By the time we rode into our courtyard the wind had gone down, and big drops of rain were pattering on the grass and on the roofs. There was not a soul near the stable. …

"What a crash!" said Pyotr Sergeyitch, coming up to me after a very loud rolling peal of thunder when it seemed as though the sky were split in two. "What do you say to that?"

He stood beside me in the doorway and, still breathless from his rapid ride, looked at me. I could see that he was admiring me.

"Natalya Vladimirovna," he said, "I would give anything only to stay here a little longer and look at you. You are lovely to-day."

His eyes looked at me with delight and supplication,[1] his face was pale. On his beard and moustache were glittering raindrops, and they, too, seemed to be looking at me with love.

"I love you," he said. "I love you, and I am happy at seeing you. I know you cannot be my wife, but I want nothing, I ask nothing; only know that I love you. Be silent, do not answer me, take no notice of it, but only know that you are dear to me and let me look at you." …

"You say nothing, and that is splendid," said Pyotr Sergeyitch. "Go on being silent."

I felt happy. I laughed with delight and ran through the drenching rain to the house; he laughed too, and, leaping as he went, ran after me.

Both drenched, panting, noisily clattering up the stairs like children, we dashed into the room. My father and brother, who were not used to seeing me laughing and lighthearted, looked at me in surprise and began laughing too. …

When I went to bed I lighted a candle and threw my window wide open, and an undefined feeling took possession of my soul. I remembered that I was free and healthy, that I had rank and wealth, that I was beloved; above all, that I had rank and wealth, rank and wealth, my God! how nice that was!… Then, huddling up in bed at a touch of cold which reached me from the garden with the dew, I tried to discover whether I loved Pyotr Sergeyitch or not,… and fell asleep unable to reach any conclusion. …

[1] supplication — a humble plea

And what happened afterwards? Why—nothing. In the winter when we lived in town Pyotr Sergeyitch came to see us from time to time. Country acquaintances are charming only in the country and in summer; in the town and in winter they lose their charm. When you pour out tea for them in the town it seems as though they are wearing other people's coats, and as though they stirred their tea too long. In the town, too, Pyotr Sergeyitch spoke sometimes of love, but the effect was not at all the same as in the country. In the town we were more vividly conscious of the wall that stood between us: I had rank and wealth, while he was poor, and he was not even a nobleman, but only the son of a deacon and a deputy public prosecutor; we both of us—I through my youth and he for some unknown reason—thought of that wall as very high and thick, and when he was with us in the town he would criticize aristocratic society with a forced smile, and maintain a sullen silence when there was anyone else in the drawing-room. There is no wall that cannot be broken through, but the heroes of the modern romance, so far as I know them, are too timid, spiritless, lazy, and oversensitive, and are too ready to resign themselves to the thought that they are doomed to failure, that personal life has disappointed them; instead of struggling they merely criticize, calling the world vulgar and forgetting that their criticism passes little by little into vulgarity.

I was loved, happiness was not far away, and seemed to be almost touching me; I went on living in careless ease without trying to understand myself, not knowing what I expected or what I wanted from life, and time went on and on.… People passed by me with their love, bright days and warm nights flashed by, the nightingales sang, the hay smelt fragrant, and all this, sweet and overwhelming in remembrance, passed with me as with everyone rapidly, leaving no trace, was not prized, and vanished like mist.… Where is it all?

My father is dead, I have grown older; everything that delighted me, caressed me, gave me hope—the patter of the rain, the rolling of the thunder, thoughts of happiness, talk of love—all that has become nothing but a memory, and I see before me a flat desert distance; on the plain not one living soul, and out there on the horizon it is dark and terrible. …

A ring at the bell.… It is Pyotr Sergeyitch. When in the winter I see the trees and remember how green they were for me in the summer I whisper:

"Oh, my darlings!"

And when I see people with whom I spent my spring-time, I feel sorrowful and warm and whisper the same thing. …

Not knowing what to say I ask him:

"Well, what have you to tell me?"

"Nothing," he answers. …

I thought of the past, and all at once my shoulders began quivering, my head dropped, and I began weeping bitterly. I felt unbearably sorry for myself and for this man, and passionately longed for what had passed away and what life refused us now. And now I did not think about rank and wealth.

I broke into loud sobs, pressing my temples, and muttered:

"My God! my God! my life is wasted!"

And he sat and was silent, and did not say to me: "Don't weep." He understood that I must weep, and that the time for this had come. …

—Anton Chekhov
excerpted from "A Lady's Story"
The Schoolmistress and Other Stories, 1920
translated by Constance Garnett
Chatto & Windus

1 The primary function of lines 1 and 2 is to

(1) establish a setting of the story
(2) present the central idea of the story
(3) provide analysis of new characters
(4) create a mysterious atmosphere

2 Pyotr's reaction to the storm in lines 7 and 8 reflects his

(1) calm manner
(2) unworthy character
(3) excessive pride
(4) carefree attitude

3 What is revealed about the narrator in lines 32 and 33?

(1) She rarely reveals her intelligence.
(2) She is usually a very serious person.
(3) She does not want to alarm her father.
(4) She is unwilling to act like an adult.

4 The reference to Pyotr's "forced smile" and "sullen silence" in line 50 reveals his

(1) contempt for status
(2) indifference to wealth
(3) fear of commitment
(4) lack of confidence

5 Lines 59 through 62 contribute to a central idea in the text by depicting the

(1) passing of youth
(2) uncertainty of love
(3) futility of hope
(4) intolerance of society

6 In line 65, the phrase "flat desert distance" is used by the narrator to describe her

(1) physical location
(2) social mobility
(3) foreseeable future
(4) unfeeling nature

7 Why does Natalya "not think about rank and wealth" in line 78?

(1) She has lost her father.
(2) She has wasted her inheritance.
(3) She has followed her conviction.
(4) She has realized her mistake.

8 Lines 81 and 82 develop a central idea by depicting a

(1) sense of loss
(2) lack of comfort
(3) desire for memories
(4) longing for attention

9 The author structures the text around references to

(1) similar locations
(2) changing seasons
(3) family interactions
(4) societal interferences

Reading Comprehension Passage B

ON LIVING

I

Living is no laughing matter:
you must live with great seriousness
like a squirrel, for example—
I mean, without looking for something beyond and above living,
I mean living must be your whole life.
Living is no laughing matter:
you must take it seriously,
so much so and to such a degree
that, for example, your hands tied behind your back,
your back to the wall,
or else in a laboratory
in your white coat and safety glasses,
you can die for people—
even for people whose faces you've never seen,
even though you know living
is the most real, the most beautiful thing.
I mean, you must take living so seriously
that even at seventy, for example, you'll plant olive trees—
and not for your children, either,
but because although you fear death you don't believe it,
because living, I mean, weighs heavier.

II

Let's say we're seriously ill, need surgery—
which is to say we might not get up
from the white table.
Even though it's impossible not to feel sad
about going a little too soon,
we'll still laugh at the jokes being told,
we'll look out the window to see it's raining,
or still wait anxiously
for the latest newscast…
Let's say we're at the front—
for something worth fighting for, say.
There, in the first offensive, on that very day,
we might fall on our face, dead.
We'll know this with a curious anger,
but we'll still worry ourselves to death
about the outcome of war, which could last years.
Let's say we're in prison
and close to fifty,
and we have eighteen more years, say,
before the iron doors will open.

GO RIGHT ON TO THE NEXT PAGE ➡

We'll still live with the outside,
with its people and animals, struggle and wind—
I mean with the outside beyond the walls.
I mean, however and wherever we are,
we must live as if we will never die.

III

This earth will grow cold,
a star among stars
and one of the smallest,
a gilded mote on blue velvet—
I mean *this*, our great earth.
This earth will grow cold one day,
not like a block of ice
or a dead cloud even
but like an empty walnut it will roll along
in pitch-black space…
You must grieve for this right now
—you have to feel this sorrow now—
for the world must be loved this much
if you're going to say "I lived"…

—Nazim Hikmet
Poems of Nazim Hikmet, 1994
translated by Randy Blasing and Mutlu Konuk
Persea Books

10 The narrator's purpose in the first stanza is to
(1) explain the importance of science
(2) determine the reason people die
(3) propose an attitude toward life
(4) encourage an appreciation of nature

11 The words "weighs heavier" (line 21) imply that
(1) aging is a challenge
(2) family is a burden
(3) the future is impossible to predict
(4) life is a greater responsibility than death

12 Lines 38 through 46 illustrate the narrator's belief that prison
(1) prevents the full understanding of life
(2) confines the body but should not confine the spirit
(3) demands many years but should not lead to death
(4) leads to the acceptance of death

13 As used in line 50, the word "mote" is closest in meaning to a
(1) globe
(2) vision
(3) speck
(4) planet

14 Which lines best reflect a central theme in the text?
(1) "I mean living must be your whole life. / Living is no laughing matter:" (lines 5 and 6)
(2) "you can die for people— / even for people whose faces you've never seen," (lines 13 and 14)
(3) "Let's say we're at the front— / for something worth fighting for, say." (lines 31 and 32)
(4) "This earth will grow cold, / a star among stars" (lines 47 and 48)

Reading Comprehension Passage C

A few years ago the City Council of Monza, Italy, barred pet owners from keeping goldfish in curved fishbowls. The sponsors of the measure explained that it is cruel to keep a fish in a bowl because the curved sides give the fish a distorted view of reality. Aside from the measure's significance to the poor goldfish, the story raises an interesting philosophical question: How do we know that the reality we perceive is true?

The goldfish is seeing a version of reality that is different from ours, but can we be sure it is any less real? For all we know, we, too, may spend our entire lives staring out at the world through a distorting lens.

In physics, the question is not academic. Indeed, physicists and cosmologists are finding themselves in a similar predicament to the goldfish's. For decades we have strived to come up with an ultimate theory of everything—one complete and consistent set of fundamental laws of nature that explain every aspect of reality. It now appears that this quest may yield not a single theory but a family of interconnected theories, each describing its own version of reality, as if it viewed the universe through its own fishbowl.

This notion may be difficult for many people, including some working scientists, to accept. Most people believe that there is an objective reality out there and that our senses and our science directly convey information about the material world. Classical science is based on the belief that an external world exists whose properties are definite and independent of the observer who perceives them. In philosophy, that belief is called realism. …

Do Not Attempt To Adjust The Picture

The idea of alternative realities is a mainstay of today's popular culture. For example, in the science-fiction film *The Matrix* the human race is unknowingly living in a simulated virtual reality created by intelligent computers to keep them pacified and content while the computers suck their bioelectrical energy (whatever that is). How do we know we are not just computer-generated characters living in a Matrix-like world? If we lived in a synthetic, imaginary world, events would not necessarily have any logic or consistency or obey any laws. The aliens in control might find it more interesting or amusing to see our reactions, for example, if everyone in the world suddenly decided that chocolate was repulsive or that war was not an option, but that has never happened. If the aliens did enforce consistent laws, we would have no way to tell that another reality stood behind the simulated one. It is easy to call the world the aliens live in the "real" one and the computer-generated world a false one. But if—like us—the beings in the simulated world could not gaze into their universe from the outside, they would have no reason to doubt their own pictures of reality.

The goldfish are in a similar situation. Their view is not the same as ours from outside their curved bowl, but they could still formulate scientific laws governing the motion of the objects they observe on the outside. For instance, because light bends as it travels from air to water, a freely moving object that we would observe to move in a straight line would be observed by the goldfish to move along a curved path. The goldfish could formulate scientific laws from their distorted frame of reference that would always hold true and that would enable them to make predictions about the future motion of objects outside the bowl. Their laws would be more complicated than the laws in our frame, but simplicity is a matter of taste. If the goldfish formulated such a theory, we would have to admit the goldfish's view as a valid picture of reality. …

Glimpses Of The Deep Theory

In the quest to discover the ultimate laws of physics, no approach has raised higher hopes—or more controversy—than string theory. String theory was first proposed in the 1970s as an attempt to unify all the forces of nature into one coherent framework and,

in particular, to bring the force of gravity into the domain of quantum[1] physics. By the early 1990s, however, physicists discovered that string theory suffers from an awkward issue: there are five different string theories. For those advocating that string theory was the unique theory of everything, this was quite an embarrassment. In the mid-1990s researchers started discovering that these different theories—and yet another theory called supergravity—actually describe the same phenomena, giving them some hope that they would amount eventually to a unified theory. The theories are indeed related by what physicists call dualities, which are a kind of mathematical dictionaries for translating concepts back and forth. But, alas, each theory is a good description of phenomena only under a certain range of conditions—for example at low energies. None can describe every aspect of the universe.

String theorists are now convinced that the five different string theories are just different approximations to a more fundamental theory called M-theory. (No one seems to know what the "M" stands for. It may be "master," "miracle" or "mystery," or all three.) People are still trying to decipher the nature of M-theory, but it seems that the traditional expectation of a single theory of nature may be untenable[2] and that to describe the universe we must employ different theories in different situations. Thus, M-theory is not a theory in the usual sense but a network of theories. It is a bit like a map. To faithfully represent the entire Earth on a flat surface, one has to use a collection of maps, each of which covers a limited region. The maps overlap one another, and where they do, they show the same landscape. Similarly, the different theories in the M-theory family may look very different, but they can all be regarded as versions of the same underlying theory, and they all predict the same phenomena where they overlap, but none works well in all situations.

Whenever we develop a model of the world and find it to be successful, we tend to attribute to the model the quality of reality or absolute truth. But M-theory, like the goldfish example, shows that the same physical situation can be modeled in different ways, each employing different fundamental elements and concepts. It might be that to describe the universe we have to employ different theories in different situations. Each theory may have its own version of reality, but according to model-dependent realism, that diversity is acceptable, and none of the versions can be said to be more real than any other. It is not the physicist's traditional expectation for a theory of nature, nor does it correspond to our everyday idea of reality. But it might be the way of the universe.

—Stephen Hawking and Leonard Mlodinow
excerpted from "The (Elusive) Theory of Everything"
Scientific American, October 2010

[1]quantum — a small, indivisible unit of energy

[2]untenable — indefensible

15 The authors' anecdote about pet owners in Monza, Italy, serves to introduce a

(1) proof of a universal world view
(2) measure that is objectionable to scientists
(3) central question about the way we see
(4) philosophical question about what we value

16 The primary purpose of lines 9 through 14 is to clarify the

(1) need for a single theory
(2) role of the senses in understanding
(3) possibility of other life in the universe
(4) origin of alternative theories

17 How do lines 17 through 19 develop a claim?

(1) by providing details about a philosophical challenge faced by scientists
(2) by showing how scientists should handle alternate realities
(3) by arguing for an approach that scientists have always followed
(4) by explaining how scientists should view a philosophical approach

18 The reference to *The Matrix* in lines 20 through 24 is used to emphasize the questioning of our

(1) virtues
(2) perception
(3) education
(4) ideals

19 The references to goldfish in lines 33 through 42 contribute to the authors' purpose by suggesting that

(1) people's theories are influenced by their viewpoints
(2) nature's mysteries are best left undiscovered
(3) reality can only be determined by an outside perspective
(4) light must be viewed under similar circumstances

20 As used in line 45 of the text, what does the word "coherent" mean?

(1) balanced
(2) indisputable
(3) popular
(4) understandable

21 The authors' reference to "a collection of maps" (line 64) is used to help clarify

(1) a complex theory
(2) a historical concept
(3) the representation of space
(4) the limitations of previous theories

22 The function of lines 73 through 77 is to

(1) argue for a specific theory
(2) suggest that theories relate to expectations
(3) describe the way differing theories should co-exist
(4) evaluate theories based on specific needs

23 With which statement would the authors most likely agree?

(1) The perception of the universe can never be questioned.
(2) There is a single, agreed upon theory of reality.
(3) There are multiple realities that are possible to prove.
(4) The understanding of the universe continues to change.

24 The authors attempt to engage the audience through the use of

(1) absolute statements
(2) real world examples
(3) detailed descriptions
(4) simple questions

Part 2

Argument

Directions: Closely read each of the ***four*** texts provided on pages 11 through 17 and write a source-based argument on the topic below. You may use the margins to take notes as you read and scrap paper to plan your response. Write your argument beginning on page 1 of your essay booklet.

Topic: Should extinct species be brought back into existence?

Your Task: Carefully read each of the ***four*** texts provided. Then, using evidence from at least ***three*** of the texts, write a well-developed argument regarding whether extinct species should be brought back into existence. Clearly establish your claim, distinguish your claim from alternate or opposing claims, and use specific, relevant, and sufficient evidence from at least ***three*** of the texts to develop your argument. Do *not* simply summarize each text.

Guidelines:

Be sure to:

- Establish your claim regarding whether extinct species should be brought back into existence
- Distinguish your claim from alternate or opposing claims
- Use specific, relevant, and sufficient evidence from at least ***three*** of the texts to develop your argument
- Identify each source that you reference by text number and line number(s) or graphic (for example: Text 1, line 4 or Text 2, graphic)
- Organize your ideas in a cohesive and coherent manner
- Maintain a formal style of writing
- Follow the conventions of standard written English

Texts:

Text 1 – 3Qs: The Ethics of Species 'De-extinction'
Text 2 – Bringing Them Back to Life
Text 3 – Case Against Species Revival
Text 4 – The Case Against De-Extinction: It's a Fascinating but Dumb Idea

Text 1

3Qs: The Ethics of Species 'De-extinction'

Scientists are closing in on the capacity to clone extinct species using biotechnology and DNA samples from the ancient past, a process that is called "de-extinction." The prospect of bringing back extinct species was discussed last week at a conference hosted by National Geographic and TEDx, in which many conservationists, geneticists, and biotechnologists supported the idea. We asked Ronald Sandler, a professor of philosophy at Northeastern and author of the new book *The Ethics of Species,* to share his take on what has been described as the "mind-blowing idea of the year."

Extinction occurs when there are no longer living members of a species. To say that the wooly mammoth, passenger pigeon, and thylacine[1] are extinct is just to say that there are none left alive in the world. It is common in conservation biology and environmental ethics to claim that "extinction is forever." This is thought to be part of what makes human-caused extinctions so bad—extinction does not just involve the death of individual organisms, but the permanent elimination of a form of life. However, it now appears that it is possible to use biotechnology to create living individuals of species that have gone extinct, perhaps even species that have been extinct for hundreds or thousands of years (so long as useable DNA samples are available in preserved specimens). This is "de-extinction."

Part of what motivates those working on de-extinction are the scientific and technological challenges involved. It would be an incredible scientific accomplishment to be able to create organisms of a species that has been extinct for some time, such as the passenger pigeon or mammoth. (There have already been efforts to use established cloning techniques to bring back individuals of species that have been extinct for only a few years, such as the bucardo, a Spanish ibex.[2]) There is also a desire, on the part of many people, to see living examples of extinct animals (or plants), particularly charismatic or culturally valued ones, such as the ivory-billed woodpecker or thylacine. Some have claimed that bringing back species that were caused to go extinct by human practices would, to some extent, help make up for the wrong of the extinction. Finally, it may be that the biotechnologies and techniques involved can be used to help conservation biologists in their efforts to preserve highly endangered species. For example, it could help increase the genetic diversity of small populations or those in captive breeding programs. …

Finally, it is crucial that our approaches to species conservation can, as much as possible, scale to the extinction crises we face—potentially thousands of species going extinct each year. The only way to do this is by aggressively reducing the causes of extinction, including habitat destruction, climate change, pollution, and extraction. De-extinction does not do this, and it is important that it not reduce the urgency with which we address the causes of extinction and that it not divert resources from efforts to conserve currently existing species. So while de-extinction would be scientifically amazing and there is nothing intrinsically wrong with it, it is important to keep it in proper perspective from a species conservation perspective.

—Angela Herring
excerpted from "3Qs: The Ethics of Species 'De-extinction'"
http://phys.org, March 25, 2013

[1]thylacine — large carnivore

[2]ibex — mountain goat

Text 2

Bringing Them Back to Life

… The notion of bringing vanished species back to life—some call it de-extinction—has hovered at the boundary between reality and science fiction for more than two decades, ever since novelist Michael Crichton unleashed the dinosaurs of Jurassic Park[1] on the world. For most of that time the science of de-extinction has lagged far behind the fantasy. Celia's clone is the closest that anyone has gotten to true de-extinction. Since witnessing those fleeting minutes of the clone's life, [Alberto] Fernández-Arias, now the head of the government of Aragon's Hunting, Fishing and Wetlands department, has been waiting for the moment when science would finally catch up, and humans might gain the ability to bring back an animal they had driven extinct. …

I met Fernández-Arias last autumn at a closed-session scientific meeting at the National Geographic Society's headquarters in Washington, D.C. For the first time in history a group of geneticists, wildlife biologists, conservationists, and ethicists had gathered to discuss the possibility of de-extinction. Could it be done? Should it be done? One by one, they stood up to present remarkable advances in manipulating stem cells, in recovering ancient DNA, in reconstructing lost genomes. As the meeting unfolded, the scientists became increasingly excited. A consensus was emerging: De-extinction is now within reach. …

In *Jurassic Park* dinosaurs are resurrected for their entertainment value. The disastrous consequences that follow have cast a shadow over the notion of de-extinction, at least in the popular imagination. But people tend to forget that Jurassic Park was pure fantasy. In reality the only species we can hope to revive now are those that died within the past few tens of thousands of years and left behind remains that harbor intact cells or, at the very least, enough ancient DNA to reconstruct the creature's genome. Because of the natural rates of decay, we can never hope to retrieve the full genome of *Tyrannosaurus rex*, which vanished about 65 million years ago. The species theoretically capable of being revived all disappeared while humanity was rapidly climbing toward world domination. And especially in recent years we humans were the ones who wiped them out, by hunting them, destroying their habitats, or spreading diseases. This suggests another reason for bringing them back. …

Other scientists who favor de-extinction argue that there will be concrete benefits. Biological diversity is a storehouse of natural invention. Most pharmaceutical drugs, for example, were not invented from scratch—they were derived from natural compounds found in wild plant species, which are also vulnerable to extinction. Some extinct animals also performed vital services in their ecosystems, which might benefit from their return. Siberia, for example, was home 12,000 years ago to mammoths and other big grazing mammals. Back then, the landscape was not moss-dominated tundra but grassy steppes. Sergey Zimov, a Russian ecologist and director of the Northeast Science Station in Cherskiy in the Republic of Sakha, has long argued that this was no coincidence: The mammoths and numerous herbivores maintained the grassland by breaking up the soil and fertilizing it with their manure. Once they were gone, moss took over and transformed the grassland into less productive tundra. …

[1] Jurassic Park — park in science-fiction novel, *Jurassic Park*, where dinosaurs are brought back to life

De-extinction advocates counter that the cloning and genomic engineering technologies being developed for de-extinction could also help preserve endangered species, especially ones that don't breed easily in captivity. And though cutting-edge biotechnology can be expensive when it's first developed, it has a way of becoming very cheap very fast. "Maybe some people thought polio vaccines were a distraction from iron lungs,"[2] says George Church. "It's hard in advance to say what's distraction and what's salvation." …

—Carl Zimmer
excerpted and adapted from "Bringing Them Back to Life"
http://ngm.nationalgeographic.com, April 2013

[2] iron lung — medical ventilator that enables a person to breathe

Text 3

Case Against Species Revival

In the movie *Jurassic Park*, a tree extinct for millions of years delights the paleobotanist. Then a sauropod eats its leaves. This movie later shows us how to re-create the dinosaur but not how to grow the tree, which at that size would be perhaps a hundred or more years old, or how to do so metaphorically overnight. To sustain even a single dinosaur, one would need thousands of trees, probably of many species, as well as their pollinators and perhaps their essential symbiotic fungi.

De-extinction intends to resurrect single, charismatic species, yet millions of species are at risk of extinction. De-extinction can only be an infinitesimal part of solving the crisis that now sees species of animals (some large but most tiny), plants, fungi, and microbes going extinct at a thousand times their natural rates. "But wait"—claim de-extinction's proponents. "We want to resurrect passenger pigeons and Pyrenean ibex, not dinosaurs. Surely, the plants on which these animals depend still survive, so there is no need to resurrect them as well!" Indeed, botanic gardens worldwide have living collections of an impressively large fraction of the world's plants, some extinct in the wild, others soon to be so. Their absence from the wild is more easily fixed than the absence of animals, for which de-extinction is usually touted.

Perhaps so, but other practical problems abound: A resurrected Pyrenean ibex will need a safe home, not just its food plants. Those of us who attempt to reintroduce zoo-bred species that have gone extinct in the wild have one question at the top of our list: Where do we put them? Hunters ate this wild goat to extinction. Reintroduce a resurrected ibex to the area where it belongs and it will become the most expensive *cabrito* ever eaten. If this seems cynical, then consider the cautionary tale of the Arabian oryx, returned to Oman from a captive breeding program. Their numbers have declined so much that their home, designated as a UNESCO World Heritage site, was summarily removed from the register. …

In every case, without an answer to "where do we put them?"—and to the further question, "what changed in their original habitat that may have contributed to their extinction in the first place?"—efforts to bring back species are a colossal waste.

De-extinction is much worse than a waste: By setting up the expectation that biotechnology can repair the damage we're doing to the planet's biodiversity, it's extremely harmful for two kinds of political reasons.

Fantasies of reclaiming extinct species are always seductive. It is a fantasy that *real* scientists—those wearing white lab coats—are using fancy machines with knobs and digital readouts to save the planet from humanity's excesses. In this fantasy, there is none of the messy interaction with people, politics, and economics that characterizes my world. There is nothing involving the real-world realities of habitat destruction, of the inherent conflict between growing human populations and wildlife survival. Why worry about endangered species? We can simply keep their DNA and put them back in the wild later. …

The second political problem involves research priorities. I work with very poor people in Africa, Brazil, and Madagascar. Rich only in the diversity of life amid which they eke out their living, they generate no money for my university. Too many other universities equate excellence with funds generated, not with societal needs met. Over my career, molecular biologists flourished as university administrators drooled over their large grants and their expensive labs. Field-based biology withered. Many otherwise prominent universities have no schools of the environment, no ecology departments, no professors of conservation. It was all too easy to equate "biology" with molecules and strip faculty positions and facilities from those who worked in the field. De-extinction efforts can only perpetuate that trend.

Conservation is about the ecosystems that species define and on which they depend. Conservation is about finding alternative, sustainable futures for peoples, for forests, and for wetlands. Molecular gimmickry simply does not address these core problems. At worst, it seduces granting agencies and university deans into thinking they are saving the world. It gives unscrupulous developers a veil to hide their rapaciousness,[1] with promises to fix things later. It distracts us from guaranteeing our planet's biodiversity for future generations.

—Stuart Pimm
excerpted from "Case Against Species Revival"
http://news.nationalgeographic.com, March 12, 2013

[1] rapaciousness — greet

Text 4

The Case Against De-Extinction: It's a Fascinating but Dumb Idea

… So what are the objections to an effort to start making amends for anthropogenic[1] extinctions by trying to restore the victims to life? The soundest scientific reason, in my view, is misallocation of effort. It is much more sensible to put all the limited resources for science and conservation into *preventing* extinctions, by tackling the causes of demise: habitat destruction, climate disruption, pollution, overharvesting, and so on. Spending millions of dollars trying to de-extinct a few species will not compensate for the thousands of populations and species that have been lost due to human activities, to say nothing of restoring the natural functions of their former habitats. …

Resurrecting a population and then re-inserting it into habitats where it could supply the ecosystem services of its predecessor is a monumentally bigger project than recreating a couple of pseudomammoths to wander around in a zoo. The passenger pigeon is often mentioned as a target for de-extinction. Passenger pigeons once supplied people with abundant meat and likely helped to suppress Lyme disease. To create even a single viable population might well require fabricating a million birds or so, since the species apparently survived by a strategy of predator saturation. And if the swarm were synthesized, where could it be introduced? The vast forests the pigeons required are partly gone and badly fragmented at best, and one of the birds' food sources, the American chestnut, is functionally extinct. The passenger pigeon's previous habitat is utterly transformed, and if humanity does not very quickly and substantially curb greenhouse gas releases, the pigeon's old homeland will likely be completely unrecognizable in less than a century. In practical terms, in the near future in which action is required, extinction is certainly "forever."…

De-extinction thus seems far-fetched, financially problematic, and extremely unlikely to succeed on a planet continually being vastly transformed by human action. There are also risks beyond failure. Resurrected, previously benign organisms could become pests in new environments, might prove ideal reservoirs or vectors of nasty plagues, or might even harbor dangerous retroviruses in their genomes. But frankly, I think such problems will probably prove minor compared to the main problem, which is "moral hazard."

Moral hazard is a term invented by economists for a situation where one becomes more willing to take a risk when the potential costs will be partly borne by others. For example, if a person can get government flood insurance, she is more likely to build a beachfront home, worrying less about the risks of sea level rise. The problem is that if people begin to take a "Jurassic Park" future seriously, they will do even less to stem the building sixth great mass extinction event. We are already seeing species extinctions occurring at a rate at least an order of magnitude above prehistoric "background" rates (those outside of the past five mass extinction events), and that gives weight to the extreme seriousness of the current population extinction crisis. And while the critical problem of climate disruption tends to engross the attention of environmentally concerned people, the erosion of biodiversity is potentially equally crucial. The disasters to be caused by climate disruption could be resolved in a few hundred thousand years; recovery from a sixth mass extinction could easily take five or ten *million* years.

Right now the biggest moral hazard on the environmental front is created by the folly of "geoengineering" — the idea that, if humanity fails to limit the flux of greenhouse gases dramatically in the near future, overheating of the earth could be prevented by any one of a series of crackpot schemes. Biodiversity loss has not achieved the prominence of climate

[1] anthropogenic — resulting from human activity

disruption, and it may not do so. But I've already had questions in classes and after speeches about the prospect of engineering biodiversity back into existence — always implying that "biodiversity" is giant ground sloths, ivory-billed woodpeckers, and the like. Moral hazard is already there, and if people ever wake up to their connections to the rest of the living world, it is sure to grow. …

—Paul R. Ehrlich
excerpted from "The Case Against De-Extinction:
It's a Fascinating but Dumb Idea"
http://e360.yale.edu, January 13, 2014

Part 3

Text-Analysis Response

Your Task: Closely read the text provided on pages 19 and 20 and write a well-developed, text-based response of two to three paragraphs. In your response, identify a central idea in the text and analyze how the author's use of ***one*** writing strategy (literary element or literary technique or rhetorical device) develops this central idea. Use strong and thorough evidence from the text to support your analysis. Do *not* simply summarize the text. You may use the margins to take notes as you read and scrap paper to plan your response. Write your response in the spaces provided on pages 7 through 9 of your essay booklet.

Guidelines:

Be sure to:

- Identify a central idea in the text
- Analyze how the author's use of ***one*** writing strategy (literary element or literary technique or rhetorical device) develops this central idea. Examples include: characterization, conflict, denotation/connotation, metaphor, simile, irony, language use, point-of-view, setting, structure, symbolism, theme, tone, etc.
- Use strong and thorough evidence from the text to support your analysis
- Organize your ideas in a cohesive and coherent manner
- Maintain a formal style of writing
- Follow the conventions of standard written English

Text

…I went to the woods because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach, and not, when I came to die, discover that I had not lived. I did not wish to live what was not life, living is so dear; nor did I wish to practise resignation,[1] unless it was quite necessary. I wanted to live deep and suck out all the marrow of life, to live so sturdily and Spartan-like[2] as to put to rout all that was not life, to cut a broad swath[3] and shave close, to drive life into a corner, and reduce it to its lowest terms, and, if it proved to be mean,[4] why then to get the whole and genuine meanness of it, and publish its meanness to the world; or if it were sublime, to know it by experience, and be able to give a true account of it in my next excursion. For most men, it appears to me, are in a strange uncertainty about it, whether it is of the devil or of God, and have *somewhat hastily* concluded that it is the chief end of man here to "glorify God and enjoy him forever."…

Let us spend one day as deliberately as Nature, and not be thrown off the track by every nutshell and mosquito's wing that falls on the rails. Let us rise early and fast, or break fast, gently and without perturbation;[5] let company come and let company go, let the bells ring and the children cry, — determined to make a day of it. Why should we knock under and go with the stream? Let us not be upset and overwhelmed in that terrible rapid and whirlpool called a dinner, situated in the meridian shallows. Weather this danger and you are safe, for the rest of the way is down hill. With unrelaxed nerves, with morning vigor, sail by it, looking another way, tied to the mast like Ulysses. If the engine whistles, let it whistle till it is hoarse for its pains. If the bell rings, why should we run? We will consider what kind of music they are like. Let us settle ourselves, and work and wedge our feet downward through the mud and slush of opinion, and prejudice, and tradition, and delusion and appearance, that alluvion[6] which covers the globe, through Paris and London, through New York and Boston and Concord, through church and state, through poetry and philosophy and religion, till we come to a hard bottom and rocks in place, which we can call *reality*, and say, This is, and no mistake; and then begin, having a *point d'appui*,[7] below freshet[8] and frost and fire, a place where you might found a wall or a state, or set a lamppost safely, or perhaps a gauge, not a Nilometer, but a Realometer, that future ages might know how deep a freshet of shams and appearances had gathered from time to time. If you stand right fronting and face to face to a fact, you will see the sun glimmer on both its surfaces, as if it were a cimeter,[9] and feel its sweet edge dividing you through the heart and marrow, and so you will happily conclude your mortal career. Be it life or death, we crave only reality. If we are really dying, let us hear the rattle in our throats and feel cold in the extremities; if we are alive, let us go about our business.

Time is but the stream I go a-fishing in. I drink at it; but while I drink I see the sandy bottom and detect how shallow it is. Its thin current slides away, but eternity remains. I would drink deeper; fish in the sky, whose bottom is pebbly with stars. I cannot count one.

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[1] resignation — patient acceptance

[2] Spartan-like — simply

[3] swath — long strip

[4] mean — inferior, lowly, of little value

[5] perturbation — disturbance

[6] alluvion — flood

[7] *point d'appui* — point of support

[8] freshet — overflowing stream

[9] cimeter — sword

I know not the first letter of the alphabet, I have always been regretting that I was not wise as the day I was born. The intellect is a cleaver; it discerns and rifts its way into the secret of things. I do not wish to be any more busy with my hands than is necessary. My head is hands and feet. I feel all my best faculties concentrated in it. My instinct tells me that my head is an organ for burrowing, as some creatures use their snout and fore-paws, and with it I would mine and burrow my way through these hills. I think that the richest vein is somewhere hereabouts; so by the divining rod and thin rising vapors I judge; and here I will begin to mine.

—Henry D. Thoreau
excerpted from *Walden,* 1910
Thomas Y. Crowell & Co.

REGENTS IN ELA (Common Core)