

ARTHUR C. CLARKE'S

JULY 20, 2019

A DAY IN THE LIFE OF THE 21ST CENTURY



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CLARKE'S**

**JULY 20,
2019**

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Edited by
Arthur C. Clarke

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CONTENTS

Acknowledgments	vi
1. Introduction: Letter from a Lunar Inhabitant	3
2. July 20, 1969: A 2019 Interpretation of the Apollo Moon Landing	13
3. A Day in the Hospital	31
4. A Day in the Life of a Robot	51
5. School Days: No Recess	73
6. On the Road: Transportation in 2019	87
7. A Day in the Life of a Space Station	107
8. A Night at the Movies	135
9. A Day at the Ballpark: Sports in 2019	155
10. House Arrest	171
11. A Day at the Office	187
12. An Afternoon on the Couch: Psychiatry in 2019	197
13. A Night in the Bedroom	219
14. Life Meets Death and Twists Its Tail	229
15. War	249
Epilogue: United Nations, 2019	273
Index	277

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2019**

LIFE IN
THE 21ST
CENTURY

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T E R 1

INTRODUCTION:

LETTER

FROM A

LUNAR

INHABITANT

The best book ever written about the future opens with these words:

There are two futures, the future of desire and the future of fate, and man's reason has never learnt to separate them.

—J. D. Bernal, *The World, the Flesh and the Devil*, 1929

A strict logician, of course, would say that the first four words are nonsense. There's not even *one* future, let alone two, because the future, by definition, does not yet exist.

Nevertheless, we all know what Bernal meant. There *does* “exist,” somewhere in every thinking person's mind, a vague image of the future that he or she would like to happen. It is seldom indeed that the real future—the “future of fate”—coincides with human aspirations. Indeed, with billions of conflicting desires and hopes, how could it? Not even an omnipotent God could create such an impossibility. As I write these words, the Iranians and the Iraqis are each praying to Allah for victory, doubtless with equal devotion. . . .

Yet even if it doesn't exist, it is important to think about the future; as has been so often pointed out, we'll spend the rest of our lives there. Some aspects of the future are easier to deal with than others; let me quote from the *second*-best book on the subject:

All attempts to predict the future in any detail appear ludicrous within a few years . . . with a few exceptions, I am limiting myself here to a single aspect of the future—its technology, not the society that will be based upon it. This is not such a limitation as it may seem, for science will dominate the future even more than it dominates the present. Moreover, it is only in this field that prediction is at all possible; there are some general laws governing scientific extrapolation, as there are not (pace Marx) in the case of politics or economics.

—Profiles of the Future, 1962

In a comment carefully designed to cause equal displeasure in Washington and Moscow, I went on to say, “Politics and economics are concerned with power and wealth, neither of which should be the

primary, still less the exclusive, concern of full-grown men.” And to my displeasure, I’ve just noticed that the cover of the revised 1984 edition refers to *Profiles* as “prophetic,” which is just what it isn’t. As the subtitle carefully explained, it’s “An Inquiry into the Limits of the Possible.” And that’s all that any book on the future—including this one—can ever hope to be.

Still, such inquiries can be extremely useful, whether they take the form of science fiction or think-tank computer studies. Although SF requires no justification (as long as it’s well written), it does have great social value as an early warning system—something none of us who have survived the year 1984 is likely to forget. It is often difficult to distinguish between “futures scenarios” produced by such organizations as the late Herman Kahn’s Hudson Institute and synopses of science-fiction novels—quite a few of which, I hope, will be generated by this volume.

Round about 1970, I suggested a motto for that noble body, the Science Fiction Writers of America: “The Future isn’t what it used to be.” (I still don’t know whether I made this up, or stole it from somewhere—probably the latter.) Certainly I am always changing *my* future, and have done so again while writing this preface.

I’ll be only 102 in 2019, which by then will be no unusual age. My great-grandfather Arthur Heal barely missed the century mark, dying in the year I was born and passing on his name to me. Even more to the point, he was still riding horseback when he was as old as I’ll be—not in 2001, but 2010. We farm boys have good genes.

So who knows: The following “Letter from Clavius” may be a self-fulfilling prophecy. Stay tuned.

And if this book is successful enough to demand a sequel (another “future of desire”), may I suggest to my editors a title that Alvin Toffler kindly gave me many years ago: *After the Future—What?*

LETTER FROM CLAVIUS

Clavius City, 20 July 2019

It doesn't *seem* like fifty years—but I cannot be sure which memories are false, and which are real.

Present and past are inextricably entangled. The monitor screen has just shown the ceremony at Tranquillity Base, culminating with the *third* hoisting of the American flag. It was blown down, of course, by the blast of *Eagle's* ascent stage, and lay there on the trampled Moon soil for thirty-six years until the Apollo Historical Committee reerected it. Then the big quake of 2009 knocked it down again; this time, we're assured, it would take a direct hit by a fair-sized meteor to lower it. . . .

Now, immediately after the live transmission from Tranquillity, they've put on a grainy old tape—yes, *tape*, not *vidule!*—from exactly half a century ago. And there I am back in the CBS Studio on West 57th Street with dear old Walter Cronkite and wise-cracking Wally Schirra, watching Neil Armstrong take that first step off the ladder. . . .

For the hundredth time, I strain my ears. Neil Armstrong once told me (and by then he must have been heartily fed up with the whole subject), "What I *intended* to say was: 'That's one small step for a man, one *giant leap for mankind!*' And that's what I *thought* I said."

Sorry, Neil—you fluffed! The "a" got short-circuited between brain and tongue. But it doesn't matter; this time, at least, history has been correctly reedited.

Did I ever imagine, back in 1969, that I would reach the Moon myself? I very much doubt it; yet I'd anticipated the circumstances more than twenty years earlier. If I may be allowed the modest cough of the minor prophet—

(AUTOSEC MARK III: THAT PHRASE ALREADY USED IN LAST THREE DOCUMENT FILES.

Shut up, Hal, or I'll reprogram you.)

—as I was saying before I was rudely interrupted, I'd already thought of a very good reason why I might be on the Moon for my hundredth birthday.

In the summer of '47, writing in exercise books "liberated" during my Royal Air Force days from a bombed-out school in the East End

of London, I concluded my first full-length novel, *Prelude to Space*, with these words:

The great medical discoveries made at the lunar base had come just in time to save him. Under a sixth of a gravity, where a man weighed less than thirty pounds, a heart which would have failed on Earth could still beat strongly for years. There was even a possibility—almost terrifying in its social implications—that the span of human life might be greater on the Moon than upon the Earth.

Far sooner than anyone had dared to hope, astronautics had paid its greatest and most unexpected dividend. Here within the curve of the Apennines, in the first of all cities ever to be built outside the Earth, five thousand exiles were living useful and happy lives, safe from the deadly gravity of their own world. . . .

Had I thought of it, I could have added another reason. Some thirty years after those words were written, Earth's "deadly gravity" killed my own mother. A very common cause of death among old people is complications following the breaking of bones after a fall. Such an accident is virtually impossible here on the Moon.

"Five thousand" was, I am afraid, a wildly optimistic figure: The present population at Clavius is only one thousand, and that includes administrative and technical staff. But in 1947, very few people would have bet on more than zero.

And if I may switch to my "minor prophet" mode again, I'd like to refer to "Out of the Cradle, Endlessly Orbiting . . ." written in June 1958 (the summer of the first satellites). It began: "Before we start, I'd like to point out something that a good many people seem to have overlooked. The twenty-first century does *not* begin tomorrow; it begins a year later, on January 1, 2001. . . . Every hundred years we astronomers have to explain this all over again, but it makes no difference. The celebrations start just as soon as the two zeros go up. . . ."

That could be my first mention of 2001—ten years before "Also Sprach Zarathustra" blasted from a thousand speaker systems. (Hello, Stanley—were you involved in putting up that big 1 by 4 by 9 black slab in Tycho on my hundredth birthday? I'm delighted to hear that you're finally shooting *Napoleon*. But what's this rumor about a happy ending, with the French winning at Waterloo?)

(IRRELEVANT TO SUBJECT.

Phooey. INTERRUPT OVERRIDE. *That'll fix you!*)

Where was I? Oh, yes—"Out of the Cradle . . ." It takes place during a very tense moment on the Moon—the first test of the thermonuclear engine for the Mars expedition. Then, to the great annoyance of the narrator—the Russian in charge of operations—everything suddenly stops. The secret has been very well kept: He had no idea. . . .

There was a click as the circuit was rerouted, followed by a pause full of indeterminate shufflings and whisperings. And then, all over the Moon and half the Earth, came the noise I promised to tell you about—the most awe-inspiring sound I've ever heard in my life.

It was the thin cry of a newborn baby—the first child in all the history of mankind to be brought forth on another world than Earth. We looked at each other in the suddenly silenced blockhouse, and then at the ships we were building out there on the blazing lunar plain. They had seemed so important a few minutes ago. They still were—but not as important as what had happened over there in Medical Centre, and would happen again billions of times on countless worlds down all the ages to come.

For that was the moment, gentlemen, when I knew that Man had *really* conquered space.

Well, that was fiction, back in 1958; now it's fact—though it took a little longer to happen than I had imagined. This is always a problem with technological extrapolation: short-range forecasts tend to be too optimistic, long-range ones usually underestimate. Who could have dreamed how many cars or telephones there would be in the world, a mere fifty years after they were invented?

Certainly none of us early Space Cadets imagined that, after the United States's six landings on the Moon, it would be more than a generation before men returned there. Yet with the twenty-twenty foresight that history gives, that now seems inevitable; we should have learned a lesson from the two closest parallels in the past.

The South Pole was first reached in 1911 by the most primitive of means—skis and sleds. Then it was abandoned; not until almost half a century later it was *inhabited*. When men returned to the Pole, they used aircraft, radio, tractors, nuclear energy. And they settled there in comfort; there was even a sauna at the American base. My old friend Wernher von Braun once told me he'd rolled naked in the snow at the South Pole, which would certainly have astonished Scott and Amundsen. . . .

The other historic parallel is much less famous, but in some ways it's even more instructive.

In 1930, Dr. William Beebe and Otis Barton made the first descent into the ocean abyss. Enclosed in a tiny steel sphere suspended from a cable, a "bathysphere," they eventually reached a depth of almost a kilometer. Beebe was acutely aware of the similarity to space exploration. In his 1935 book *Half Mile Down*—my copy was too battered (and too heavy) to bring with me, alas—he wrote: "Until I am actually enclosed within some futuristic rocket and start on a voyage into interstellar space, I shall never experience such a feeling of complete isolation from the surface of the planet Earth as when I dangled in a hollow pea on a swaying cobweb a quarter of a mile below the deck of a ship rolling in mid-ocean."

But the bathysphere was a dead end—a pioneering experiment never to be repeated. A quarter of a century later, the Piccards developed the free-diving bathyscaphe, which by 1960 had reached the maximum ocean depth of almost eleven kilometers in the Marianas Trench.

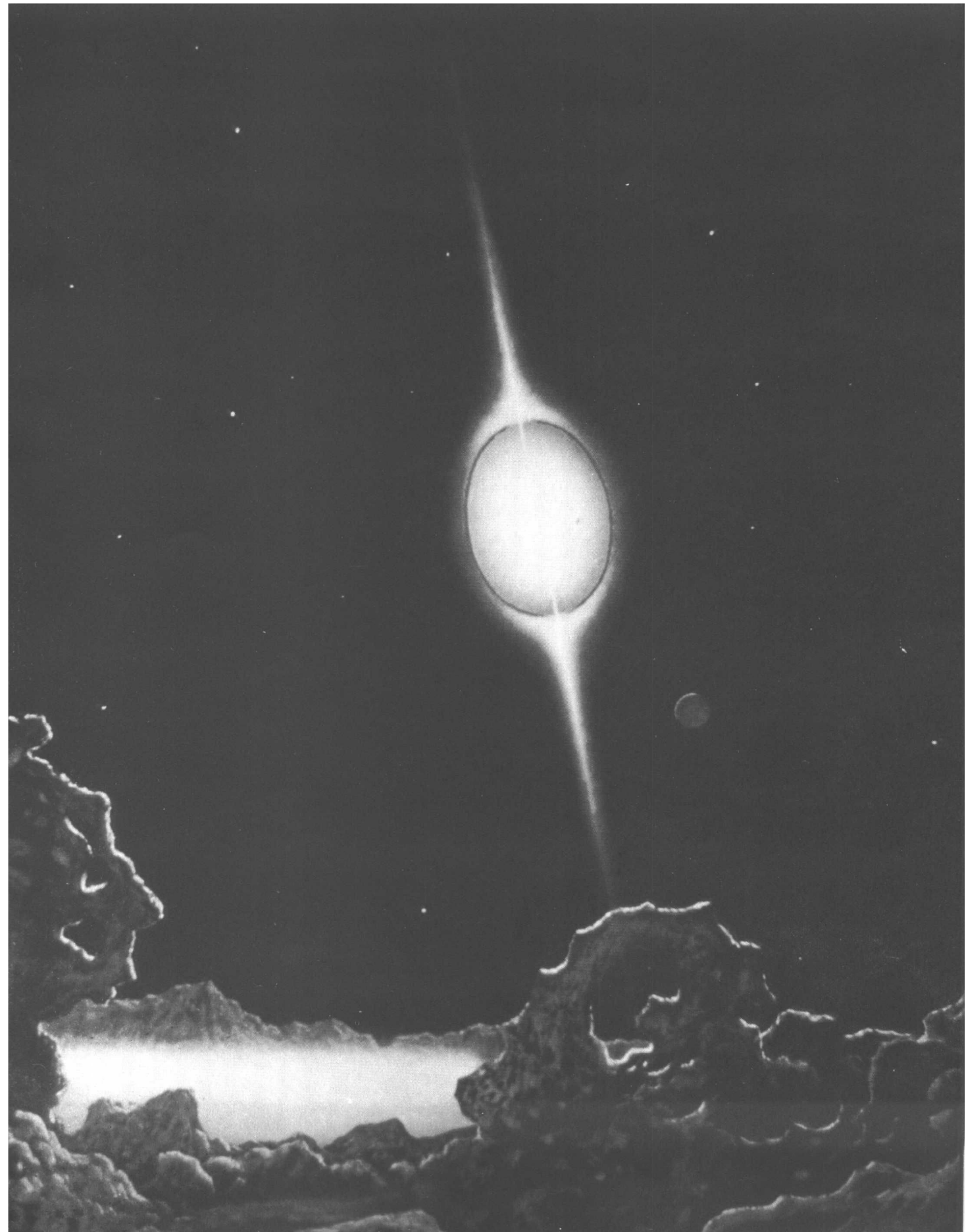
Superb technological achievement though it was, the Saturn V rocket that took the first men to the Moon was also a technological dead end; someone once compared it to an ocean liner that carried three passengers and sank at the end of its maiden voyage. Before space travel became practical, it had to be superseded by the fully reusable shuttles and interorbit ferries that we have today.

And their development required more resources in money and engineering skills than any single nation—even the United States—could possibly muster. More than these, it demanded political will, and a degree of international cooperation that we now take for granted but which, back in the dangerous decade of the eighties, often seemed impossible of achievement.

Looking back now, I think I can pinpoint the exact day when the tide began to turn—though it still took many years for the era of sterile confrontation to end. The date was October 30, 1984, when President Reagan signed Senate Joint Resolution 236, "Relating to cooperative East–West ventures in space." I still have the copy that the resolution's sponsor, Senator Spark Matsunaga, presented to me in Hawaii a few weeks later.

It opens with the words:

Whereas the United States and the Soviet Union could soon find themselves in an arms race in space, which is in the interest of no one. . . .



and ends with:

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the President should—

- (1) endeavor, at the earliest practical date, to renew the 1972-1977 agreement between the United States and the Soviet Union on space cooperation for peaceful purposes;
- (2) continue energetically to gain Soviet agreement to the recent United States proposal for a joint simulated space rescue mission; and
- (3) seek to initiate talks with the Government of the Soviet Union, and with other governments interested in space activities, to explore further opportunities for cooperative East-West ventures in space including cooperative ventures in such areas as space medicine and space biology, planetary science, manned and unmanned space exploration.

Those were noble aspirations, and I am happy that, despite many disappointments and setbacks, the president lived to see them fulfilled. . . .

I'm afraid I'll have to finish this later—the monitor's just switched to Neil and Buzz and I want to hear what they've got to say.

At eighty-eight and eighty-nine, respectively, they both look in pretty good shape.

Considering they stayed on Earth.

Opposite page: A permanent space station will be the first step toward setting up way stations from which to explore other worlds.