Early del Rey

LESTER DEL REY

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To the memory of

John W. Campbell,
a great editor, who taught me to write.

And to Howard DeVore,
who proved himself a friend.

a market for it much later. I've sometimes thought of rewriting it. But common sense prevails. Somehow back then I did it just right; and while I might be more skillful in some ways now, the original enthusiasm behind it would be stale. I'm still glad I wrote it.

After that, I went back to more routine flights of fancy and spent 4,800 words on a bit of space wrangling. The story was called "Habit" and won me another $60.

4.

Habit

(by Lester del Rey)

Habit is a wonderful thing. Back in the days of apelike men, one of them invented a piece of flint that made life a little easier; then another found something else. Labor-saving ideas were nice, and it got to be a habit, figuring them out, until the result was what we call civilization, as exemplified by rocket racing.

Only, sometimes, habits backfire in the darnedest way. Look at what happened to the eight-day rocket race out of Kor on Mars.

I was down there, entered in the open-class main event, with a little five-ton soup can of rare vintage, equipped with quartz tube linings and an inch of rust all over. How I'd ever sneaked it past the examiners was a miracle in four dimensions, to begin with.

Anyway, I was down in the engine well, welding a new brace between the rocket stanchion and the main thrust girder when I heard steps on the tilly ladder outside. I tumbled out of the dog port to find a little, shriveled fellow with streaked hair and sharp gray eyes giving the *Umatila* the once-over.

"Hi, Len," he said casually, around his cigarette. "Been making repairs, eh? Well, not meaning any offense, son, she looks to me like she needs it. Darned if I'd risk my neck in her, not in the opens. Kind of a habit with me, being fond of my neck."

I mopped the sweat and grease off the available parts of my anatomy. "Would if you had to. Since you seem to know me, how about furnishing your handle?"

"Sure. Name's Jimmy Shark—used to be thick as thieves with your father, Brad Masters. I saw by the bulletin you'd sneaked in just before they closed the entries, so I came down to look you over."

Dad had told me plenty about Jimmy Shark. As a matter of fact, my father had been staked to the *Umatila* by this man, when racing was still new. "Glad to meet you." I stuck out my hand and dug up my best grin.

"Call me Jimmy when you get around to it—it's a habit." His smile was as easy and casual as an old acquaintance. "I'da known you anywhere; look just like your father. Never thought I'd see you in this game, though. Brad told me he was fixing you up in style."

"He was, only—" I shrugged. "Well, he figured one more race would sweeten the pot, so he blew the bankroll on himself in the *Runabout*. You heard what happened."

"Um-hm. Blew up rounding Ceres. I was sorry to hear it. Didn't leave you anything but the old *Umatila*, eh?"

"Engineering ticket that won't draw a job, and some debts. Since I couldn't get scrap-iron prices for the old soup can, I made a dicker for the soup on credit. Back at the beginning, starting all over—and going to win this race."

Jimmy nodded. "Um-hm. Racing kind of gets to be a habit. Still quartz tubes on her, eh? Well, they're faster, when they hold up. Since you aren't using duratherm, I suppose your soup is straight Dynatomic IV?"

I had to admit he knew his tubes and fuels. They haven't used quartz tube linings for ten years, so only a few people know that Dynatomic can be used in them straight to give a 40 percent efficient drive, if the refractory holds up. In the new models, duratherm lining is used, and the danger of blowing a tube is nil. But the metal in duratherm acts as an anticatalyst on the soup and cuts the power way down. To get around that, they add a little powdered platinum and acid, which brings the efficiency up to about 35 percent, but still isn't the perfect fuel it should be.

Jimmy ran his hand up a tube, tapped it, and listened to the coyote howl it gave off. "A nice job, son. You put that lining in yourself, I take it. Well, Brad won a lot of races in the old shell using home-lined quartz tubes. Must have learned the technique from him."

"I did," I agreed, "with a couple of little tricks of my own thrown in for good measure."

"How about looking at the cockpit, Len?"

I hoisted him and helped him through the port. There wasn't room

for two in there, so I stood on the tilly ladder while he looked her over.

"Um-hm. Nice and cozy, some ways. Still using Brad's old baby autopilot, I see, and the old calculator. Only that brace there—it's too low. The springs on your shock hammock might give enough to throw you against it when you reverse, and you'd be minus backbone. By the way, you can't win races by sleeping ahead of time in your shock hammock—you ought to know that." He held up my duffel and half a can of beans. "And that isn't grub for preparing a meteor dodger, either."

"Heck, Jimmy, I'm tough." I knew he was right, of course, but I also knew how far a ten-spot went on Mars.

"Um-hm. Be like old times with a Masters in the running. Got to be a habit, seeing that name on the list." He crawled out of the port and succeeded in lighting a cigarette that stung acridly in the dry air. "You know, Len, I just happened to think; I was supposed to have a partner this trip, but he backed down. There's room and board paid for two over at Mom Doughan's place, and only me to use it. We'd better go over there before her other boarders clean the table and leave us without supper. Eating's sort of a habit with me."

He had me by the arm and was dragging me across the rocket pit before I could open my mouth. "Now, Jimmy, I'm used—"

"Shut up. You're used to decent living, same as anyone else, so you might as well take it and like it. I told you I'd paid for them already, didn't I? All right. Anyhow, I'm not used to staying alone; sort of a habit, having somebody to talk to."

I was beginning to gather that he had a few habits scattered around at odd places.

Jimmy was right; shock cushions and beans don't make winners. With a decent meal inside me, and an air-conditioned room around me, my chances looked a lot rosier. Some of the old cocksureness came back.

"Jimmy," I said, lying back and letting the bed ease my back lazily, "I'm going to win that race. That hundred-thousand first looks mighty good."

"Um-hm." Jimmy was opening a can of cigarettes and he finished before answering. "Better stick to the second, kid. This race is fixed."

"I'll change that, then. Who told you it was fixed?"

He grinned sourly. "Nobody. I fixed it myself." He watched my mouth run around and end up in an open circle. "Maybe Brad forgot to tell you, and it's not common news, but I'm a professional bettor."

It was news to me. "But I thought Dad—did he know?"

"Sure, he knew. Oh, he wasn't connected with it, if that's what you're wondering. When he switched from jockeying to dodging, I left the ponies to handicap the soup cans. Learned the gambling end from my father, the best handicapper in the business. It's a habit in the family."

There was pride in his voice. Maybe I was screwy; after all, some people have a pretty low opinion of rocket dodgers. I decided to let Jimmy spill his side without foolish questions.

"Um-hm. Natural-born handicapper, I am. I won twice every time I lost. Never cheated a man, welshed on a bet, or bribed a dodger to throw a race. Anything wrong with that?"

I had to admit there wasn't. After all, Dad used to do some betting himself, as I should know. "How about the race being crooked?"

Jimmy snorted. "Not crooked—fixed. Don't go twisting my words, Len." He stretched out on the bed and took the cigarette out of his mouth. "Always wanted to be famous, son. You know, big philanthropist, endow libraries and schools. Got to be a habit, planning on that; and you can't make that kind of money just handicapping. Your dad ever tell you about that fuel he was working on?"

I began to see light. "We knew he'd been doing something of that sort, though the formula couldn't be found. Matter of fact, he was using it in the *Runabout* when it went out."

"That's it." Jimmy nodded. "A little bit of the compound in the fuel boosts the speed way up. There was a couple of kinks in the original formula, but I got them straightened out. I pick the winner—the fellow who needs to win most, if that's any comfort to you—and sell him on the new fuel. Only the thing won't work in quartz tubes—burns 'em out."

"I won't need it. I'll win this race fair and square." All the same, that did mess things up; I knew Dad had thought a lot of that fuel.

"No rules against better fuels. A man can pick the fuel he wants, the same as he can travel any course he wants to, no matter how long, if he goes past the markers." He grunted. "Brad didn't want you racing, so he sent me the formula. Had a hunch about going out, I guess; dodgers get a habit of hunches."

"And we Masterses have a habit of winning. Better change your bets, Jimmy."

"It's all fixed, too late to change, and the odds are long. After this race, I'm going back and get the habit of being a big philanthropist. Look, kid, you're not sore about my using Brad's formula?"

"If he gave it to you, that was his business." I pulled the sheet up and reached for the light switch. "Only don't blame me when you lose your bets."

But the morning of the start, I had to confess I wasn't feeling so cocky, in spite of living high on Jimmy for a week. I'd seen the favorite —*Bouncing Betty*—and Jimmy's fix, the *Tar Baby*, and both looked mighty good to me.

"What's the *Tar Baby* pulling?" I asked Jimmy. "Or do you know?"

"Olsen says he's driving her at better than two G's all the way. The *Bouncing Betty*'s pulling straight two, which is tough enough, but Olsen thinks he can stand the strain at two and a quarter."

I looked them over again. An extra quarter gravity of acceleration, even if it is only an extra eight feet per second, uses a lot of additional fuel, even for a sixteen-ton soup can. "How about that mixture, Jimmy? Does it pep up the efficiency, or just the speed—combustion rate and exhaust velocity?"

"She'll throw out a fifty percent, mixture I gave Olsen; optimum is good for eighty." Something began to click in my head then, but his next words sidetracked it. "You'd better draw out, kid. An eight-day race is bad, even if you can hold two G's. How's your supplies?"

I was worried a little myself, but I wouldn't admit it. "They'll last. I've stocked enough soup to carry me to Jupiter and back at two G's, if I had to, and the marker station is forty million miles this side of the big fellow, on a direct line from here. I've got plenty of oxygen, water, and concentrates."

They'd given out the course that morning. We were to head out from Kor, point straight at Jupiter with a climb out of the plane of the ecliptic, drive down and hit a beacon rocket they were holding on a direct line with the big planet, forty million miles this side of him; that made about an even three-hundred-million-mile course from Mars, out and back, figured for eight days at a constant acceleration and deceleration of two gravities. It had been advertised as the longest and toughest race in rocket history, and they were certainly living up to the publicity.

"That's a tough haul on a youngster, Len," Jimmy grumbled. "And with quartz lining, it's worse."

"I've had plenty of practice at high acceleration, and the tubes are practically safe for six days' firing. I think they'll last the other two."

"Then you're matching the *Bouncing Betty*'s speed?"

I nodded grimly. "I'll have to. The *Tar Baby*'ll probably run into

trouble at the speed she's meaning to make, but the *Betty*'s built to stand two."

The starter was singing out his orders, and the field was being cleared. Jimmy grabbed my hand. "Good luck, Len. Don't ride her harder'n she'll carry. You Masterses make too much of a habit of being crazy."

Then they forced him off the field and I was climbing into the cockpit, tightening the anchor straps of the shock hammock about the straitjacket I wore.

And I expected to need them. Two gravities mean double weight, during eight days, fighting your lungs and heart. If you take it lengthwise, it can't be done, but by lying stretched out on the hammock at right angles to the flight line, it's just possible.

The *Betty* roared up first, foaming out without a falter. Olsen took the *Tar Baby* up a little uncertainly, but straightened sharply and headed up. Finally, I got the signal and gave her the gun, leaving Mars dangling in space while I tried to keep my stomach off my backbone. The first ten minutes are always the toughest.

When that passed, I began feeding the tape into the baby autopilot that would take over when I had to sleep, which was about three quarters of the time, under the gravity drag. There wasn't anything exciting to the takeoff, and I was out in space before I knew it, with the automatic guiding her. I might have to make a correction or two, but she'd hold at the two-G mark on course for days at a stretch.

I'd been fool enough to dream about excitement, but I knew already I wasn't going to get it. By the time I was half an hour out, I was bored stiff, or felt that way. The automat ran the ship, space looked all alike, and the only sensation was weight pressing against me. I looked around for the *Betty*, and spotted her blast some fifty miles away, holding evenly abreast of me. The others were strung out behind in little clusters, except for Olsen. His blast was way up ahead, forging along at a good quarter gravity more than I could use. At the end of an hour, he was a full ten thousand miles away from me; there was no mistaking the harsh white glare of his jets. Olsen had decided to duck over the ecliptic, as I was doing, but the *Bouncing Betty* had headed below it, so it was drawing out of sight. That left me out of touch with what I hoped was my leading competitor.

Of course, the radio signals came through on the ultrawave every so often, but the pep-talk description of the thrilling contest for endurance racing didn't mean much when I put it up against the facts.

A racing ship in space on a long haul is the loneliest, most God-forsaken spot under the stars. For excitement, I'll take marbles.

Having nothing better to do, I turned over and went to sleep on my stomach. You can kill a lot of time sleeping, and I meant to do it.

The howler was banging in my ear when I woke up. I reached over and cut on, noting that the chronometer said sixteen hours out of Kor.

"Special bulletin to all pilots," said the ultrawave set. "The *Bouncing Betty*, piloted by James MacIntyre, is now out of the race. MacIntyre reports that, in cutting too close to the ecliptic, he was struck by a small meteoroid, and has suffered the loss of three main tubes. While out of the running, he feels confident of reaching Kor safely on his own power.

"This leaves Olsen of the *Tar Baby* and Masters of the *Umatila* in the lead by a long margin. Come in, Olsen."

Olsen's voice held a note of unholy glee that the obvious fatigue he was feeling couldn't hide. "Still holding two and a quarter, heart good, breathing only slightly labored; no head pains. Position at approximately twenty-two and a half million miles from Kor; speed, two million eight hundred thousand per hour. Confident of winning."

"Report acknowledged, Olsen. Come in, Masters."

I tried to sound carefree, but I guess I failed. "Acceleration at two, holding course beautifully on autopilot, rising over ecliptic. Body and ship standing up okay. Pyrometer indication of tube lining very satisfactory. Position, twenty million miles out, speed, two and a half million. No signs of meteoroids up here. Can you give next highest acceleration below me?"

Already it took time for the messages to reach Kor and return, and I tried to locate Olsen with his two-and-a-half-million-mile lead. Even if he cut down to two now, the race seemed a certainty for him—unless something happened. Finally the report came back.

"Burkes, on the *Salvador*, reports one and three quarters, refuses to try higher. No others above that except yourself and Olsen. Are you going to match the *Tar Baby*?"

Match the *Tar Baby*, indeed, and run short of fuel or blow up! "No chance. Still expect to win, though."

Well, at least it would sound nice back home, and it might worry Olsen a little. He was too conceited about his speed. But I couldn't see myself making good. Even if I cut closer to the ecliptic, it wouldn't save enough time to count, and the risk wasn't worthwhile. I dug into my store of concentrates and satisfied a raving hunger—

double weight takes double energy, just as it does sleep. The only thing I could think of was to wish I could maintain acceleration all the way, instead of just half.

That's the trouble with racing. You accelerate with all you've got half the way, then turn around and decelerate just as hard until you reach your goal; then you repeat the whole thing in getting back. The result is that as soon as you reach top speed, you have to check it, and you average only a part of what you can do. If there were just something a man could get a grip on in space to slew around, instead of stopping dead, every record made would go to pieces the next day.

I checked over the automat, found it ticking cheerfully, and fiddled around with the calculator. But the results were the same as they'd been back in Kor. It still said I'd have to decelerate after about forty-four hours. Then I messed around with imaginary courses to kill time, listened to the thrilling reports of the race—it must have been nice to listen to—and gave up. Setting the alarm, I went back to sleep with the announcer's voice concluding some laudatory remarks about the "fearless young man out there giving his ship everything he's got in a frantic effort to win."

But I was awake when the next bulletin came in from Kor at the end of the forty-hour mark. "Special bulletin! We've just received word from Dynatomic fuels that there's a prize of fifty thousand additional to any and every man who makes the course in less than eight full days! Olsen and Masters are now way ahead in the field, and about to do their reversing. Come on, Masters, we're pulling for you; make it a close race! All right, Olsen, come in."

"Tell Dynatomic the prize is due me already, and give 'em my thanks. Holding up fine here, fuel running better than I expected. Hundred and forty million out; speed, seven million. Reversing in two hours."

By a tight margin, I might make it, since it applied to as many as came in within the time period. "I'll be in the special field, Kor. Everything like clockwork here, standing it fine. Pyrometer still says tubes okay. Position, one-twenty-five millions; speed, six and a quarter. Reversing in four hours."

"Okay, Masters; hope you make it. Watch out for Jupiter, both of you. Even at forty million miles, he'll play tricks with your steering when you hit the beacon. Signing off at Kor."

Jupiter! Right then a thought I'd been trying to nurse into consciousness came up and knocked on my dome. I dug my fingers into the calculator; the more the tape said, the better things looked.

Finally I hit the halfway. Olsen had reversed a couple of hours before with no bad effects from the change. But I was busy dialing Mars. They came in, after a good long wait. "Acknowledging Masters. Trouble?"

"Clear sailing, here and ahead, Kor." It's nice to feel confident after staring second prize in the face all the trip. "Is there any rule about the course, provided a man passes the beacon inside of a hundred thousand miles? Otherwise, do I have free course?"

"Absolutely free course, Masters. Anything you do after the beacon is okay, if you get back. Advise you don't cut into asteroids, however."

"No danger of that. Thanks, Kor."

I'd already passed the reversing point, but that wasn't worrying me. I snapped off the power, leaving only the automat cut into the steering tubes, and gazed straight ahead. Sure enough, there was Jupiter, with his markings and all; the fellow that was going to let me maintain full speed over halfway, and make the long course the faster one. I was remembering Jimmy's remark that put the idea into my head: "A man can pick the fuel he wants, the same as he can travel any course he wants, no matter how long."

With power off, I was still ticking off about seven million miles an hour, but I couldn't feel it. Instead, I felt plenty sick, without any feeling of weight at all. But I couldn't bother about that. Kor was calling again, but I shut them off with a few words. If I was crazy, that was my business, and the ship was doing okay.

I set the buzzer to wake me when I figured I'd be near Olsen. Looking out, when the thing went off, I could see his jets shooting out away off side, and a little ahead. But he was cutting his speed sharply, while I was riding free, and I began sliding past him.

I was all set to gloat when his voice barked in over the ultraset: "Masters! Calling Masters!"

"Okay, Olsen."

"Man, decelerate! You'll crack up on Jupiter at that rate. If something's wrong, say so. We're way out ahead, and there's plenty of time. Give me the word and I'll try to cut in on you. The *Tar Baby*'s strong enough to hold back your soup can. How about it, Masters?"

That was the guy I'd been hating for a glory hound, figuring him as out for himself only. "No need, Olsen, but a load of thanks. I'm trying out a hunch to steal first place from you."

The relief in his voice was as unquestionable as his bewilderment. "It's okay if you can do it, mister. I'll still make the special. Why not let me in on the hunch? I won't crib your idea."

"Okay, but I don't know how it'll work, for sure. I'm going around Jupiter at full speed instead of cutting to the beacon."

"You're crazy, Masters." The idea didn't appeal to him at all. "Hope your tubes hold up under the extra eighty million miles. So long!"

Sixty-seven hours out of Kor I passed the beacon at the required hundred thousand miles—which isn't as wide a margin at full speed as it sounds—and headed out. Olsen must have called ahead to tell them what I was doing, because the beacon acknowledged my call, verified my distance, and signed off without questions.

I caught an hour's sleep again, and then Jupiter was growing uncomfortably close. I'd already been over my calculations twenty times, but so darned much depended on them that I wasn't taking chances. I ran them through again. The big fellow was coming up alongside like a mountain rolling toward an ant, and I was already closer than anyone I'd ever heard of.

But it worked out all right, at first. I grazed around the side, was caught in his gravity, and began to swing in an orbit. That's what I'd been looking for, something to catch hold of out in space to swing me around without loss of momentum, and that's what I'd found; Jupiter's gravity pulled me around like a lead weight on a swung rope.

Which was fine—if I had enough speed to make him let go again, as close as I was to his surface. Fortunately, he hasn't any extensive atmosphere to speak of—beyond that which creates his apparent surface—in proportion to his diameter, or I'd have been warmed up entirely too much for pleasant living. In no time I was coming around and facing back in the general direction of Mars; and then two things happened at once.

Jupiter wasn't letting me go on schedule; he seemed to think he needed a little more time for observation of this queer satellite he'd just caught. And Io swung up right where it shouldn't have been. I'd forgotten the moons!

That's when I began counting heartbeats. Either Jupiter pulled me too far, or he threw me square into Io, and I didn't like either prospect. The steering tubes were worthless in the short space I had at that speed. I waited, and Jupiter began to let go—with Io coming up!

Whishh! I could hear—or imagine, I don't know which—the outer edges of the moon's atmosphere whistle briefly past the sides of my soup can, and then silence. When I opened my eyes, Io lay behind, with Jupiter, and I was headed straight for the beacon. Dear old Io!

Light as its gravity was, it had still been enough to correct the slight error in my calculations and set me back on my course, even if I did come too close for my peace of mind.

I was asleep when I passed the beacon again, so I don't know what they had to say. It was Olsen's call that woke me up.

"Congratulations, Masters! When you reach Mars, tell them to hold the special and second prizes for me. And I'll remember the trick. Clear dodging!" He was still heading in toward the beacon on deceleration, and less than eighty hours had passed.

Well, there wasn't much more to it, except for the sleeping and the ravings of that fool announcer back on Kor. I reversed without any trouble at about the point where I'd stopped accelerating and began braking down for Mars. Then the monotony of the trip began again, with the automat doing all the work. The tubes, safe for six days, would be used for only about three and a half, thanks to all that time with power off, and I had soup to spare.

Miraculously, they had the landing pit cleared when I settled down over Kor, and the sweetest-looking white ambulance was waiting. I set her down without a jolt, slipped out, and was inside the car before the crowds could get to me. They've finally learned to protect the winning dodger that way.

Jimmy was inside, chewing on an unlit cigarette. "Okay," he told the ambulance driver, "take us to Mom Doughan's. Hi, kid. Made it in a hundred and forty-five hours. That gives you first and special, so you're out of the red. Nice work!"

I couldn't help rubbing it in a little. "Next time, Jimmy, bet on a Masters if you want to go through with those endowments of yours."

Jimmy's face was glum, and the cigarette bobbed up and down in his mouth in a dull rhythm, but his eyes crinkled up and he showed no rancor at the crack. "There won't be any endowments, kid. Should have stuck to the old handicapping, instead of trying to start something new. I'm cleaned, lock, stock, and barrel. Anyway, those endowment dreams were just sort of a habit."

"You've still got your formula."

"Um-hm. *Your* fuel formula; I'm sticking to the old habits and letting the newfangled ideas go hang."

I stopped playing with him then. "That's where you're wrong, Jimmy. I did a lot of thinking out there, and I've decided some habits are things to get rid of."

"Maybe." He didn't sound very convinced. "How'd you mean?"

"Well, take the old idea that the shortest time is made on the shortest possible course; that's a habit with pilots, and one I had a

hard time breaking. But look what happened. And Dad had one habit, you another, and you'd both have been better off without those fixations."

"Um-hm. Go on."

"Dad thought a fuel was good only in racing, because he was used to thinking in terms of the perambulating soup cans," I explained. I'd done plenty of thinking on the way in, when I was awake, so I knew what I was talking about. "You had a habit of thinking of everything in terms of betting. Take that fuel. You say it gives eighty percent efficiency. Did you ever stop to think there'd be a fortune in it for sale to the commercials? The less load they carry in fuel, the more pay cargo."

"Well, I'll be—" He mulled it over slowly, letting the idea seep in. Then he noticed the cigarette in his mouth and started to light it.

I amplified the scheme. "We'll market it fifty-fifty. You put up the fuel and salesmanship; I'll put up the prize money and technical knowledge. And if you're looking for fame, there ought to be some of that mixed up in there, too."

"Um-hm." Jimmy stuck out his hand. "Shake on the partnership, Len. But, if you don't mind, I'll use the money like I said. Those endowment ideas sort of got to be a habit with me."

I read "Habit" when it first came out in the magazine and somehow never read it again until I began putting this book together. Now I wonder why Campbell bought it, or why he ever thought it deserved a bonus. He must have been very hard up for short fiction on the day it came in.

I could probably try to excuse it by suggesting that (to my knowledge) it was the first story that pointed out that high acceleration could be tolerated much better in a prone position than when standing or sitting. But that's a minor virtue, and it has a major error in science that renders the whole thing invalid.

At the time, I figured the course of the rocket race very carefully, and the time and distances given are correct enough. But then I have the little ship whipped around Jupiter and brought back to head toward Mars—when the ship is going some seven million miles an hour. This is the result of pure, sloppy carelessness. Jupiter does have a strong gravity, and a ship could be made to turn through 180° when going close to it—but only if the ship was doing less than 100,000 miles an hour. That's an error of seventy times in my figures.

Of course, I didn't bother to figure it out. The formula for centrifugal force is a bit complicated, with a lot of figures beyond the decimal point. So instead of sitting down and calculating it, I took it for granted. And that's pretty inexcusable in science fiction. I've always prided myself on figuring things out, but this story doesn't bear any degree of pride.

There was another error in the magazine version, which seemed to make me suggest that Jupiter had no atmosphere. Even in those days, I knew that Jupiter had more atmosphere than any other planet! On checking with my manuscript when the story was published, I found that several lines had been omitted in setting it.

Well, as Campbell told me at the time, "those things just happen and somehow slip by." But I've tried to restore them in this copy, to reduce the needless errors by one, at least.

So far as possible, incidentally, all the stories in this book are appearing exactly as I wrote them, except for the last one (which will be explained when we come to it). I think it only fair that something meant to show my early writing should show it as I wrote it. And the magazine versions sometimes differ to a considerable amount.

Generally, Campbell made fewer alterations than most editors; he expected his writers to turn in finished copy, not stuff he had to rewrite. But certain changes are necessary, as I've learned from my own experience in editing. Sometimes a story has to be cut slightly because it takes up only a few lines on the last page, leaving too much blank space to be filled in. Sometimes it requires minor changes to get rid of "widows"—incomplete or short lines at the top of a page, which make the page look wrong. There are a number of other legitimate reasons for such changes and deletions in a writer's copy. I don't object to them, but I see no reason to perpetuate purely mechanical changes.

Where I've had originals, I've followed them exactly. In many cases, due to a basement that flooded, my carbon copies were almost useless, but did enable me to check against the published version. And in a few cases, such as "Habit," I've filled in where I clearly remember noting changes in the magazine version when I read it. In any event, these stories will be closer to what I wrote than any other version to appear in print.

I haven't the faintest idea of how good or bad the next story I wrote was. The only information I have on it is a list which shows the order in which it was written, the length, and the title. It was called "Glory," it ran for 5,000 words, and was meant for *Unknown*. It

bounced back to me, and even Campbell's rejection must have been pretty routine, since it's one of the few that don't stick in my mind. Generally, hardly a memorable story.

I can remember that both "Habit" and "Glory" were written during my only attempt to write on something like a schedule. The idea is a fine one. Every morning for a certain number of days of the week, the writer is supposed to sit down at his typewriter and stay there for a fixed number of hours. I'd figured out that four hours a day for three days a week would work out very well. If I turned out a thousand words an hour average—allowing for all kinds of bad starts, thinking up new plots, etc.—it would produce something very respectable as an income, even if only half of what I wrote sold. There are lots of fallacies built into that idea, but some writers can make it work.

I can't. When I get a story started, I have to keep with it. I gain momentum as I go along. Ideas seem to pop into my head for its development at a speed that increases slightly faster than my writing speed does. I can even work up a mild fever when I'm really going, and that seems to help. But if I stop, I usually find I'm dull when I return, that the ideas have all flown, and that it's like starting all over again.

I've found that true for novels, too. Once I can get one moving, I stay with it for sixty to eighty pages at a stretch, only breaking when some development will offer a fresh start. And I've turned out 180 pages in one case without ever leaving the typewriter—though that was because I'd gotten myself into a horrible jam and had to finish the book at once. That novel is at least as good as others over which I labored much longer.

Anyhow, that attempt to be systematic came to a sudden end after the fiasco of "Glory." I reverted to my normal sloppy and rather lackadaisical habits, and a feeling of deep peace came over me to exceed any that may have blessed Abou ben Adhem.

When I came back to the typewriter, it was fun to begin writing again, and the result was much better. I wrote my longest story up to that time (14,500 words) and Campbell accepted it and sent a prompt check for $187.50. It was called "The Smallest God."