

# Rapid Transit

by E.S. Strout

*Cal Tech scientists today succeeded in teleporting a photon across 3.28 feet of space and created a replica photon.* Cal Tech press release, 10-22-1998

## 1.

Thursday, 21 May 2009:

44-year-old Dr. Vincent McGill, Director of the U.C, Irvine Subatomic Particle Physics Laboratory, was awarded a substantial U.S. Government grant for the study and investigation of the teleportation phenomenon. The study was limited to inanimate objects, one-celled protozoans and insects at first.

McGill was a tall, athletic appearing man with dark hair, sideburns and a voluminous dark mustache. He was a Purdue University graduate with a PhD in subatomic particle physics. His staff consisted of two Associate Professors Ann Casey and Elizabeth P. Russo.

Dr. Casey was a staid, myopic auburn haired New Englander. She held advanced degrees from Boston University and MIT in physics, human and animal anatomy and physiology.

Dr. Russo, a blond, green eyed native Californian was dynamic, impulsive and impatient. She held advanced degrees in physics and subatomic particle physics from Stanford and Cal Tech. "How did Dr. McGill pull off a grant of this size from the Federal Government?" she asked Dr. Casey.

Ann smiled. "Vince knows people."

Monday 25 June, 2018, 1030 hours. Professor McGill's subatomic particle physics laboratory, U.C. Irvine campus.

The complex apparatus shut down with a faint hiss. TRANSFER COMPLETE glowed in green from the control panel. "How did we do, Annie?" Dr. McGill asked.

"Six rats. All looking good." 36-year-old auburn haired Ann Casey tucked a stray auburn tress behind an ear and pushed rimless glasses down from her forehead.. She released the catch and lifted the reinforced plastic cover of the reception chamber. The inquisitive white rodents poked whiskered pink noses through the grillwork of the cage and sniffed the air.

"Our first mammals, Professor," Ann said. "Abrams and that bunch at U.C. Davis are still teleporting cockroaches and frogs."

Dr. McGill handed her a fax. Casey raised an eyebrow. "They just teleported a rabbit?"

McGill nodded. "Bigger, but only across a room. We go cross-campus."

Casey brushed more loose strands off her forehead. “Your addition of beta particle emissions to the molecular dis-cohesion and transmission process looks like the key.”

Vince nodded, smoothed his graying mustache with a fingertip. “We’ve come a long way from single atom or light beam teleportation experiments of the 1990’s.”

“Beth wants to send her friend Chazz next.”

“And if he survives?”

“Then humans. One of us, maybe,” Ann said.

“Dr. Russo might volunteer.”

“For what?” 27-year-old Dr. Elizabeth P. Russo asked as she walked in. “To spring for lunch? I think it’s your turn, Annie.”

A nod. “You’re right, Beth. Back in twenty.”

## 2.

1120 hours:

“In-N-Out burgers, animal style,” Ann said. She plopped the takeout bag on Dr. McGill’s desk and handed out napkins.

“My favorite,” Beth declared as she grabbed a French fry. Lunch passed with amicable nonscientific discussions. Then Russo asked, “Volunteer for what?”

Vince gave her a blank stare. “Say what?”

“Eidetic memory, you know. I remember almost everything. Quote Professor Vincent McGill, ‘Dr. Russo might volunteer’.”

“I was joking, Beth,” he said with a faint stammer.

She grabbed the last dill pickle. A grin illuminated her pert green-eyed features. “I’m not. I volunteer.”

“We could offer one of the graduate students a couple hundred bucks,” Vince said. “I’ll bet Natalia or Henry would volunteer.”

“R. & D. would never approve it. Their insurance doesn’t cover graduate students,” Dr. Russo said. “For me they would okay it, I think.”

Dr. McGill said, "If your pal Chazz does okay, you will be first up for consideration."

She raised a fist. "Yes!"

McGill's cell chirped. He listened, then nodded, "Okay, Alan, let's do it now. We're all here."

"Do what now?" Ann asked.

"Security. Our request for a coded entry system for our labs here and over at the Gottschalk Clinic was approved. Alan is bringing the setup over."

### 3.

Security Chief Alan Parker, a 42 year-old fit and tanned veteran of Desert Storm laid a sheet of paper marked off into three squares on a lab bench and placed an ink pad next to it. "Right index finger only. Roll side to side, then lift and press on the paper square next to your name."

"How do fingerprints replace a key card?" Dr. Casey asked.

"State of the art, Professor. These prints will be incorporated in a conductive silica gel pad. Your door's electronic locking mechanism will respond only to either of your fingerprints. Just press on the pliable gray square next to the door. I'm planning to have them installed in both labs by 1700 hours."

Dr. McGill said, "That's great. Thank you, Alan."

### 4.

Gottschalk Clinic Lab, one week later: 0930 hours:

"How's Chazz doing, Beth?" Ann asked over the intercom.

"He's asleep."

"What did you give him?"

"Phenobarbital in his banana," Dr. Russo said.

"Good. The molecular disassembly program is set for remote activation. Come on over. Ask Natalia or Henry to keep an eye on him."

"On my way."

The transfer took a second. Chazz gave a stuporous blink, scrambled from the transfer chamber and leapt into Dr. Russo's arms with a chatter of greeting. "Glad to see you, too," she said.

The little chimp's physical exam, blood chemistries x-rays and MRI revealed no abnormalities. His whole body molecular matrix was unchanged. "Well done, all." Dr. McGill said.

Beth said, "Let's do me now."

"Not so fast," Dr. Casey said. "You will need a physical exam, chest x-ray and MRI first. Your last ones are six months old. Plus we need your upgraded intracellular molecular matrix for the computer."

"Come on, Ann," Dr. Russo complained. "I feel fine. Chazz is fine too. Besides, those guys at U.C. Davis are less than six months behind us."

"This isn't a race, Dr. Russo. We're talking *homo sapiens* here," Dr. McGill cautioned with a stern head shake. "An evolutionary step above the chimpanzee. We'll wait the required six months for observation of Chazz. There may be unanticipated obstacles or delayed reactions. Safety is our primary concern. It does look good for human trials, but it's best we wait."

"Yes," Ann reminded her, "we share ninety-six percent of our DNA genome with the Great Apes. It's true that most of the remaining four percent is duplication, but a few have no known purpose as yet I will say it does look good for human trials at this point, but I say lets wait." Dr. McGill gave a nod of concurrence.

"Oh, all right," Beth agreed with a contrived pout. "It'll take that long for our R. & D. pencil pushers to approve research-related imaging appointments and DNA mapping."

"And have them schedule you for follow-up exams after your excursion," Ann Casey added.

"Excursion. I like that."

"Beats the heck out of 'beam us up, Scotty'," Dr. McGill said.

## 5.

Monday, 14 January 2019. Gottschalk Center transmission Lab. 1030 hours:

Beth viewed Dr. McGill's new movie posters that adorned one wall of the lab with an odd smile. "Vince has a weird sense of humor."

“Those are classics. *The fly*, 1958 with David Hedison and its 1986 reincarnation with Jeff Goldblum,” Dr. Casey said. “Vince knows a couple of Hollywood execs who donated them. He knows Hollywood.”

“Did you ever watch the ‘86 version? The one where the Jeff Goldblum character turns into a . . .”

“Not lately.” Dr. Casey rested a latex gloved hand on the transparent cover of the transmission chamber, held a finger to her lips. “Relax. The chamber is contaminant free, and you’re wearing sterile O.R. scrubs.”

“I’m okay.” Her eyes closed, breathing regular. “The Nembutal. It’s working . . .”

Ann gripped her hand. “We’ll see you on the other side. Safe trip.”

“We have a go, Vince,” Dr. Casey addressed the intercom.

“We’re green board here, Ann. Beta particle emission optimal. Dr. Russo’s molecular matrix is in sync. Whenever you’re ready,”

“Copy. Detaching monitor leads. Sealing chamber lid now. I’m go here.”

An eyeblink later a few wisps of mist swirled in the empty chamber.

## 6.

Physics lab receiving area, twenty minutes later:

“Monitor leads reconnected. Vital signs all within normal limits,” Dr. Casey said as she viewed the screen. “B/P 110/75, pulse 78, resp. 12, Body temp 98.4. Hmm. This EKG trace looks odd, Vince. Take a look.”

“It’s normal sinus rhythm. Probably a misaligned chest lead. Wait one. She’s coming around.”

Dr. Russo’s eyelids gave a flutter. “How long?” she mumbled.

Professors McGill and Casey viewed the computer readouts with satisfaction. “Two seconds,” Ann said.

“U.C. Davis, eat your hearts out.”

Beth stepped from the receiving chamber trailing a half dozen monitoring leads, took a deep breath. “We got any coffee?”

Vince handed her a steaming cup. “Fresh brewed.”

She took a swallow as Ann detached the leads. “Back in five.”

## 7.

“She’s been half an hour,” Dr. Casey said.

Vince gave a soft tap on the dressing room door. “You okay, Dr. Russo?”

She cracked the door, gave him an ecstatic grin. “Just checking to see that everything is still in the right place.”

Ann reattached the leads, viewed the monitors. “All vital signs in the green. EKG still has that odd little twitch, but it’s still normal sinus rhythm.”

“I’ll get the electronics geeks to have a look.”

After lunch Dr. McGill removed a packet of paperwork from his briefcase. “I’m applying for additional grant funds. I just need all of your signatures.”

“Are we including a space station lab?” Dr. Russo asked.

Vince flipped pages. “Paragraph twelve-a. I know a few NASA folks.”

“Yes. Sounds good.” She grabbed the pen and inked a quick scrawl next to her name.

“I’ll submit these at the R. & D. Office. Be back in half an hour. You guys go ahead and review the video disc.”

The phone beeped. Ann answered, listened.

“Okay. Dr. Russo will be there.”

“What?”

“R. & D. says you’re clear to go for x-rays and MRI at noon.”

Beth smiled. “Vince knows people.”

## 8.

1300 hours:

“Did your imaging tests turn out okay?” Dr. Casey asked.

“They had an emergency case. They’ll call,” Dr. Russo said.

The landline buzzed. “Teleport Lab, Dr. Casey.”

“Al Parker in Security Dr. Casey. There’s a problem with one of the signatures on the new grant request.”

“Mine?”

“No, Professor. It’s Dr. Russo’s. If she could stop by, I’ll have a copy for her to sign. It’s no big deal. You know how picky the Office of Budget Management gets. Undotted i’s, uncrossed t’s . . .”

“Our tax dollars at work, Alan. Could you bring them over, please?”

“Be there in five.”

“Problem, Ann?” Beth asked.

“You need to re-sign a copy of the grant documents. Something with the signature.”

## 9.

1415 hours:

“This is a forgery,” Dr. Russo raged. She tapped a finger on the document. “Not even close.”

Security Chief Parker, Dr.’s Casey and McGill eyed the signature for only seconds. “I agree.” Ann said. “Clumsy one at that. Definitely not Beth’s.”

Parker opened a folder and laid a document on McGill’s desk. “Here’s her signature from the security request hardcopy back in May.”

There was no match.

“This is B.S.,” Russo screamed, an octave above middle C.

“Who else has access to these documents,” Dr. McGill asked.

“Twenty or more,” Parker said. “R. & D., Board of Regents, the Dean’s office. And the feds, of course.”

“Any of them pissed off at you, Beth?” Ann Casey asked.

“Administration can’t stand me.”

“Anyone from U.C. Davis snooping around?” Dr. McGill asked.

“A microbe couldn’t get past our security,” Parker said.

“Please check again, Alan.”

“My guys will start collecting signature samples.”

“What then?” Professor McGill asked.

“I know a handwriting expert with the Irvine Police,” Parker said. “Dave Cook. I’ll give him a buzz.”

One hour later:

“We think it’s a forgery, Dave,” Chief Parker said.

The fingerprint expert compared Dr. Russo’s known signature with the forgery, using magnifying lenses. “I see what you mean,” he said. “It’s odd.”

“What the hell do you mean odd?” Dr. Russo demanded.

“Can’t say for sure,” Dave said, his eyelids in a puzzled squint. “Just strange.”

“When will you know something, Dave?” Parker asked.

He gathered up the documents. “Gotta look at the employee signature database. I’ll call when I’ve checked it out.”

## 10.

The landline buzzed. “Dr. Russo here.” A pause. “What do you mean, unusual? Dammit. Okay, I’ll be right there.”

“Problem?” Vince asked.

“My x-ray and MRI results. Be right back.”

Thirty minutes later:

Dr. McGill’s cell phone chirped. “Vince, it’s Beth. I’ve brought Dr. Raymond with some very unusual films to show you and Annie.”

“We know Mike Raymond. Bring him on in.”

Silence.

“Dr. Russo?”

“Ah, I have another problem. I can’t unlock the door.”

“Try again.”

Her voice quivered with annoyance. “Vince, I’ve pressed the fingerprint pad six times. I keep getting an ACCESS DENIED message on the screen. Oh, no. Now it says SECURITY ALERT.”

She tried three more times as Dr’s McGill, Casey and Security Chief Parker watched. “Glitch in the system,” Parker said. “I’ll get the techies up here.”

Dr. Casey said, “Thanks, Alan. Let us know.”

“Did you injure your fingertip, Beth?” Vince asked. “Burn, paper cut, anything?”

She held the index fingertip up for examination. “None of the above.”

Dr. McGill nodded. “I agree. Take two deep breaths and exhale slowly. Let’s see what Mike has.”

## 11.

Dr. Raymond clipped a film up on the lighted view box behind Dr. McGill’s desk. “This is the chest x-ray from Dr. Russo’s physical, August of last year and before her recent transit. Completely normal.” He placed another film next to it. “Now this one from today.”

“It’s backwards, Mike,” Ann said.

“That’s what I thought at first, but look here.”

Dr. Russo’s name and I.D. numbers on the lower right hand corner of the film were not reversed. “This is a condition known as *situs inversus*. Her heart is on the right-hand side of her chest.”

“That would explain the EKG anomaly,” Vince said. “Beth has dextrocardia.”

“Dextrocardia, my ass,” Dr. Russo protested. “I’ve never had an abnormal x-ray. You’ve seen them all, Mike.”

Dr. Raymond nodded in bewilderment. “I have. Think this is strange? Wait till you get a load of the MRI’s.” He clipped up another series of films. “This is one for the journals,” he said. “*Situs*

*inversus totalis*. The major organs are reversed, too. Liver on the left, spleen on the right, and so on.”

“Wait one,” Beth screamed. “All of Chazz’s tests came back normal after his excursion.”

“I’ve re-examined those as well. Normal,” Mike said.

“I’d better let Abrams know,” Dr. McGill whispered to Ann. “A genetic on-off switch present in our genome but not in our simian ancestors, probably tripped by the discohesion step.”

She nodded. “Good thing you requested more grant funds.”

Parker’s cell chirped. “Dave Cook here, Alan. Took a while but I’ve got it.”

“You’re on speaker with us, Dave. Go ahead.”

“I missed it at first glance. It’s Dr. Russo’s. Her signature is dyslexic. Written backwards in an almost illegible scrawl. ”

“This is insane,” Russo muttered.

12.

Dr. Casey raised a hand. “Dr. Raymond, didn’t you just say that all of Dr. Russo’s organs are reversed?”

“That’s right.”

“And her cerebral hemispheres as well?”

“Yes. She’s a mirror image.”

“It’s been a while,” Ann said, “but part of my early training included neuroanatomy. The motor cortical areas would be reversed, but the cognitive memory functions of the anterior cerebral hemispheres are independent of the motor cortex.”

“What the heck does than mean?” Beth asked.

“Your cognitive feedback would continue to support your usual sensory perception of body part spatial orientation,” Ann explained.

Beth sat, eyes shut tight, chin resting on a closed fist. She remained like that for almost thirty seconds. Then she leapt to her feet, eyes wide and glistening. “Got it,” she exclaimed with a joyous yell and a high five for Dr. Casey.

“Be right back.” Dr. Russo yanked the door open, stepped outside and closed it. A second later it opened with a decisive click.

“Gimme a pen and those documents,” she said.  
Her signature was perfectly legible.

Dr. Casey nodded. “Looks good. A little opposite tilt from her previous, but normal.”

“Do you foresee any problems with converse handedness, Beth?” Dr. McGill asked.

”I’ll let you know.”

13.

One week later:

Dr. Russo mopped her forehead with a sleeve, pounded on the computer keyboard with savage strokes. Text spewed from the Hewlett-Packard printer. She grabbed each new batch and scribbled briskly on each page.

Dr. Casey grabbed a seat next to her. “Anything I can help with, Beth?”

She exhaled a forlorn sigh. “Thanks, Annie. This problem is mine alone. Vince told me the R. & D. hierarchy just finished their review of our teleportation project to date. We hadn’t listed my unforeseen complication in the Possible Side Effects section. They couldn’t find anything to cover it in any of their hundred or so manuals.”

“And?”

“I have to re-sign all original copies of all my work on Rapid Transit. And redo my handwritten marginal notes. For continuity, they said.”

Dr. Casey nodded. ”University bureaucracy in action, Beth. Perhaps you should just consider this a left-handed compliment.”

The End