Wiens told one of his surgeons, "Everything that you told my family that I would never do I've done. Tell me, what else can't I do, so I can..."
God took Dallas Wiens’s face from him on a clear November morning four years ago. If you ask Wiens, he will say that it was neither an accident nor a punishment; it was simply what had to happen. At the time, he was trying to paint the roof of the Ridgelea Baptist Church, just off Route 30, in Fort Worth. He was twenty-three, and suffering from the complications of being young and living a life of trouble, heartache, and restlessness.

Wiens had been adrift since adolescence. At fourteen, a traumatic incident—something that he can’t bear to talk about—had shaken him, cut into the core of who he was. He promised himself never to smile again, to detach himself from any emotion. Although he had grown up in a Christian home, he decided to turn his back on God. He fought often at school. By eighteen, he had left home, and was using drugs, dealing drugs, and carrying guns. He joined the Army, to clean himself up, but he had a bad knee and trouble with authority, and so he left. He tried to keep away from Texas, but poverty drew him back, and he got a local girl pregnant. While she was giving birth, the baby nearly died. In the hospital, Wiens asked someone if it was O.K. to cry, and then cried like never before. When the baby was born, a tiny girl at twenty-seven weeks, he filled up with emotion. He married the mother of his child, thinking that it was the right thing to do, but the marriage fell apart. He wanted change. He wanted to reinlist, to escape the mess of his story, to be a good father, a better man. Like all of us, he kept trying to find his way.

Wiens needed civilian medical and psychological evaluations before returning to the Army, and for that he needed money, which is how he ended up at the Ridgelea Baptist Church on November 13th, the day his face was destroyed. He found the job through his oldest brother, Daniel; their uncle, Tony Peterson, was going to be working with them. They planned to do some touchup painting from a boom lift, which can hoist a man into the sky with a giant hydraulic arm. It was a small job. They debated where to position the machine, how far from the church, and decided that Wiens would go up. Daniel went around to the other side of the building. Wiens got into the
lift and began operating the hydraulics. He seemed preoccupied, Peterson recalled; he was staring straight ahead, unaware of the danger, as he rose and rose, until his forehead hit a high-voltage electrical wire suspended above him. The electricity gripped his body, coursing through his head and the left side of his torso. For about fifteen seconds, ionized gas enveloped him in an azure nebula. The smell of an electrical burn hung in the air. “All around the kid was blue,” Peterson said. “It lit him up, and it hung on to him. It seemed like forever. Shit, man, all I thought was ‘I just killed my nephew.’”

Once the electricity let Wiens go, his body slumped like clay onto the suspended platform. Peterson lost his composure and fell into hysteria. Daniel called 911. The Fort Worth police department does not keep recordings of 911 calls for more than a year, but notes taken by an operator hint at the depth of urgency: “WAS FRIED FROM A POWER...IS HANGING...THE POWER SOURCE IS LIVE...THINKS HE IS POSSIBLY DECEASED.”

Within minutes, police and firefighters arrived. They lowered the lift and pulled Wiens’s body out. When a paramedic got there, she was mesmerized by the damage. Just above Wiens’s left ear, where he had hit the line, it seemed like hot candle wax had been poured over his skin. Daniel recalled, “He had like a little charred bald scar on the top of his head. When they stripped his shirt off, it was just a big gaping hole—and I know this sounds kind of nerdy, but I liken it to a lightsaber coming up and brushing him on the side.” The paramedic placed an oxygen mask over Wiens’s face, and his eyelids fluttered as he struggled to inhale. Daniel noticed that his eyes were red. “It was like someone had blown glue and sand into them,” he said.

Wiens’s lips were fused, his jaw clenched, and he was not getting enough air. Worried that he was slipping away, the paramedic injected him with a paralytic and performed a field tracheotomy—a common procedure in the military but one that he had never done before. A helicopter then flew Wiens to Parkland Hospital, which is a Level 1 trauma center, meaning that it can provide the highest possible level of care for such an emergency. President John F. Kennedy was taken to Parkland after Lee Harvey Oswald shot him—and, later, Oswald was taken there. The hospital also houses one of the country’s largest and best burn centers. It sees more than six hundred burn victims a year, but when a doctor there, a surgeon with twenty-six years’ experience, later examined Wiens he was shocked. People with that type of physical trauma rarely become patients. Usually, they died.

Electrical burns can have an oddly mercurial impact on the human body. They can devastate tissue immediately, or they can have no effect at all, or they can have a delayed effect. The period of limbo can last days, and during that time doctors must wait for each cell in the affected area to “declare itself” living or dead. Brett Arnoldo, the co-director of Parkland’s burn unit, explained to me, “In a high-voltage electrical injury, typically what you see is the tip of the iceberg. There is a lot of deep-tissue injury that you cannot recognize when you just look at the patient.”

Arnoldo was the admitting surgeon when Wiens was brought in. He examined his head and his torso and found that the “charred bald scar” that Daniel had noticed was actually exposed skull. It suggested that the burn would soon reveal itself to be profound. “Our thought was that this was highly likely to be a lethal injury,” Arnoldo recalled. When Wiens’s family arrived, a doctor recommended that they find a priest to administer last rites. Dallas’s mother, Lea Wiens, told me, “The moment we walked in the hospital, we were told that, and I was like, ‘Don’t think so—well be taking him home.’” While the family waited anxiously for news, Wiens was taken to an intensive-care unit, and his wounds were cleaned. An anesthesiologist put him into a benzodiazepine-induced coma to spare him from the severity of the pain.

Soon enough, the cells throughout Wiens’s face began declaring themselves dead in a steady cascade, laying waste to skin, muscle, and bone. By late afternoon, half his face was showing signs of injury. After about a day, every feature was subsumed by swelling. Wiens’s lips were “black as a piece of charcoal,” his grandmother, Sue Peterson, recalled. His skin turned resinous, joining with muscle, fat, and even hair, in a semi-translucent shell.

As the cells began to die off, doctors at Parkland raced to remove them, fearing that they would invite a fatal infection. The process, called debridement, is sometimes simple, requiring just a scalpel, and sometimes involves drills and
chemicals. For Wiens, there were more than twenty complex procedures. They claimed his forehead, eyelids, nose, cheeks, and lips. With each debridement, Arnoldo informed Wiens’s family what needed to go, and, for the most part, the family accepted the news pragmatically. In a crisis, it is possible to regard parts of the human anatomy that would otherwise seem all-important as expendable, if it means that a life can be saved. But Wiens’s face—the living symbol of who he was—was steadily being dismantled, and at times the news that a particular feature had to be removed was difficult to bear. “I really did not want them to remove his teeth,” his grandmother told me. “He was such a nice-looking kid, and I knew that that would be an issue for him. I cried and cried over it.”

Surgeons are practiced in distancing their emotions from their work, but the invasiveness of the debridements affected them, too. “I have never been physically sick in the O.R.,” Arnoldo said. “But when I removed the midface—the nose, the lips, the soft tissue around the eyes—and carried those pieces of tissue to a back table, there was a moment where I felt like I could be physically ill. It was upsetting. You’re taking his identity away.”

Another surgeon told me that the amount of tissue that had to be debrided amazed him. The issue with Dallas was that the burn was so deep that we couldn’t get down to anything living,” he said. “After skin, fat, and muscle were removed, a drill was needed to burr the scordched skull. ‘We got down to bone,’ he said; in some areas, the bone had died all the way through. ‘After multiple trips to the operating room, he literally looked like a skull on top of a body. Everything was gone.’

Something about Wiens stimulated intense protective feelings among the Parkland staff almost at once. Even under deep sedation, his body spoke with its own force and charisma. Wiens is a small man. He weighed a bit more than a hundred pounds. But he withstood the injury, and survived the complete removal of his face. “It was like a movie,” a nurse said. “It was surreal.”

While Wiens was in the I.C.U., his head was wrapped in Xeroform, gauze saturated with petroleum jelly and antiseptic—a provisional substitute for skin. But beneath the Xeroform and the damaged tissue the condition of his brain remained a mystery. In the aftermath of the electrocution, he had suffered from seizures. He could not swallow or breathe unassisted, and Arnoldo believed that he would probably never talk, eat, see, or smell again; the doctors at Parkland were skeptical that he was anything short of severely brain-damaged. Still, Wiens’s family did not relinquish hope. They spoke to him. They held his body. One day in mid-December, about a month into the debridements, his mother, Lea, was by his bedside. She was holding his hand, and she was convinced that she felt him squeeze her fingers. She ran to the hospital staff to let them know “he was in there,” but they told her that it was probably just a reflex.

There would be little point in further surgery for a patient who was effectively brain-dead, so in early January a determined resident decreased Wiens’s sedation to see if he could communicate. Wiens began to stir, his head swinging from side to side. “Relax, buddy,” the resident said. Wiens calmed down, and began responding to basic commands. That day, Wiens’s parents, Lea and her husband, Mike, were standing beside their son in the I.C.U. Wiens was immobile, his brain separated from the world by nothing more than bone and raw tissue. But his ventilator had been removed, and Lea heard him whisper, “I’m thirsty. I hurt. And I love you.”

The fact that Wiens was “in there,” as Lea had hoped, was a cause for relief, but it also presented a conundrum: what next? Even if his brain was fully intact, it could not remain wrapped in bone and Xeroform forever. “If his face was to come down whole again,” at Parkland, the doctor who bore this responsibility was a young reconstructive surgeon named Jeffrey Janis, a warm, soft-spoken man from Ohio, where Wiens had spent some of his childhood. Janis knew that, to look human, Wiens needed a face. “The question was, how do you reconstruct it?” he recalled. “Usually, in plastic surgery, you replace like with like”—facial skin with facial skin—but in this case there was so much tissue missing that we couldn’t borrow it from anywhere else. People aren’t walking around with spare parts.”

Janis and his team scoured the medical literature for guidance, but Wiens’s condition was so unusual that they found little of use. Eventually, they decided to take muscles from Wiens’s back and sides, and fix them to the front of his skull, like a blanket. If the muscle thrived after several weeks, they would graft skin from Wiens’s thigh over it. The process would involve multiple surgeries, and the results could not be predicted. At best, Wiens would be given an immobile and featureless tableau of skin, a blank human canvas, where his face had been. Janis thought that a prosthetics specialist he sometimes worked with could construct a convincing mask, based on photographs of Wiens’s face before the injury. After the surgeries healed, Janis intended to mount metal pegs on Wiens’s skull so that the mask could be held on with magnets. In essence, Wiens would become a man disguised as himself.

The plan was both minimalist and risky. Janis recalled thinking, “If it fails, then it is likely going to result in death, because you can’t just have someone walk out of the hospital as an uncovered skull on a body. It doesn’t work like that.”

Reconstructive surgery is an ancient art, dating back at least to the time of the Upanishads, in India. In about 600 B.C., Sushruta, a scholar from Varanasi, catalogued more than three hundred surgical procedures, among them what may be the first documented rhinoplasty, which involved using the leaf of a creeper as a measuring device. “A patch of living flesh equal in dimension to the preceding leaf should be sliced off from the region of the cheek and, after anointing it with a knife, swiftly adhered to the severed nose,” Sushruta advised. A pedicle—a bridge of skin keeping the patch linked to the cheek—provided blood to the graft while it integrated with the nose, and was later removed. An ear, he noted, could be repaired the same way.

Sushruta’s treatises found their way to Renaissance Europe, and, in 1557, Giacomo Fabrici, a professor in Bologna, described a form of rhinoplasty from Sicily that was much like Sushruta’s. He
understood reconstructive surgery in psychological terms, explaining, “We restore, repair, and make whole those parts which nature has given but fortune has taken away, not so much that they delight the eye, but that they buoy up the spirit and help the mind of the afflicted.” The Catholic Church disagreed: it judged that he had been tampering with the will of God and excommunicated him. Although a few sympathetic doctors kept Tagliacozzi’s work alive, for the most part grafts became an object of ridicule. In 1909, the *Boston Medical and Surgical Journal* noted that by the eighteenth century rhinoplasty “sank into disuse and in course of time began to be considered impossible or fabulous.”

In the subsequent centuries, reconstructive techniques improved, but the principle remained the same: tissue used to repair a wound had to be taken from the patient’s own body; otherwise, the immune system would attack and destroy it. This biological threshold was impermeable, the pathologist Leo Loeb argued, in “The Biological Basis of Individuality,” and many surgeons accepted it. Modern facial reconstructive surgery came about during the First World War, to repair the devastating injuries that resulted from mechanized warfare, but it was still limited to grafts from the patient. The field’s failures were as stark as its achievements. The Third London General Hospital opened a department, known as the Tin Noses Shop, to build masks for soldiers whose injuries could not be disguised by reconstruction. The program’s founder wrote, “My cases are generally extreme cases that plastic surgery has, perforce, had to abandon.”

Nearly a century later, Janis was attempting something remarkably similar. In January, 2009, Wiens’s comatose body was wheeled into the O.R., for two days of surgery. After the muscles from his back and sides were moved to his face, the team covered them with pigskin. This was a temporary measure; the pigskin would eventually break down, but it would give the muscles protection without wasting any of Wiens’s own skin, much of which was still healing. “He’s a very thin guy,” Janis recalled. “We wanted to be very conservative.”

After a week, Janis’s team replaced the pigskin with a synthetic product called Integra. Initially, the swelling was tremendous. “The nurses said, ‘What did you do to this guy?’” Janis recalled.

“But, as the swelling went down, the muscles assumed the contours of the facial skeleton.” Three weeks later, the team grafted skin from Wiens’s thigh to his head. What resulted was not quite a face: smooth, undifferentiated skin travelled from above Wiens’s hairline down to a slit where the remainder of his mouth was. One of his eyes had to be removed; another was inert, but the doctors had “buried” it protectively in soft tissue, in case it could one day be revived. Wiens had no nose, no lips. He was able to grow a beard on just a tiny patch of chin. He looked like Mr. Potato Head without the features.

Once Wiens was back in the I.C.U., the doctors allowed him to regain consciousness, and soon he began talking. He was hard to understand, so his parents set up a dry-erase board at his bedside, and, though he had been blinded, he could write out some basic phrases. But his transition into consciousness was blurred by delirium. He was given a small computer to help him communicate, and in his mind’s eye he struggled to use it while he balanced atop a wall made from lashed-together wooden pilings.

Wiens had no memory of the electrocution or the hours leading up to it, but he later spoke of having had a religious experience. At the moment his head touched the high-voltage line, he had a profound sense of dying, of being sucked into an infinite void, which he understood to be Hell. “I saw every sin flash before my eyes, and then I felt a pain that I never before or since felt,” he said. “It wasn’t physical and it wasn’t internal. It was like being forsaken, that’s the only way to describe it. I remember crying out and hearing nothing, and it was utter impermeable darkness. It was basically separation completely from the divine, and then coming back with God’s arms around me, and an overwhelming sense of peace.”

Wiens had no grasp of how long he was in the abyss, he says, but eventually he emerged. “I woke up into a dream, knowing it was a dream,” he said. “I knew I was hurt bad.” REM sleep is not possible under deep sedation, but the induced coma had waned and waned. At his bedside, Wiens’s mother asked him what being in the coma was like, and he told her that he dreamed that he
had a missing leg, that his hip was in terrible pain, but that the rest of his body was intact. In the dream he was on a small boat, alone, lost in a vast ocean.

In the first days of his return to consciousness, neither Wiens’s family nor the hospital was prepared to tell him the extent of his injuries. Wiens did not feel pain in his face, as nearly all of it was insensitive, but eventually he asked a nurse, “What’s wrong with me?” The nurse informed him in general terms, and his father later gave a fuller description. “He was upset, but handled it remarkably well,” Wiens’s mother recalled. The severity of facial injury rarely corresponds with the difficulty of psychological coping; someone with a small disfigurement can be far more devastated than someone with overwhelming mutilation. In some cases, patients are euphoric.

Wiens told me, “I was pretty stoic about it, realizing that I had experienced worse.” He had started drinking when he was twelve; the narcotics came soon afterward. “I cared about nothing and nobody. It was like that with my family, too.” But after his injury he appeared to be changed: he was still stubborn, still restive, but he seemed to possess a new inner calm. “He had to learn how to be patient with others and himself,” a nurse recalled. After his religious experience, Wiens embraced the faith that he had spared. “I could never deny His existence,” he told me. Years earlier, when his daughter, Scarlett, was endangered during childbirth, he had prayed in a fit of anger. “I remember crying out to God that I hated, begging Him not to take my daughter,” he said. Now, it seemed, he had been spared, too. One day in March, Wiens’s grandmother found him listening to Christian music. He told her, “I am putting some good things to mind.”

After weeks of psychological preparation, Scarlett, now two years old, was brought to him. Avoiding his face, she grabbed his hands and exclaimed, “Daddy’s hands!” Wiens wept, thankful that he had no tears that she could see. “One time, he just mourned for everything that was up ahead of him,” the nurse said. His other brother, David, said, “He called me and told me, ‘I need you to come,’ and I rushed up to the hospital. And he kind of broke down: I don’t want to do this anymore, I don’t want to keep fighting. This is bullshit. My life has been so miserable to begin with, and I really don’t have any reason to come out of this.’ I was sobbing, and I said, ‘Don’t give up on this.’ And the next night I went to see him, and he cleared the room, and he said, ‘That was really wrong of me. I’m sorry I put you through that. I’m not going to die. I’m fine.’”

In fact, Wiens began telling people that he would not undo his injury; he had lost his face, but he had found family, religion, and a way to become a better person. “God took my whole life and gave me a new one,” he explained. One day, shortly before being discharged, he told Arnoldo, whose initial predictions had been so dire, “Everything that you told my family that I would never do I’ve done. Tell me, what else can’t I do, so I can go ahead and get those out of the way.”

Wiens moved into his grandparents’ home in May, 2009, and slowly began to practice walking, talking, and eating. He struggled to adjust to his blindness, and to build a relationship with his daughter. The reconstructed tissue was sometimes tight, and it restricted his movements, but some nerve endings appeared to be reviving. Wiens could taste, a little. Mostly, he felt grateful to be alive. He even wondered if he should turn down the prosthetic mask. His grandmother, who had helped raise him, referred to the reconstruction as his Melon Face. She told me, “I loved Dallas from the moment he was born. I learned to love that Melon Face. I could read it.”

When Wiens sometimes argued with her, she would turn to him and say, “Don’t look at me like that.” He told me, “It always struck me as funny, because I knew I wasn’t making any facial expressions, but she could tell exactly what I was thinking, whether it was skeptical, quizzical, or glaring. She was right pretty often.”

That October, the American Society of Plastic Surgeons held a conference in Seattle, and Janis was invited to join a panel called “The Greatest Saves,” in which surgeons present their accounts of lifesaving operations, and the audience decides which one is the medical feat of the year. When Janis guided the audience through Wiens’s unexpected recovery, they were deeply moved, and voted him the winner. The victory spoke to Parkland’s exceptional care and ingenuity, but it also raised a disconcerting question: What did it mean that the year’s greatest achievement in facial reconstruction was for a man who no longer had any semblance of a face?

One of the other nominees on the panel, a surgeon named Bobchan Poma- hac, from Boston, argued that the field could do much more. Poma-hac was frustrated by the limits of reconstructive surgery, and he explained how he had begun
to think differently. His patient, a Vietnam War veteran named Jim Maki, had fallen onto the electrified rail of a T line, and had been left with a cavernous hole where his nose had been. Pomahac knew that rebuilding Maki’s midface was impossible, and he considered prosthetics inadequate. Still, he believed that there was an alternative; couldn’t he transplant the missing features from someone else? In the days of Leo Loeb’s “Biological Basis of Individuality,” the notion would have seemed impossible, but many breakthroughs had been made in transplantation; the first successful kidney transplant, performed in 1954, proved that “individuality” was far more permissible than Loeb had believed.

Pomahac eventually removed the nose, cheeks, and hard palate from a patient who had died of heart failure and sutured them to Maki’s face. This was the second time a partial face transplant had been tried in America; only half a dozen had been performed anywhere. The presentation concluded with a slide of Maki, just after the operation, standing calmly in front of a hospital exit, looking scarred and a little swollen but otherwise whole. Beneath the image, Pomahac had written, “Not life saving, but life giving.”

After Pomahac’s talk, Janis ran up to him and said, “I think I have a patient for you.”

Pomahac smiled and said, “I might be able to help.”

Janis, unable to contain his excitement, called Wiens. Here was an unimagined medical option, a procedure that would give him a new, living face. “Dallas,” he said, “I think I’ve seen a glimpse of the future.”

When I began to look into face transplantation, a surgeon I knew told me to read Tom Wolfe’s “The Right Stuff.” The procedure was “frontier surgery,” he said—perhaps the final horizon in a field that is being surpassed by genetics and other, more exotic disciplines. A face transplant requires teams of twenty or thirty doctors, from specialties as diverse as immunology and prosthetics, operating for up to twenty hours—and, like a lunar rocket launching, it results in a public event of demonstrable technical bravura.

“You couldn’t have a good surgeon who didn’t believe in the concept of the hero,” a doctor told Joan Cassell for her 1991 book on the culture of surgeons, “Expected Miracles.” Several years ago, The Lancet asked the surgeon who conducted the first face transplant, a French doctor named Bernard Devauchelle, if he had a mentor. “I am an autodidact,” he said; the historical figure he most identified with was Sir Edmund Hillary, “because he was the first man to conquer Everest.”

Bolohan Pomahac is this country’s leading specialist in face transplants. A tall, quiet-mannered man, forty years old, with neatly trimmed hair and a goatee, he works at Brigham and Women’s Hospital, in Boston. He grew up in the Czech Republic, in the city of Ostrava, not far from Poland and Slovakia. After graduating from medical school, in 1996, he flew to the United States with savings from a small temp agency that he ran while studying. One afternoon, he showed up in the office of the Brigham’s chief of plastic surgery, Elif Eriksson, and asked if there was any research he could do. Pomahac did not speak English that well, but Eriksson thought that he had the attributes of a good surgeon: precision, ambition, and a willingness to push the limits of what is possible.

Eriksson had told Pomahac that there were no jobs available, but he gave him a tour of a laboratory and told him he could observe for the day. That evening, Pomahac returned and said that he was willing to work for free. “I’m not certain I want you to do that,” Eriksson said, and found money to give him a small stipend. In eight years, Pomahac went from researcher to associate director of the Brigham’s burn unit. He liked the restorative ethos of plastic surgery. Other doctors fought illness by removal: excising cancer, or debriding charred muscle and bone. Plastic surgeons rebuilt. “I always tell my patients, ‘We are the good guys,’” he said. “After the other doctors leave, we’re the ones who try to help the patient be functional and live a normal life.”

By the time Pomahac began going into the O.R., reconstructive surgery was able to accomplish remarkable things: doctors could stretch out skin on a patient’s arm, sculpt it into a nose, and move it to the face. But these procedures, done in multiple rounds, could be emotionally trying for the patient, and the results—though vastly better than the injury—rarely looked natural. Pomahac showed his wife reconstructions that he was proud of, and she said, “Are you kidding me?” He realized that his standard of success was biased by the limits of his field; a pair of lips built from another kind of skin would never look like the original.

“When you get out of that mental silo, you think, God, this is really not good enough,” he later told another doctor. “I wanted to beat the odds that patients could not get any better.”

Pomahac’s efforts took him to the frontier of a medical field that had only recently been settled. The transplants that are commonplace today—kidney, liver, heart—have been performed
clinically for no more than thirty-five years. The protocols for them took years of aggressive trial and error to develop, with hundreds of patients suffering immensely, and yet scientists still do not fully understand how the body accepts foreign grafts. More than a third of all kidneys from deceased donors fail within five years, and more than half of all lung transplants. Recipients of organ donations are prone to serious health problems, from diabetes to cancer, and some are considerably more likely than their contemporaries to die within ten years.

The reason for these problems is straightforward: to get a patient’s body to accept foreign tissue, doctors must cripple the immune system just enough to allow a transplant to thrive but not so much that the patient dies. Lifelong regimens of powerful immunosuppressive drugs are administered to subvert the body’s internal defense system—the impetus to distinguish and defend me from not me. The Holy Grail in transplantation is a breakthrough that would induce the body to regard a foreign organ as its own. Some scientists speak of attaining “chimerism,” named for the mythical Chimera, which Homer described as “a thing of immortal make, not human, lion-fronted and snake behind, a goat in the middle.” If the Chimera’s easy hybridism could be clinically attained, then organs could be exchanged among patients without a biological price. People could be rebuilt like puzzles.

Many surgeons have long believed that until human chimerism, or something like it, is possible transplantation should be limited to vital internal organs, like the heart and the lungs, for anything else, the biological price would be too high. Throughout medical history, exotic grafts—arms, legs, even heads—have either been a thing of the imagination or calamitous experiments. Around 300 A.D., Sts. Cosmas and Damian are said to have transplanted the leg of an Ethiopian gladiator to a Christian bell-tower keeper, but the story is more legend than historical account. Transplanting composite masses of different tissue—muscle, nerves, bone—especially if they included skin, was particularly challenging; many surgeons were convinced that skin, which protects the body from the outside world, is the most antigenic tissue, meaning the most inclined to trigger a strong immune response if grafted onto a foreign body. In the First and Second World Wars, doctors attempted to transplant skin onto wounded soldiers, but the recipients’ bodies quickly destroyed the grafts. In 1964, a doctor in Ecuador attempted to transplant a hand using immunosuppression that had worked for kidneys. The results were disastrous, and after two weeks the hand had to be amputated. It took the discovery of cyclosporine, a drug derived from an unusual fungus found in Norway, for surgeons to seriously consider performing a composite-tissue transplant again. Cyclosporine targeted parts of the immune system that attack grafted tissue, leaving the rest more or less intact. In 1981, not long after its discovery, a professor at the University of Texas suggested in The New England Journal of Medicine that it would soon be possible to transplant limbs; the drug, he hoped, would cause Cosmas and Damian’s miraculous surgery to “become a fait accompli of the modern medical practice.” In 1998, doctors at the University of Louisville demonstrated that limb transplants in large mammals were possible with low doses of cyclosporine. By then, the only real obstacles preventing a return to the 1964 surgery were ethical: would it violate the Hippocratic oath?

The doctors at Louisville wanted to perform a hand transplant, but an international team based in France beat them to it. “I had this dream—I wanted to be first,” Jean-Michel Dubernard, a French surgeon who led the team, told me. As a young doctor, he had studied at the Brigham, under the surgeons who had performed the first kidney transplant. Known to friends as Max, he has a flamboyant manner and a reputation for brilliance. He conducted one of the first pancreas transplants, developing a new technique that was later widely adopted.

The team settled on a middle-aged patient from New Zealand, Clint Hallam, who told them that he had lost his hand in an industrial accident. A psychiatrist working with the surgeons declared that he had a “strong constitution and solid resolve,” and recommended him as a candidate. Twenty-five doctors would be involved in the operation; nonetheless, Hallam was facing a medical abyss. The surgeons could not predict how he would react, physically or psychologically. They told him that the odds of the hand’s success were as good as flipping a coin.

“There was still the ethical objection to putting someone on potentially life-threatening immunosuppressants for a ‘quality-of-life’ operation,” one of the surgeons later wrote. “However, one may argue that such operations are already routine—kidney and pancreas transplants are done so that people do not have to endure a lifetime of dialysis or insulin injections and are not in themselves lifesaving.”

The argument was not especially convincing. Most people with one hand can live independently, but people on kidney dialysis typically die far sooner than recipients of transplants. Hallam’s surgery was clearly experimental, but at least, in the event of failure, the hand could be removed.

The operation took place in September, 1998, and lasted fourteen hours. The donor, who had died in a motorcycle accident, was bigger than Hallam; his forearm was longer and wider; his skin was lighter, pinker, and less hairy. But when Hallam first saw the result he told his doctors, “My hands back. It’s almost like I’d lost an old friend years ago, and suddenly it’s back.” Within months, nerves began to show signs of regeneration. Sensation returned, expanding a few millimetres per day from forearm to fingertips. Eventually, Hallam could write, hold a phone, and eat with a fork and knife. But after he was discharged, in December, he became elusive. News broke that he had lied about his injury; it had happened while he was serving time for committing fraud. Then Hallam stopped taking the immunosuppressive drugs. He told reporters that the medication had made him feel nauseated and lose weight, that he experienced flu-like symptoms, and that an independent doctor had recommended he go off the drugs to allow his immune system to fight the infection. His doctors believed that he was psychologically troubled. Dubernard said
that, after one of his other transplant patients met with the Pope, Hallam went to Rome, hoping to get his own audience; he was refused, and became more fixated on having the hand removed.

Once Hallam stopped immunosuppression, the hand became swollen and red; tendons calcified, making it virtually immobile. He covered the hand, so that neither he nor anyone else could see it. "I've become mentally detached from it," he told a reporter. "As it began to be rejected, I realized that it wasn't my hand after all." He begged his doctors to amputate, they resisted, urging him to reconsider. They provided him with free immunosuppression, but when it ran out he made no effort to find more. The rejection returned in force, and Hallam called one surgeon to plead, "Help, I want it off." His doctors finally agreed—although some of them blamed him for the failed procedure, calling him a con man and a psychopath. In February, 2001, they removed the hand.

For skeptics, Clint Hallam's operation appeared to confirm a grave suspicion: composite-tissue transplants were about surgical heroism at the cost of good medicine. But a small community of researchers interested in face transplantation watched the surgery with enthusiasm. For anyone who thought that a limb could never be transplanted because skin was too antigenic, the operation was a breakthrough. "Clint Hallam caused me to question that dogma," Peter Butler, a surgeon at the Royal Free Hospital, in London, told me. "It gave me the idea that you could potentially move the procedure to the face." By 2002, ten hand transplants had been conducted, none with Hallam's complications, and Butler and a colleague broached the idea of a face transplant in an article for The Lancet. Soon afterward, doctors in the United States, France, Spain, and China were racing to do one.

Among the competing surgeons and their critics, there were threats, accusations of plagiarism, and sore feelings. Journalists, meanwhile, rushed to discover the identities of potential patients. When the London tabloids picked up the story, they were filled with references to "Face/Off," the film in which John Travolta and Nicolas Cage, as an F.B.I. agent and a killer, have their faces surgically exchanged and switch identities. Face transplants were portrayed as cosmetic surgery in extremis. "SWAP YOUR FACE," the Daily Express blared. A proponent of the surgery told me, "Everyone had the Nicolas Cage 'Face/Off' point of view," even though studies indicated that, because bone structure played a large role in facial appearance, recipients of face transplants would not look like their donors.

Amid the frenzy, the Royal College of Surgeons of England decided to adopt the procedure. People with facial disfigurement were already wrestling with questions of selfhood and self-worth; some had immense psychological challenges ahead of them. What did it mean to put them through a radical operation that might alter their identity in unknown ways? What were the chances that a face transplant would even function as expected? Could desperate patients balance the risks and give informed consent? What if a recipient refused his immunosuppression, as Hallam had? Or what if the transplants failed—say, at the rate that lungs did? A face could not be amputated like a hand. Doctors who were asked about the consequences of failure were blunt. "Absolutely terrifying," one told a reporter. Another said, "Too horrible to imagine."

The Royal College of Surgeons studied the issue for eight months and concluded that it was "unwise to proceed." A French national ethics committee argued that it was "utopian" to think that severely disfigured patients could give "authentic consent," and that lifelong immunosuppressive therapy means that a person who was previously in a situation of major handicap enters into a life-threatening condition. The committee ruled that a full face transplant was not justified. But it did allow that a procedure involving just "the triangle"—the nose, mouth, and chin—"was less likely to risk psychological complications, and could be ethically done if it was clearly presented to patients as a high-risk experiment."

A year later, in 2005, a traumatically disfigured middle-aged woman turned up at a hospital in Amiens, a small city about seventy miles north of Paris. Her name was Isabelle Dinoire, and she lived in a quiet French town near Belgium. One night, Dinoire, who had been suffering from depression, had an argument with her daughter, took a handful of sleeping pills, and collapsed. When she awoke, she reached for a cigarette, but found it impossible to smoke. She had no mouth, no nose. While she was unconscious, her pet Labrador had mauled her face. A pool of blood surrounded her. "I went to see myself in the mirror, and then I could not believe what I was seeing," she later told Noëlle Châtelet, in a book titled "Le Baiser d'Isabelle." She added, "It was too horrible."

Centre Hospitalier Universitaire d'Amiens, or C.H.U. Amiens, is not a large facility, but it accepts hard cases from the area. The dog bite had left Dinoire looking cadaverous; nothing covered her teeth or gums. "It was a terrifying atrocity," one of her doctors told me. Eating and speaking were nearly impossible. Already psychologically frail, she retreated into shock, losing her sense of time, even of who she was. "I cried in despair," she told Châtelet. "I saw no exit." Dinoire later told me that she could not imagine living without a face. "When you have no face, you are nothing," she said. She adopted a cloistered life, leaving home rarely, and only behind a surgical mask.

The chief of maxillofacial surgery at C.H.U. Amiens, Bernard Devauchelle, thought that she might be a candidate for a face transplant, but when he tried to obtain the necessary authorization the hospital's immunologist would not support him. "He was afraid because it was new," Devauchelle told me. Eventually, he reached out to Max Dubernard. In addition to being a surgeon, and an expert on transplantation and immunology, Dubernard was a well-connected politician in the National Assembly; he had experience obtaining approval for radical procedures.

"For me, he was a political man," Devauchelle told me. "But when he came here he was a doctor. His first question was 'Can I see the patient?' And he had the same reflexes we did." After evaluating Dinoire, Dubernard said to the other doctors, "It is evident: here was a patient whose life had been devastated. He told me, 'As a doctor, I had this way of thinking: if she was my daughter or mother, what would I do?' The debate about medical ethics suddenly faded into abstraction, and the
team began to seek authorization, emphasizing that Dinoire's situation was "an emergency." Her scar tissue was tightening, causing her wound to become more pronounced. Her face was edging.

The doctors decided that Devauchelle and his team would perform the surgery; then the patient would be flown to Dubernard's hospital, in Lyons, where his staff would monitor the immunosuppression. Iaving experienced the paradox of media interest in Iallam's operation, Dubernard tried to control it with Dinoire by inviting cameramen into the O.R. to document the procedure. The doctors had her sign a consent form, twice. After the surgery, in November, 2005, photographs were sold to Paris Match. (The proceeds went to the patient.) Though Dinoire's eyes were obscured in the photos, enough was visible to identify her; later, at a press conference, she seemed overwhelmed. Her nerves could not yet command the face, which was still swollen. Her lips were inert. A month after the operation, Dinoire read that a British newspaper had identified her donor—a middle-aged woman from a nearby town, who had apparently committed suicide by hanging. "Somewhere, we were connecting," Dinoire later told Châtelet. "It is strange to know that she wanted to die like me. Strange to know it is she who saved me."

Intense criticism followed. Plastic Reconstructive Surgery published an article asking whether Dinoire had been exploited. Had the procedure been managed ethically, given the spectacular publicity? Could she cope psychologically? Dinoire's surgeons responded with a florid defense, comparing themselves to Galileo, Copernicus, and Darwin, who had been attacked for their daring. They criticized reporters for identifying the donor, and argued that declining to operate on Dinoire because of her psychological fragility would have been the most damnable form of ostracism. Three teams of psychiatrists, they said, had judged her a good candidate.

Two months after Dinoire's surgery, the team was invited to a conference in Arizona on composite-tissue grafts. Devauchelle was reluctant to go, but several prominent attendees were welcoming. "The French team acted very responsibly and carefully," Sir Roy Calne, a pioneer in the field, said at the conference. Joseph Murray, who won a Nobel Prize for his work in transplantation at the Brigham, agreed. "Once a surgeon has reflected on all surgical, ethical, and moral aspects and arrived at a decision, it is counterproductive to second-guess," Murray said. "In fact, indecision can be destructive."

Not long ago, I went to see Devauchelle in Amiens. Given the way he had appeared in print, I expected him to be overbearing, so I was surprised when I met him: small-framed, thin, with a wave of autumn hair, he had the weary manner of an aging bohemian. His desk was surrounded by primitivist art works; there was no computer. He wasn't wearing socks and, under his white coat, he wasn't wearing a shirt. When I asked him about his comment to The Lancet about Edmund Hillary, he smiled as though he were embarrassed. "When I was younger, I climbed a lot—it was a passion for me," he said in a deep voice, softened by smoking.

Devauchelle compared plastic surgery to playing the piano, and he spoke of Solzhenitsyn's "Cancer Ward," which had inspired him. "What does a face mean?" he said. "Be careful. Lots of philosophers and artists speak and write of the significance of the face. It is provocative, but I am not sure. For me, the face is exactly like an organ. It is no more, no less. There is the heart, liver, brain—and the face. Everyone is looking for truth in the face. For a surgeon, it is skin, tissue, muscle, blood."

Devauchelle's breakthrough, and the notoriety that came with it, seemed to weigh heavily on him. Standing in his office, smoking a cigarette, he told me that a woman had come to see him with her daughter, who had a traumatic facial injury. "The mother said, I want to give my face to my daughter," he told me. "And I had to explain. He took a drag, coughed, and shook his head. "It is quite a burden," he said.

One of the surgeons who took part in the transplant, Sylvie Testelin, joined us in the office. She had become a kind of guardian for Dinoire, who was now very attached to the hospital, visiting often. Testelin urged her to use the surgery as a chance to turn her life around, to grow, though she was uncertain that Dinoire really wanted to change. "Until the end of our lives, we will bear this responsibility," she said.
“It’s not so easy,” Devauchelle said. He took another drag.

Testelin thrust her hands into the pockets of her white coat, leaned against a wall, and said, “It is the best and the worst.”

III

It is hard to imagine a hospital more different from C.H.U. Amiens than the Brigham, a sprawling, super-modern facility affiliated with Harvard. One of its entrancesways opens into a multi-story atrium; there are flat-screen TVs along the walls. The main hallway, called the Pike, is decorated with a series of large portraits by Yousuf Karsh, titled “The Healers of Our Age.” For two decades, the Brigham has ranked among the best hospitals in the country.

As a young reconstructive surgeon, Bohdan Pomahac did not specialize in transplantation, but after Dinoire’s surgery he went to see Elif Eriksson to make a case for trying a face transplant. It turned out that Eriksson had been pondering the procedure since 1990, but, aware of the ethical questions, decided not to pursue it. Years earlier, the Brigham had taken wild chances in innovation under Francis Moore, its legendary head of surgery, until Moore began advocating caution in the latter half of his career, warning that “the surgeon should be aware of the fact that patients threatened by severe illness display a surprising and sometimes alarming readiness to accept uncertainty and reach out for something new.”

Still, the news of the French breakthrough provoked Eriksson to reconsider. Not long after Dinoire’s surgery was announced, he met Joseph Murray, who told him that the controversy was no different from the one that he experienced after performing the first kidney transplant. “That was an eye-opener,” Eriksson told me. “I started to think about it, and said to myself, ‘He’s right.’” By then, the medical establishment was gradually changing its view; as one former critic later noted, “This is not like taking Viagra or getting a mole removed—that’s the wrong framework.” In 2006, the Royal College of Surgeons released a second report, tempering its position. “There was more information,” one of the authors explained to me.

Encouraged, Pomahac worked to gain approval from the Brigham’s Institutional Review Board, which oversees experimental surgery for several hospitals in Boston. As a teen-ager, he had played competitive chess, and he approached the I.R.B. by moving in tactically precise increments. He proposed that the operation be approved only for patients who already had an organ transplant and were taking immunosuppressive medication.

“It would be the perfect candidate, because you do not add that necessary controversy,” he told me. He knew that the chances of finding such a patient were small, but he thought that if the hospital would agree to the procedure under these circumstances he could begin to broaden the parameters.

In May, 2007, the I.R.B. approved the protocol, but, as expected, finding such a patient was difficult. Moreover, the hospital was concerned about funding; the surgery would be expensive, and it was not clear whether the cost of lifelong immunosuppression, which can be as much as ten thousand dollars a year, would be covered by insurance.

Eriksson had an idea: to invite Max Dubernard to speak at an event that hospital administrators would attend. “I thought that it would be a shot in the arm to the whole transplant suggestion,” he told me. Dubernard gave a dramatic talk, showing images of hand-transplant recipients playing pickup sticks and threading a needle, and of Dinoire buying produce. During a dinner that evening, he pointed to the chief of surgery, and said, “You have to support this. This is the new frontier.”

Although the I.R.B. had approved the procedure in only a limited way, Pomahac wanted to practice and learn more. He and another surgeon flew to Brussels to meet with Devauchelle and other members of the team that had operated on Dinoire. After studying the case histories of potential candidates, the team decided that Jim Maki, the Vietnam vet, was the most suitable, and then practiced his surgery on a cadaver.

“We were exactly in the same spirit—the same honesty, the same willingness,” Devauchelle told me. One evening, the French team invited the Americans to dinner, where they planned a surprise: they had secretly invited Dinoire. She socialized comfortably, ate with ease, even stepped out to smoke with Devauchelle.

“She was, at that point, three years out,” Pomahac recalled. “She had no problems communicating. She was talking, smiling, drinking from a glass. All of that was unthinkable, and when she arrived at the restaurant nobody even noticed her.”

After dinner, Pomahac told his colleague, “This is it.” Any lingering doubts were gone. In 2008, the Cleveland Clinic conducted a partial face transplant, and the Brigham’s I.R.B. agreed to expand the protocol to patients who were not on...
immunosuppression. In 2009, a donor became available for Maki: a man who had died while waiting for a heart transplant. By chance, ABC’s “Boston Med,” a reality show, had been following his story. After Maki’s successful surgery, an episode aired about the two patients’ connected lives.

Pomahac secured a $3.4 million grant from the Defense Department, and began looking for another candidate. When Janis told him about Wiens, he was cautiously interested. Wiens would require a groundbreaking operation: a full-face transplant, something that had never been done before. But his injury had devastated many critical nerves and blood vessels. “I was thinking, Oh, my God, there is nothing left—the whole face is gone,” Pomahac told me. “This is probably not the right patient.”

When Wiens was discharged from Parkland, his grandparents decided that they would divide the work of caring for him. Sue Peterson would help raise Scarlett. Del Peterson, his grandfather, would help with hospital matters. Sue and Del had spent their lives aiding relatives. One afternoon, Del showed me a yellowed photograph of his family’s farm in Oklahoma. In 1979, a tornado ripped through it, throwing his mother and his niece out of the house. His niece was killed, but his mother survived, and so Del and Sue moved to Oklahoma to help rebuild. Later, after resettling in Texas, the Petersons helped raise their grandchildren.

In early 2010, Wiens flew to Boston with Del to be evaluated by Pomahac’s team, but he still did not know if he truly wanted the procedure. “One of my concerns was: Am I putting myself under the knife with the knowledge that I might not wake up?” he told me. “I had just gone through life and death to get where I already was. Am I tempted fate?”

There is no standard protocol for face transplants. One surgeon in Paris, who has done seven, tells prospective patients that they might die in the O.R. Pomahac believes that this is excessive, but the Brigham worked to communicate the grave long-term uncertainties. If the face failed in ten or twenty years, Wiens would require another round of reconstructive surgery. The risks associated with immunosuppression, from cancer to kidney damage, would be constant. Because Wiens was blind, he would have to rely upon others to monitor signs of rejection. The hospital enumerated the dangers so aggressively that one day Wiens told Pomahac, “It sounds like you’re trying to dissuade me.”

In truth, Wiens was not so preoccupied with the long-term risks. “We had become very comfortable with what he had,” Natalie Czirraski, a nurse at Parkland who later became his closest friend, told me. “He was like, ‘I don’t know. What would that be like?’” His family looked up face transplants, and described them to him; some of the results looked less than natural. “I think he was a little hesitant about the cosmetic aspect,” she said. “I don’t think he ever considered the medications a deterrent.”

After months of deliberation, Wiens opted for the procedure. “I had grown almost a liking for the face,” he told me, referring to Janis’s reconstruction. “It was just part of who I was, but I knew it was eventually going to change—either with prosthetics or by a face transplant—and I think what really made me go with the transplant was sensation. I had no sensation. With prosthetics it would be no different, except for what other people saw, and for me what other people saw didn’t matter. I couldn’t see, so I couldn’t judge how they looked at me— and I did my best not to judge anyone by that point. What they saw wasn’t me; it was just a mask that I wore, just like their faces were masks that they wore. So I considered: do I go for prosthetics, which will be easy, or sensation, which will be hard? And, when it came down to it, what I had already gone through was impossible, not hard.”

Sue Peterson told me that Wiens had also been thinking about his daughter. “He did not want to make children shy away,” she recalled. “One of the issues for him was that as Scarlett got older, and as her friends got older, he did not want to be a freakish-looking person and have her friends be afraid of him.”

Because Wiens had received so many transfusions at Parkland, his body had built up an antibody response to more than sixty per cent of donor tissue. A transplant containing any of this tissue would be destroyed instantly. “It’s not going to be an easy thing,” Pomahac explained. Still, Wiens was convinced that he would be in the O.R. by Christmas—so much so that his family held Christmas early so that he could spend it with his daughter. “Then it didn’t come,” his grandmother recalled. “And I think he started losing hope.”

Wiens told me that the procedure just slipped his mind, until the spring, when he got a call while playing a computer game for the blind. It was Pomahac. “Hey, Dallas,” he said. “How’s it going?”

“I’m doing pretty good,” Wiens said. “I just want to let you know that we’ve identified a donor,” Pomahac said. There was silence on the receiver. Wiens thought he might be dreaming.


Pomahac described the donor’s appearance. “This is like winning the lottery,” he said. He did not give details—organ donation is typically anonymous—but the patient was significantly older, in his late forties. “How do you feel about that?” he asked. Wiens agreed at once to the surgery—he didn’t want to risk more waiting—and Pomahac told him to fly to Boston as soon as he could. His grandparents rushed to help him pack and prayed they would not hit traffic. Del would go with him; Sue would watch Scarlett. Wiens’s parents rushed to the airport, too, and just before he entered security his mother hugged him. “You know what?” she told him. “I just hope that my new son is just as handsome.” Then she patted his face and kissed him goodbye.

“Mom, just remember one thing,” he told her as she pulled away.

“What?” she said.

“The old Dallas died when I hit that line,” he said. “My body is here, but the old Dallas died.” He was telling her that it would be O.K. if he looked different; the injury had already reshaped him into someone new. Then, guided by his grandfather, he shuffled into the crowd and out of reach.

What can be said of Wiens’s donor?

He was a good man, a shopkeeper, a pillar of his community. He was a misanthropic sculptor who spent his life in a remote cabin. He was a hitchhiker, a
drunk, a violent criminal. He had a heart attack in a church pew; or maybe life slipped from him during a car accident, or while he was saving a drowning child. He passed away in his sleep—alone but not lonely. He was never alone; even on his deathbed, his wife and children were near.

There are many reasons for the secrecy around organ donation, among them the emotional complications—what the anthropologist Lesley Sharp calls "biosentimentality"—that follow when one person's tissue is sutured into another's. Some donor families seek a relationship with "their" recipient. Many others opt for privacy. Even conventional organ donation carries questions of personal identity and cultural anxiety. One healthy donor can save as many as eight people, and help dozens more, but less than half of us agree to part with our organs in death. Given that thousands of people die from a lack of organs, this might seem tragically irrational. But reason has limits: a heart is also your heart.

Pomahac approached the New England Organ Bank early in his effort to set up a face-transplant program; the normal consent given on a driver's license would clearly not suffice. When he presented his case to doctors on its board, he was met with impassive expressions. They were concerned that his team would get in the way of surgeons who were procuring lifesaving organs. Pomahac agreed to observe the procedure, to see how he could be unobtrusive. The board asked: What if, in the process of removing the face, the donor's condition became unstable, risking the loss of a heart or a kidney? "Well stop," Pomahac promised. He told me that, after one of their meetings, "the president took me aside and said, 'There is something about you that makes me want to help.'"

Pomahac is a master of persuasive sincerity; once at a press conference, Pomahac was announcing a face transplant for a woman named Charla Nash, who had been attacked by an ape. "To us, she is not a woman who was mauled by the chimpanzee," he said. She was a sightless person who once had no nose but now could smell; a woman without a palate who could now eat a hamburger. Before the operation, he explained, Nash had decided not to attend her daughter's high-school graduation. "We know it broke her heart," he said, looking down at the lectern and becoming visibly emotional.

Pomahac was commuting to work when he heard from the New England Organ Bank about a potential donor for Wiens, at a hospital a short flight from Boston. (To protect the donor's identity, the organ bank insists that the hospital's name and location remain secret.) At first, it was unclear whether the donor was appropriate. "Most of the time, it doesn't go forward," Pomahac told me. But blood and tissue samples were flown over, and tests indicated that he was a viable match. Suddenly, intense planning was required: a team would go to the hospital where the donor's body was being kept alive; another, at the Brigham, would begin preparing Wiens for the graft.

"As the day evolved, there were a lot of things that made it extremely stressful," Pomahac told me. A key member of his team—a surgeon who had worked on Maki—in Aruba, which meant that Pomahac would have to remove the donor's face, the most challenging part of the operation, with someone new to the procedure. In a way, Pomahac was new to it, too. He had never done a full face transplant. "Even though I had practiced it on a cadaver, it was something I did a long time ago," he recalled.

Pomahac arranged a late-night flight to the other hospital, giving him the day to work out details. Eriksson, who had experience with neck surgery, would join him for the "recovery," as the removal of the donor's face is called. He invited Janis, the surgeon who had first operated on Wiens; Janis had never performed a face transplant, but he knew Wiens's facial anatomy well.

At 6 p.m., the organ bank called: a team of surgeons from another hospital—I will say from Hartford—needed the donor's liver. Pomahac would have to begin two hours earlier, and would have only an hour in the O.R. The math was stark. For Jim Maki's partial face transplant, the recovery took six hours. Here Pomahac would have to remove far more tissue in a fraction of the time. He considered cancelling Wiens's surgery. "I told them, 'I understand the need for a lifesaving organ, but that's really not possible,'" Pomahac recalled. "I said, 'I don't think one hour versus a few hours will make a difference. Can we get three hours?' They said no."

Desperate to find an alternative, Pomahac called the lead surgeon in Hartford to plead his case. "I told him I would respect his opinion, but if he was not able to give us a little more time we would have to drop everything. He said, 'Yeah, our patient has been sick for a couple of days. We can give you a couple of hours.'" Pomahac returned to his team. Could a face be dissected in only two hours? "We decided to give it a shot," he recalled. "At
that point, Dallas was on the way." The new schedule meant more changes. Janis could not make the flight—shifting the recovery team further—and instead would come to the Brigham to observe the surgeons there. Around 9:30 P.M., Pomahac, Eriksson, and two other doctors boarded an eight-person jet at Northwood Memorial Airport, outside Boston. Private jets are often used to obtain organs, but for Pomahac, a reconstructive surgeon, the experience was unusual; he later said that he felt like an investment banker going to a meeting.

In the airplane, each surgeon retreated to his own thoughts. Pomahac worked out scenarios that the team might face. "I was thinking two or three steps ahead all the time, so I could change the strategy," he said. As the team's leader, he had to consider diverse obstacles: would fog cause Wiens to arrive in Boston after they had returned—a delay that could cause the face to decompose? Eriksson had brought along an old anatomy book that he liked to study before surgeries. Mentally, he rehearsed every step of the operation. "We are surgeons, and we tend to not be nervous when we prepare for something," he told me.

From the airport, an ambulance rushed them to the hospital. The donor's body was waiting on a table in a spacious O.R. The team was glad to see that he had a good-looking face, but was surprised by his size: he was a heavyset man, far larger than Wiens. For an instant, Pomahac wondered if this mismatch was a problem, but he assured himself: it's not the end of the world.

They scrubbed in. "The enormous time pressure was really killing me," Pomahac recalled. Most surgeries move inward from the skin's surface, but when a face is removed layers of tissue are cut away all at once, like the peeling off a banana. During this process, the surgeon must navigate the delicate subcutaneous anatomy—the architecture of nerves and vessels crucial to the face—in reverse. "It is like a mechanic who spends his career under the car fixing engines, and then for the first time he has to do it from above," Pomahac told me.

Pomahac and Eriksson stood on either side of the donor's head. They planned to dissect from the ears toward the nose, peeling the face off radially as they moved toward its center. Just after their first incision, the surgeons from Hartford arrived. "How's it going?" the chief doctor asked. "We're working as fast as we can," Pomahac said.

"So can we scrub in?" the doctor said. "Or do you need more time—understanding that we can't give you much?"

"Ideally, we would need six hours," Pomahac said. "But I realize you can't give it to us, so whatever you feel comfortable giving."

The doctor called his hospital and told the Brigham surgeons that they could have another hour. Pomahac and Eriksson kept working. In an hour, they removed a quarter of the face. "We realized that there was no bloody way we could get it done in three hours," Pomahac told me. Eriksson was dissecting a parotid, a large salivary gland in the cheek. The Brigham's face-transplant team typically doesn't take the donor's parotid if the recipient's is functioning; the redundancy makes the face look wider. But Pomahac and Eriksson knew that the left side of Wiens's face was indented from his injury, and had decided to use the gland to fill the indentation.

About three hours into the operation, the doctors from Hartford returned and stopped the donor's heart to begin the process of removing the liver. Without blood, the facial tissue would survive for no more than four hours. "The clock started ticking," Pomahac said. He and Eriksson had dissected about two-thirds of the face. "We tried as fast as we could to finish. Instead of working toward the nose, they began working from top to bottom. The change—one that Pomahac has since made routine—allowed them to see more easily, especially the complex anatomy of the neck. "At one point, I was wondering, Am I crazy?" Pomahac told me. "Is it even worth it, to put myself in such a situation? I could have had a heart attack."

Eriksson told me that during intense surgeries he silently repeats a mantra: Please concentrate here. Don't make any errors, because there is no room for errors. As the senior surgeon, he encouraged Pomahac not to worry about the other doctors, the deadline, and the unforeseeable complications, and simply to focus. By the time they finished, they had less than three hours to attach the face to Wiens. "We were running out of time," Pomahac said. The face was put into an iced-filled blue cooler—the kind you might buy at Sears—and the ambulance rushed back to the airport. Again,
Pomahac began to play out scenarios. He and Eriksson had removed everything they could, and it would be enough. But, because the donor’s heart had been stopped, it would not be apparent if blood vessels were nicked in the course of surgery. “Without the blood circulating, you don’t really see the little bleeds,” Pomahac told me. “Even tiny little vessels, when there are a hundred of them, can lead to massive, massive blood loss quickly.”

The pilot altered his flight plan to land at Logan Airport, which is closer to the Brigham. With the face beside them, and the early-morning sky still dark, the doctors hoped to reach Wiens in time. Pomahac said, “It was the biggest stress in my entire life.”

Wiens and his grandfather touched down at Logan at about the same time that Pomahac and Eriksson made their first incision. A team from the Brigham was there to meet them. Wiens was wearing an Obey T-shirt, a hoodie, and jeans, and he had on a flat cap and sunglasses. A beard twisted out from his chin like a question mark. He had a cane in one hand and with the other he held on to his grandfather’s arm. They were ushered into an S.U.V. “At this point, in this truck right now, I’m like, ‘Is this really happening? Or do I wake up?’” Wiens said. A hospital official assured him, “You are really here.”

At the hospital, Wiens was rushed to pre-op and placed on a gurney. Janis was there, and he and another plastic surgeon turned Wiens’s head from left to right, positioning it, while the plastic surgeon drew guidelines with a purple marker. The skin was taut, like a canvas. He drew large circles where Wiens’s eyes should have been. He drew a triangular nose. He took a picture and left.

It was about one-thirty in the morning. As Wiens was about to be wheeled into the O.R., he whispered something to a nurse, who called out, “He would like to see everybody. Come on in.”

“We’re here, Dallas,” Peterson said.

“Where’s Janis?” Wiens asked.

Janis put his hand on his shoulder.

“Me?” he said.

Wiens began to speak. “Because of the medication that they gave me, I don’t know if I can do this without making a mess.” His speech was slow, and he halted every few words. “Every one of you—I guess I can’t,” he said, and then paused, collected himself, and began again. “I will never, in my life, be able to express the undying gratitude, and love, for you guys to usher me into an entire new life, and ‘Thank you’ just doesn’t count.” Wiens paused again, and the sound of medical equipment, a mass of noises forming a single hiss, filled the silence. “It’s my life—” His voice began to waver. His head, scarred and featureless, except for the cartoon of a face that had been drawn on it, seemed terrifyingly vulnerable. The doctors were going to remove the inexpensive container of flesh that Janis had created to house Wiens’s personhood; and yet the room was filled with his emotion, his trust, his gratitude, his anxiety. He was barely audible. His head was still. He whispered, “I will see you all on the other side, right?”

A face transplant is typically a symmetrical process: while one team of surgeons removes the donor’s face, another removes the recipient’s. But, with the face running out of time and Pomahac’s flight already on the way, the symmetry would have to be disturbed. Rather than removing Janis’s reconstruction right away, the surgeons decided to focus on excavating Wiens’s carotid artery, so that the face could immediately be connected to a blood supply. Sewing the face to the artery would be like plugging a dying battery into an electrical socket. Once it was plugged in, it could be set aside, while the surgeons mapped out vessels and nerves and removed the Melon Face.

Like other doctors, Janis was inspired by Wiens’s courage and equanimity. “He’s a guide to me in more ways than he knows,” he told me. After everyone else left Wiens’s gurney, he stood by him, holding his hand. Then it was time to begin. “Off we go,” an anesthesiologist said. “Lucky Room No. 8 is where we’re going.” Wiens was rolled to the O.R., his body wrapped in a heated blanket and supported by a mattress filled with warm water. The procedure would take eighteen hours.

In the operating room, E. J. Caterson, a specialist in craniofacial surgery, worked with another surgeon to expose the carotid. They finished early, and then began to uncover Wiens’s seventh nerve, which extends across the face like a tree, beginning with a trunk near the ear and spreading out in branches. One thing that makes the human face unique is its delicate motor control; nuanced expressions are built from combinations of minute muscle movements, many of them directed by the seventh nerve. Since his injury, Wiens’s had become embedded in hardened scar tissue. The surgeons had to carefully dissect it so that they could connect the branches with the donor’s counterparts. They labelled branches with plastic loops.

By the time Pomahac arrived, it was
after five in the morning, and the crucial four hours that the face could survive unattached had nearly expired. He rushed in with the blue cooler. "Yay!" a nurse cried. "How are you?" Caterson said.

"Stressful," Pomahac said. He walked over to peek at the surgery. "That's fantastic," he said. Then he knelt, opened the cooler, and began scooping ice into a bin that a nurse placed beside him. He lifted out a small Tupperware container with translucent sides and a blue top. It was wrapped in a plastic bag, which was bound with a zip tie. A white tag on it read "Skin graft: Face."

Pomahac looked around, trying to find somewhere to put the face. A nurse wordlessly wheeled over a stainless-steel trolley, and he put the container on top of it. Two nurses offered him scissors. He took one pair, and began to cut the bag. "I guess we can keep it here," he said as he worked. He rolled down the edges of the bag, so it remained open, and then popped open the Tupperware and looked inside. There was another plastic bag, submerged in ice water, and through the clear plastic Pomahac could see a blurry mass of human tissue. He stopped, to avoid contaminating the contents. He had planned to talk with Del Peterson, who had spent the night in a nearby waiting room, but he asked Janis if he could go in his place while he scrounged in.

In the waiting room, Peterson greeted Janis. "Howdy."

"It's good to see you, my friend," Janis told him. "He sat and sketched out the coming hours of surgery, while Peterson, sitting forward, listened without interrupting. "I do think that it is going to be important for you to get some rest," Janis concluded."

"Sounds like doctor's orders, don't they?" Peterson said.

"Well, I've said it to you before," Janis said. "You have to take care of yourself before you can take care of somebody else. Dallas knows you're here. You are with him in spirit. He knows that you love him. Right now he's in good hands, and if you were my dad I'd say, 'Dad, go home and get a little rest.' I'll tell you what I'll do—I can text you, if you've got your cell phone, and give you little updates."

"As far as texting, we didn't get that service," Peterson said.

"I can call you," Janis said. "Good old-fashioned telephone works, right?" Peterson nodded, and Janis asked, "Have you had anything to eat?"

"Well, I ate this morning," Peterson said. "But I don't need a lot during the day. I personally don't. I honestly do not."

"Let me show you a tour," Caterson told Pomahac, who had approached the operating table. They examined Wien's arteries, and Pomahac was surprised to see that they were much smaller than the donor's; blood vessels that had supplied regions of the face which were no longer there had atrophied. The most important blood vessels in Wien's face were in either side of the neck, as the common carotids, and then each divided into an "internal" artery, which directs blood to the brain, and an "external" one, taking blood to the scalp and the face. The donor's common carotid was the diameter of a Sharpie; Wien's was the diameter of a Big pen. "It's at least double," Pomahac said. Grabbing an overhead lamp and wiping the lens to improve the light, he peered into a better look.

"It is generally believed that the arteries are required to sustain a face, but Pomahac told me, "Without any ability to test it, I thought we should be enough—and that this would simplify the recovery."

"We had a backup system if this didn't work," the team could leave the forehead that Janis had reconstructed—the area most likely to fail in place.

Pomahac planned to rewrite Wien's vascular circuitry by routing one of his arteries into the new face. He could not tamper with the internal carotids—the blood flow to the brain was vital. But the external carotids were more forgiving. He decided to connect an artery from Wien's scalp to the donor's facial artery, which was about the same diameter, hoping that enough blood would circulate. The team was going to re-
“triples the cyanide of every seed!”
Gulag Snowblower:

“completely hollow, might be an acquired taste!”
I get a lot of e-mails that say ‘I’ve always wanted to be an apple evaluator.’

Once I cherished the oneness of every apple’s blush, knowing we might never fall into these forms of flesh again.

Now I envy the bees drowsing in their blossoms, drunk on the mouthfeel. For them, there is no distance between the necessary and the good. Why do you keep hitting me when I’m already dead? the detainee asked at the enhanced interrogation.

He wanted to wipe his eyes on mine, but I was busy loading my pockets with apples for the penitential climb.

Sniff, bite, spit. When I offered him the latest hybrid, he said we have a saying: giving it away doesn’t make a thing a gift.

—Alice Fulton

move the skin that had been grafted onto Wien’s head, but not the muscle underneath it, in case the new face failed. If the muscle was starved of blood, a layer of dead tissue would then separate the face from the skull, a potentially fatal outcome.

The doctors decided to attach the face to Wien’s left carotid first. Caterson turned to two doctors mapping nerves and said, “Abort that.” Parnahac walked back to the Tupperware container and gently took the transplant out. His movements were clinical and measured, as if he were handling a delicate piece of art. The face was the same color as his surgical gloves: latex beige, pale, glistening with ice water. It was slightly unshaven, as if the beard had grown in transit. The rubbery-looking skin supported an inch of so of cartilage, vessels, fat, and nerves—a red mash of tissue—beneath it. Spread out in Parnahac’s hands, the face was massive, about the circumference of a hubcap.

In 2004, a surgeon who had been practicing face transplants on cadavers told *New Scientist*, “It is really awesome to lift up a whole face and lay it back down.” Had suspected that during actual surgery the atmosphere would be less conducive to feelings of awe. But when I asked Parnahac about it he seemed overcome. “It is exciting when you transfer the face,” he told me. “It is unreal—I don’t know, a very powerful moment.” Parnahac carefully swivelled from the trolley to the operating table, placing the donor’s face where Wien’s own face had been. “It’s going to go twice around him,” he observed dispassionately. During the dissection, Parnahac had cut the skin far beyond the hairline, to transplant part of the scalp as well. The donor’s hair was slightly lighter than Wien’s—it had some gray in it—and some of Wien’s hair poked out from underneath, as if he were wearing an ill-fitting mask.

As the surgeons wiped the face, the center of it folded in on itself a little. “Can we get a stapler, please?” Parnahac called out. Even though the transplant would be sitting over Wien’s Melon Face temporarily, it had to be secured, so that it would not slip, and so that the artery would be joined at the right length. Some of the tissue beneath the face spilled out to the side, and the doctors gently nudged it back beneath the skin.

“I’m going to staple,” a doctor announced.

“There’s gonna be a little bit of a spasm,” Parnahac said. “Let’s hope so, too.” Once everything was in place, the surgeons prepared to sew the two arteries together. The donor’s facial artery, after hours without blood, was soft and whitish. Parnahac trimmed excess tissue from it. Other doctors cauterized smaller vessels in Wien’s neck, with an instrument resembling a soldering iron. The instrument made a snapping sound on contact, and threw off smoke and flashes of blue-white light. A plastic syringe containing saline was periodically used to wash out the operating area. “That’s a good-looking face,” one of the doctors said as they worked.

Even though the carotid is a major blood vessel, delicate microsurgery is required to sew it. Nurses wheeled over a powerful Zeiss operating microscope, a large machine with eyepieces for two doctors and a jointed armature that supports the lens. Cables ran in and out of its exterior, giving it the appearance of a hybrid mechanism: part air-conditioner, part periscope. The surgeons place a towel over the eyepiece to keep it sterile. With the microscope, they can suture vessels the size of a letter stamped on a penny. Suddenly, instead of seeing the whole operative field, you see a tiny area, and it is a lot more difficult,” Parnahac told me. “You have to know where your hands are without seeing them.” Sewing requires minute shifts of micro-fingers with the fingertips. “Then you have to tie the suture under the microscope, again not using your hands but just with instruments,” he said.

Peering into the microscope, Parnahac pulled out the facial artery again. It stretched and retracted like a rubber band. Referring to the thickness of the suture—a twenty-fifth of a millimetre—he said, “8-0 nylon, please.” A nurse pro-
vided a suture, attached to a needle shaped like an eyelash. Pomahac gripped the needle with the micro-forceps, and two doctors waited nearby, ready to help.

"Let's do this," he said.

Pomahac brought the needle through the arteries and around again. After several minutes, he said, "Four for good luck," making some final loops. He had not eaten for hours. "I'm getting a little hypoglycemic," he said, and then muttered, "Well, let's see. Hope for the best." He double-checked the suturing. "What's his temperature?" he asked. "Because mine is about a hundred and four." A nurse laughed.

The face took on different expressions as it was nudged this way and that. The skin was still pale, covered in specs of dried blood. The hair was short and wet, looking as it might at the end of a workout. One eyelid was open, and the other was folded in on itself—just a slit with the lashes turned inside. It was unclear whether it would ever work; eyelids are among the trickiest parts of a face to restore, but because Wiens was blind it would not matter much. The mouth fell into a frown, the kind of expression one might have at the end of a tiring day. Each twist of the skin reflected the trace of an intelligence that was no longer there.

Pomahac released a clamp, allowing blood to flow into the facial tissue. Immediately, the blood leaked from the nicks that he and Eriksson had made. "Is it holding pressure?" Pomahac asked. Wiens's blood pressure rose and fell, at one point plummeting to a near-fatal level. Pomahac, looking through the overhead microscope, clamped the artery and searched for the nicks. "Right in front of us," he said. It was possible to hear the electrocauterizer burn the little wounds. Snap, a flash of light. "All right," he said. The clamp was removed again. There was still a bit more bleeding, which he suppressed. "More suction," he said.

As the doctors worked, the transplant shifted, twisting the colorless lips into an S curve, giving the face a wry, almost bemused expression. The surgeons were working quickly, moving to stanch the bleeding, and the faintest hint of futility was beginning to appear.

"His lips kind of pinched up a little bit," Pomahac said.

The thin suture glistened like spider silk. The face seemed to hover between sleep and death. Pomahac wiped it and pointed to the cheek, identifying more pinkeyness. "But it's not rapid," he said.

"Well, he was cold for four hours, maybe that's part of it. Let's give him a little time." Excitement grew as patches of the skin became flushed. "This is definitely pink," a doctor called out. Pomahac began to sort through nerves, and then stopped. "I was tied to death—ready to crash," he recalled.

"I'm going to actually step out to the bathroom," he told Caterson. "Is that O.K.?" Caterson nodded, and the operation microscope was pulled aside.

"I would have been worried if you said no," a doctor said, and people laughed. The face, turned sideways, seemed fully sentient. The forehead twisted in a way that no natural face could, but the effect was not jarring, perhaps because movies have made the impossible commonplace a familiar thing: the slow-motion punch, the face distorting into exaggerated ripples, assisted by C.G.I. Having been wiped with a damp cloth, its lips looked as if they had been licked, even though no mouth was attached to them yet. One side of the face rested against the operating table, causing a dimple-like fold in a cheek. Without any will to guide it, the face offered the uncanny image of a man intensely concentrating in a state of sleepy distraction.

Hours of surgery lay ahead. Once the face was connected to both common carotids, it was unstapled from Wiens's head and flipped over onto his chest. It remained there while the doctors returned to the work of removing Janis's skin graft—the Melon Face. "It's kind of a reverse reconstruction," Janis said, and another doctor joked, "I'm a deconstructive surgeon." When the doctors began to match up the nerves, they flipped the face back and forth: on top of Wiens's head and then onto his chest, upside down, to see where the connections lined up. "I have a question," a doctor said.

"The mental nerve on the other side, is it intact?" Pomahac had barely had enough time to take it in. "We'll find out," he said. The operation did not end until the evening. Afterward, Pomahac and Janis went to a Mexican restaurant. Relieved, exhausted, hopeful that the surgery had gone well, they ordered burritos and beer.

**IV**

Wiens felt the weight of his new face. There was no soreness, no pain—he did not yet have functioning nerves—but he could sense the heavi-