

## MAKE IT SING

Moses Nagel

I credit Rudolf Doblin. He was a diminutive German Jew who had escaped Nazi Germany with his wife, Helga, the daughter of an SS Officer. They came to America and found a living from his musical genius and her expansive brilliance; she was a professor of linguistics, speaker of many languages, and a dynamic cellist herself. He served as conductor of the Buffalo Symphony Orchestra and other appointments before they settled in a little cabin (a dacha, almost) in the countryside outside Saratoga. As it happens, just a mile from my parents' homestead.

By 1984, Mr. Doblin was semi-retired and only took on a small number of students whom he deemed to show real promise. It was only because of our proximity and their involvement with my family in a neighborhood group that Mr. Doblin agreed to give me lessons. I was an average student with a lackadaisical approach to practicing. Under his regime of fear and inspiration, I became good enough to be second chair in my school and make the All-State Orchestra, but there was never any confusion that I might someday go to a prestigious conservatory or play for a top symphony like his other students. Still, whether he knew it or not, he mentored me into a lifelong love of music and an appreciation for the world of sound that has become a career for me. This small, rumpled man, with a thick German accent, who only reluctantly listened to classical music on the radio,

## CREATIVE LIVES

because he thought recorded music was an ineffective imitation of real performed music, is the mentor I credit with starting me toward my work: using computers and multimillion-dollar digital audio tools to produce television programs. The connection, as I see it, is in the lesson that he always emphasized about playing the cello: as a cello player, you are a technician. You must, through practice, learn the correct techniques and positions. If your finger is just a millimeter off, you are badly out of tune. However, once you have the technique and position, you must make it sing. This is, I believe, the theme of my work. I am in a technical career. Audio engineers don't build their own preamps anymore, and we don't do much soldering either, but being able to do the job effectively requires a firm grasp on the mechanics. Electrical signal flow, as well as computer savvy, makes the difference between success and “we are experiencing technical difficulties; please stand by.” I came to this work through music, though, and I believe that what separates getting the job done from really nailing it is that last part: making it sing. The part that keeps me engaged is the creativity and improvisation that comes into play once the technical part is in place—or, actually, in my work, the two interplay constantly, not necessarily one before the other.

After working at recording studios and music clubs, the first well-paying job I got, fortuitously, just at the time of my first child's birth, was as a radio engineer for United Nations Radio. The United Nations has a radio service that provides free content in dozens of languages for national radio stations around the world. I was hired because of my knowledge of Sonic Solutions—a digital editing software that I had learned mostly because I was interested in CD mastering (the final 'finishing' process before duplication in the production of music albums). I had paid less attention to the program's appeal as a top dialog editing tool. The UN had recently bought this system, and there was a lot of tension as they made the transition from ¼-inch analog tape reels and vinyl (really!) to digital mediums. The fact that I knew the basics of this program made me useful to them in the transition.

The UN was a place where people stayed for their whole careers. As you might imagine, there was an intense culture and workflow that built up between the producers, the journalists who worked in the different languages of the UN, and the audio engineers who worked in the production studios in the basement under the General Assembly Hall in Manhattan. These engineers had decades of experience and familiarity, so I struggled to learn all the practices and culture of the workflow, as well as learning Sonic Solutions for this specific application. I was the 'digital kid,' but our production was still half analog tape. Unlike the old-timers, who were razor-blade masters, I was barely proficient at cutting and splicing tape. I remember sweating profusely trying to make a complicated edit on the reel-to-reel machine. I had to find the edit point, make a cut, and then spool out several seconds of tape onto my shoulder. Once I found the end of the piece to take out, I had to reattach it. Then, with the piece I'd taken out still on my shoulders, I had to find the new place, splice it in, and wind it into place. With all that done, I rewound to edit point to audition my work, only to hear the new piece play backwards!

With time and experience, the job started to slow down. Soon, I knew the personalities. I adapted to the UN culture. I was interested in the subject matter (although the daily reports about the Secretary General's latest address on the peacekeeping protocol could get tedious), and I liked the work. I started to get really fast and accurate on Sonic Solutions. The great thing about that software was that, although it had a fairly high learning curve, it was remarkably flexible. It allowed for very fast dialog editing, and also, because it was designed for music as well, extremely accurate, and involved cross-fades and mixing. I started to get a reputation for fast and efficient work. As I grew comfortable with the basics, I started to search out methods for adding a little extra. I relished the pieces that used music for color. I loved to back-time the song perfectly so that the relevant lyric would fade up right at the moment the talking stopped. Sometimes there were sound effects to sprinkle in. I helped mesh music

## CREATIVE LIVES

with voice in an interview piece with a man who had been tortured by the military regime in Argentina, which was nominated for a radio documentary award. A producer for the French unit traveled to UN projects throughout Francophone Africa and came back with lots of natural sound along with interviews. We worked together to create a four-part series that presented an immersive and seamless 'journey' through these UN Africa projects and the people and communities that were affected by them. These projects were creative, fun, and gratifying. As a result of my developing ear and creative enthusiasm (as long as it was mixed with technical accuracy), the producers started to compete for time in my studio.

All this is not to give short shrift to the hours of boring repetition. Just as practicing cello is not all beautiful vibrato on an exquisite Mozart sonata, the UN was often hours, or even whole days, of routine editing, counting the time until lunch break and the train ride home to my young children. I am not someone who suffers boredom especially well, though. So my response was two-fold. First I filled the downtime with other projects. When a coworker had a baby, we had colleagues from different countries come in and record a lullaby or children's story to make an international baby CD. I used the studios for music recording and making mix tapes that I would give out for holiday gifts. Yes, I surfed the Web a lot too, but my other technique for fighting the mundane was to make the most out of every opportunity for expression. Even the smallest piece of music or natural sound in a piece could be sculpted and finessed for maximum effect. Now, almost 10 years after leaving the job, those are the most memorable moments.

It is no coincidence that this time was also the beginning of a new family. I got the permanent position when my son was about a year old. Our little trio went from an uncertain future paid for by hustling between live sound and erratic studio work to a weekly paycheck. A good one, too! We bought a house upstate. The hour-long train ride could be tedious, but we had a nice house for my son to grow up in and I was home every evening and on weekends. A few

years later, a daughter joined the mix. Fatherhood was another area in which to exercise creativity. I loved to play and wrestle with my children and to make up serialized bedtime stories, which they loved.

After eight years at the UN, we decided to move out of the commuter orbit of New York City. We bought a small farm in the foothills of the Berkshires, but this was no executive weekend home or retirement. The goal was to have a farm and be far from the City; to find work based on the life we wanted, rather than find a life around the requirements of a job. I did not have a plan for how to make a living with the only real job skill I had.

It quickly became clear that finding work in nearby Troy or Albany, New York, was not going to provide for my family. There were audio jobs, doing live sound or A/V installation, but these were jobs for young, unattached types, not a 35-year-old with two kids and a mortgage. The job at the UN had allowed me to become accustomed to a good salary, benefits, and paid vacations, and although expenses were lower way out in the country, they weren't that much lower.

Through some coincidental connections at the UN, I found my way into the world of live television, mostly sports. The pay was good and there was definitely a boom in the televised sports world. The catch was that the work was all in New York City, Long Island or New Jersey. I started driving the three hours down to work for a day at a time. Sometimes I would get two or three days in a row and stay on a friend's or a sibling's couch for a night or two. I was, suddenly, a freelancer. I scrambled to get my name out to all the regional 'crewers' and networks. I drove late nights to be home to milk the cow in the morning. I would book work and fill up a busy month, only to be home a few weeks later, worried about when the next job would come. It was impossible to predict how much income I would have from one month to the next. I was new, often the last choice, so even if I was busy, my datebook for the next month was likely to be blank.

All this was a shock, but an even bigger change was the work and my position inside it. At the UN, I had been known as one of the most accomplished engineers. The producers, our clients, clamored

## CREATIVE LIVES

to get time in my studio. They saved challenging projects for their time with me. They appreciated my work, and my colleagues, the other engineers, respected me. I was a resource for answers about production issues. I wrote a manual to train everyone on a new CD-burning process and was appointed a 'super-user' to test a new editing software that we were adopting.

In this new world, I was the new guy. My accomplishments at the UN amounted to very little. The skills were much different, the language and culture were different, and I was not necessarily welcomed by all into the small community of audio technicians in the region. While most were not hostile, there was no doubt about my status: 'green' and at the bottom of the crewers' list. Now I was the new kid at 36!

In TV, there are two audio positions: A1 and A2 (no blurring of status in this world). The A1 is the mixer. Their position is inside the control room (usually in sports, a mobile television truck with an entire production facility inside a 16-wheel truck). They are responsible for the patch bay and mixer and, often, the configuration of the communications. The A1 is the one moving the faders during the show, controlling what we hear during the broadcast. The A2 is the 'audio assist.' Their responsibility is everything outside the control room. They run the cables, plug in the microphones and communication equipment, and 'wire up' the talent. Both jobs have their own skill sets, and although there are some people who do either job, most do one or the other.

I had to begin as an A2. Despite my twelve years' experience already and my success at the UN, there were too many new skills and too much new equipment. The UN required people skills and editing proficiency, but we basically sat in the same chair every day from 9 to 5. Now I was in a different workplace every day, doing a job that was at times physically taxing. At the least, we would walk several miles around a baseball park or hockey arena, dragging heavy multi-channel audio cable.

I liked the change. After all the years of routine, this felt refresh-

ing. At the UN, people would often avoid work, and sometimes that would come down on me, since clients wanted to work with me anyway. Here, it seemed, everyone was responsible for their own part of the world. I liked sports, so it was fun to be working at a Devils game or a Yankees–Red Sox series. There was also an element of puzzle-solving that was fun. The goal was to get good audio to the necessary positions as efficiently as possible. Sometimes the TV truck was parked thousands of feet from the event. At the pro stadiums, the cable was usually installed permanently, but at smaller venues, it often had to all be put in just for the event. This is where strategic laziness could really come into play. You wanted to do the best job and make it all work, but with the least amount of effort you could manage. Also, once it was set up, if you had built it correctly and with solid gear, there might not be much to worry about until it was time to 'strike': dismantle everything and pack it back inside the truck. Often the best A2s were the ones who looked like they were hardly doing anything.

Even as I learned the ins and outs of this new job, I could see that it was the A1 position that had the real potential for creativity. To me at the time, it looked like rocket science. The A1 was seated in a room, facing a massive mixing board, with a patch bay behind bristling with what seemed an impossibly tangled mass of patch cords. The rest of the room was stuffed with computer monitors and outboard gear full of flashing lights and flickering meters. The noise was incredible. Different mixers worked at different volumes, but every audio room contained the sound of the game being played: the sneaker squeaks, the rattle of the boards, and the bat cracks, along with the drone of the announcers. In other speakers around the room, the director and producer were barking orders, calling camera shots and cracking jokes, or chewing out whoever was unlucky enough to make a mistake. To the uninitiated, it sounded like pure chaos. I wanted the job.

Back at home at this time, we were setting up our new farm. The field was cleared for vegetables. Chickens were procured. We

## CREATIVE LIVES

bought a dairy cow, too. I learned to milk the cow and tried to fence the pasture. These are not skills that I have experience with, so it was all a struggle. Still, I liked the contrast of milking the cow and feeding the chickens one day and plugging in mics for the Yankees in the World Series the next. The kids loved the farm and we started making movies together using a little camcorder and iMovie, which became second nature to the kids. One of the first films we made was a comedic newscast, with my six-year-old daughter as the anchor, about life on the farm.

I started learning from other A1s as I worked as an A2. Most people in the field were fairly generous with information and willing to help. Some were even willing to let me come in on my own time and help set up their shows for them. The audio room consisted of three main elements: a large-format mixing board, almost always digital, containing the faders that you picture, and an extremely powerful routing system and, a patch bay that often covered the entire back wall of the audio room with a jack field of hundreds of 'tiny telephone-size' patch points and a rack of hanging patch cords. (If you have trouble picturing this, imagine a telephone operator in a 1950s movie). And a computer that housed the ADAM program. This was the standard software that ran all the communications in the truck. It was what allowed all the people in the truck to talk to each other, to the announcers and reporters outside, and to the studio or master control elsewhere. At first these elements all seemed incredibly complicated.

Mixing boards I knew from all my previous training, but these were bigger and deeper than I was used to. Besides the 48 or 96 faders stretching across the room, they were sometimes several layers deep and had even more meters and controls buried in menus and levels that might not be immediately obvious. Patch bays were labeled with tiny writing that didn't always make sense. Plus, our work meant that you might be on a different truck in a different location every other day and the IFBs (how the talent hears the producer and director) could be in one place one day and somewhere else entirely



## *Make It Sing*

the next. The ADAM was the most mysterious of them all to me. It was a computer program that seemed to produce all these different forms of communication by magic. There were PL's: party lines, where many people could all talk on one line, and the IFB's, where talent could take direction and hear themselves and the show, point-to-points, where one person in the truck could talk to another without anyone else being included, and many more. Essentially, it was a giant and complex switchboard that existed only inside a computer but controlled lots of real-world devices.

I tried my best to put all these pieces together. I filled a little notebook with advice and diagrams. Eventually, I felt like I knew enough of the outlines to take some jobs as the A1. My training had always included one important thing: an experienced A1 there with me who was responsible for the actual show. Once I was alone in the audio room, nothing prepared me for how fast it all moved. We would usually show up at around 1:00 p.m. for a 7:00 p.m. game. In that time, we had to build a whole show from scratch and have our mandated hour lunch break. For me, it felt like the clock was loudly ticking from the moment I set foot into the truck. There were so many things to worry about. It was hard to keep the order—I'd start putting in patch cords and then someone would remind me that they were waiting for their communication panel; then the producer would want to hear the music he had chosen for the show. By then I had completely forgotten where I was with the patching. Then, if something didn't work right and required troubleshooting, that meant even more time. I was sweating and stressing. When the game started and I was actually mixing a show, I was exhausted.

Inevitably, mistakes were made. On one show, the 'talkback,' a separate circuit that the announcers rely on to talk to the producer mid-show without their voice going on the air, never worked. At another, I inexplicably opened the wrong mics and left the announcers silent for several seconds. I couldn't seem to get through a whole show without some memorable screw-up. The combination of stress and not being sure of what was coming next made it very hard to succeed.

## CREATIVE LIVES

After working as an A2 on a grueling track and field competition (grueling for the TV crew—no comment on the athletics), I was invited at the last minute to come to Kentucky for the World Equestrian Games. This is something like the Olympics for horse sports, with several venues at once, dozens of events, and hundreds of competitors from around the world. I was to be an A2, but my A1 training would be useful for giving breaks to the other mixers. It would be 20 days away from home, but I was in no position to refuse. I'd never been away from my family for that long. Compounding my stress, my marriage had started to fall apart. We were separating, which makes my worry about leaving my kids greater.

When I got to Kentucky, it was decided that rather than providing relief, I would be mixing the NBC show. It was a big promotion in responsibility and pressure. I was inspired and up for it, though. I was learning and the other mixers were helpful. The complexity was mind-boggling at times. There were so many layers of connectivity and control to integrate all the different venues and facilities. It took all my concentration and effort to be ready to go for the opening ceremonies. It all went well and I was relieved, but as soon as we finished, the executive director walked in and told me he wanted me to do a 'follow cut' on the cross-country race in two days. This meant integrating 50-something mics into my mixing board in a whole different setup, while maintaining the one I would need again in five days. I swallowed hard and got started.

The event was a positive experience. I built a lot of relationships and confidence. I came back inspired and upbeat. However, it was also the beginning of a struggle to have time with my kids in balance with rewarding work. My wife and I were soon divorced. She left the farm and was not cooperative with my erratic schedule. At this time, I was still building clients, but sometimes it was a struggle to book enough days every month to cover the bills. It was not really feasible for me to say, "I don't work Mondays or Tuesdays", and certainly the weekends tend to be the prime time for this work. Making a shared custody schedule that allowed for the time I was used to with my

children was really tough. I stayed on the farm and found ways to manage the work and travel while keeping the comfort of the farm for me and the kids.

My daughter was a precocious eight-year-old. She read books that seemed like they should be beyond her. Her vocabulary was off the charts. She, my son, and I set up a poetry contest—we pit 16 different genres of poetry against each other in a tournament style. We randomly chose which genre to write in and what the topic would be. Then we had our friends and family go to a blog and cast their votes. In the end, the sonnet beat out the limerick and haiku for the win.

The following year, I was invited to work on the NHL playoffs with NBC. The main mixer hired me as his assistant. For two years, I spent 2½ months on the road with the playoff crew, flying around the country, working a game every other day, sometimes even more. I would do the patching for the show both inside and outside the truck and make sure everything was working for the mixer. During the game, I would run interference with anyone who needed anything, so that the AI could focus only on the game. During this time, I gathered confidence with regard to all the different parts of the patch bay and the truck. Things that I had sort of known, 'plug that here and it works,' I now understood more precisely. Even more importantly, I sat beside the mixer day after day. I watched him work and followed the flow of the pre-production, pregame, and game. I started to get familiar and know what to expect.

After that, when I went back to mixing smaller shows, my stress levels were dramatically lower. Things started to slow down and I could get through a whole game without having a mental lapse. There was still a lot to learn, but I was in a position to improve instead of panic. I started to notice that it had been awhile since the last fiasco. They are still lurking out there and happen to everyone—remember the Super Bowl a few years ago?

Recently, I started to travel farther for work rather than driving back and forth from New York City and Boston all the time. In the last few years, work has taken me around the country, as well as to

## CREATIVE LIVES

Malaysia, Russia, Botswana, Canada, and Brazil. The airplane travel is hard and so is being away, but it beats driving until 2:00 a.m. several times a week and staying on friends' couches. My son is in college and pursuing creative endeavors. My daughter started high school and is a master of Instagram and Tumblr, but also an actor and musician. I feel lucky to have a new partner, and a new baby to experience the creative act of parenting again. The challenge is still finding the balance between being present for the needs of my teenage children and baby and keeping the flames stoked with my partner while feeding a career. There isn't much time to look back and reflect, but this work has carried my family here. I continue to be challenged by it. As I write this, I am preparing for my first shot at being the main mixer for a UFC bout. This will surely be a new chaos and a chance to go down in flames. It may, however, present a way to discover a more elegant way to do something or a new improvisation to capture the sounds; things I find greatly satisfying.

It reminds me of those moments with Mr. Doblin when the lesson would stop in the middle of me struggling through some scale or audition piece. He would put aside the frustration over my lack of technical skill and talk about life. It would sometimes be about how the logic and beauty of the music radiated out to explain the world and us. He never was much for recorded music, and I'm positive he never watched a single mixed martial arts match, but I hope he would still know that his lesson made its mark.