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INTERVIEWED BY REBECCA WRIGHT
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WRIGHT: Today is June 6th, 2017. This oral history session is being conducted with Courtney Stadd for the NASA Headquarters Oral History Project in Washington, DC. The interviewer is Rebecca Wright, assisted by Sandra Johnson. We thank you again for taking time to visit with us again for this Project.

STADD: My pleasure. Thank you.

WRIGHT: We are very interested in many of the years that you were working at NASA Headquarters and all the different roles that you had. We'd like to start today with the role that you had in advocating for and securing the nomination of Michael [D.] Griffin as a NASA Administrator.

STADD: Sure. As you know from my previous interviews, during the first term of the George W. Bush administration, I served as Chief of Staff for [President William J.] Clinton holdover [NASA Administrator] Dan [Daniel S.] Goldin. I then served as the Chief of Staff to Goldin's successor, Administrator Sean O'Keefe, who had a background in public administration but was completely non-technical. During that experience I had worked with the Administrator and the NASA team through the [STS-107] *Columbia* accident experience.

From that experience I became convinced that whomever the future Administrator might be needed to have very strong technical engineering credentials or, in the absence of such knowledge, at least significant experience in dealing with an R&D [research and development] culture that uniquely shapes and drives an agency like NASA. And, most especially, given the pending flight status of the post-*Columbia* accident Space Shuttle Program, I thought it critical to have an Administrator who had special insight into ensuring successful resumption of the Space Shuttle Program.

Recall that in late 2004 when Administrator O'Keefe had announced his resignation, and through the early part of 2005 when Mike Griffin was announced as the new Administrator, that the Return to Flight was the big priority. So, finding somebody with the appropriate technical credentials became a big focus of my private citizen efforts (at this point I was no longer affiliated with the Administration) and others who felt the same way I did.

I had known Mike for a period of time, including in his capacity as the former [NASA] Chief Engineer. I live in Maryland, so I had some interaction with the senior senator from the state, Senator Barbara [A.] Mikulski, and I knew her staff. I also knew the late Senator Ted Stevens from Alaska who at that point was still a very powerful figure on the Appropriations Committee and had oversight over NASA.

I still had some standing as the former White House Liaison and Chief of Staff, and so still had a modicum of some influence, if you will, in the West Wing of then President George W. Bush. So I began to advocate for Michael Griffin, and was able to obtain support from both of the senior senators from Maryland and Alaska. Mike had his PhD in aerospace engineering from the University of Maryland, had significant prior experience with the Agency and so became a native son favorite of the senator from Maryland.

Others like myself who were supporting his candidacy very quickly garnered the support including that of key players in the West Wing, the Science Advisor's Office and Mike ultimately became a leading candidate. Again, for a number of us, it was important to have somebody in that Administrator's Office who brought Mike's formidable record of engineering knowledge to the office.

WRIGHT: Walk us through those next days. We know that at some point you came back to the Agency as an adviser. Explain how that role came about.

STADD: After departing as NASA Chief of Staff in mid-2003, I did not have any intention of going back to the Agency. I was focused on my private industry efforts. I still had two daughters in college, so my focus was on supporting them and getting them through college. But Mike reached out to me to help him during his nomination process. So in an informal capacity I provided some advice and guidance to him during that time period.

When he was finally confirmed by the Senate, Mike asked if I would come back to the Agency. In fact, he even wanted to short-list me as a Deputy Administrator candidate—one of several candidates that he had in mind. I was greatly honored but I told him that I'd already had the honor of being a de facto Deputy Administrator when I was Chief of Staff for former Administrator Dan Goldin (during his year as a Clinton holdover), and that I really thought it was important for him to build a new team. Of course, I told him that that I was always available as a private citizen to provide informal counsel as appropriate.

Then he made me an offer that, frankly, I found difficult to turn down. This was to come back as an adviser, a consultant, and help him resurrect a position that was in place back in the

1960s called the Associate Administrator [AA]. That was the number three job in the Administrator's Office. In this case, the idea was to have a permanent civil servant with the appropriate engineering technical background as the third ranking official in the Office of the Administrator. In the wake of the *Columbia* accident, where I felt that the Administrator's Office was a bit too dominated by political considerations, I agreed with Mike that having such a senior-level permanent position was critically needed. So I agreed to come back to Headquarters on a very temporary basis as a consultant, exclusively focused on helping to draft the job position for the new Associate Administrator position.

I came back in April of 2005 and I stayed through June of 2005 with the primary focus, again, of crafting the responsibilities for this new position. In doing so, I worked closely with the agency's HR [human resources] folks, and especially with Rex [D.] Geveden, who was then NASA's Chief Engineer. Once the position was finalized and advertised, Rex was appointed to the AA position until he retired some years ago. In retrospect, given the legal issues that I ultimately encountered, if I had Harry Potter's magic wand and could go back in time, I would have opted to provide my advice to the Administrator on this new position without physically moving to an office at Headquarters. But the Administrator really wanted me back with ready access to him. I think he felt that given my corporate memory and institutional knowledge of NASA Administrator transitions—after all I had headed up a transition for George W. Bush and had been Chief of Staff for a couple years—that I was in a good position to help him deal with the various and sundry administrative start-up issues that any new Administrator has to confront. But I still believe in retrospect that I just should not have haven't taken an office in the Administrator's office, because it was very difficult I think for people to not view me in my

former position, even though I tried as best I could to explain to people that I was in a *purely advisory* position and did not have decision-making authority anymore.

But as the cliché goes, perception is reality. In retrospect, even if I had decided to go back to Headquarters, I should have taken an office in a basement somewhere rather than up in the Administrator Office. But Mike insisted that I be located in the Office of the Administrator which, I think, only served to confuse the perception of my role, which again was temporary and primarily focused on helping draft the new AA position and was purely advisory.

WRIGHT: Talk a little bit about that position, because based on information from Michael Griffin, he definitely is a student of history, he definitely knew how [former NASA Administrator] James Webb had created that position. Give us some background about what he told you, why he felt that position was important, and how you used that information to scope the role and ultimately help find the right person.

STADD: The position of Associate Administrator was held, among others, by the former legendary Dr. Robert [C.] Seamans. That was part of the triumvirate governance model that Jim Webb put in place with other legendary personnel such as the late Dr. [Hugh L.] Dryden and Dr. George [M.] Low.

What Mike and I wanted to do was to bring back a position that caught that same spirit of having somebody in place that had the technical credibility, had the institutional knowledge, and could ensure that the Administrator was always getting the appropriate ground truth and the sense of what really were the real challenges—both programmatic and budgetary starting at the field center level.

Part of the vision that the Administrator had, what he wanted to have reflected in the position that he brought me on to help draft, was to ensure that the AA would be the umbilical cord, if you will, between Headquarters and the real work that was going on at the operational level at the field centers

The Administrator and I agreed that oft-times when project or program managers come up from the field center to brief leadership at Headquarters, they don't necessarily always communicate the full reality of their technical and programmatic challenges. It's not that people are being in any shape or form purposely deceptive. It's just that it can be rather daunting if not intimidating to come up and brief your program in front of the Administrator or the Deputy.

We wanted to bring back an era when technically well-respected leader in the AA position, in the hands-on-spirit of a Dr. Low or the late Dr. Robert Seamans, would frequently travel to the Centers and speak directly to the relevant program or project manager about their challenges and then be able to translate the operational challenges back to Headquarters. As I said earlier, many times the people in the field are not always candid and straight up when briefing folks at Headquarters. Again, it's not because they're being deceptive, but because they are more likely to fully disclose all their challenges to someone with the appropriate technical experience and with whom they have built mutual trust. Without that sort of candid feedback loop, HQ can, frankly, become insular and disconnected from the realities of the folks doing the real work in the field. I'm just being very candid.

I think Mike wanted to take that governance model developed under the leadership of Jim Webb and see if we could not resurrect some variation of it under his leadership. So that was the spirit and that was the intent behind putting that position in place.

As I noted, I worked very closely with then Chief Engineer Rex Geveden. He and I bonded very early on in the process. We spent a lot of time working through the scope and nature of that position, obviously in consultation with Administrator Griffin. There was a wonderful happenstance one day. I was expressing to Rex Geveden the desire to meet with Dr. Robert Seamans who held the position of AA in 1960. I said, “Wouldn’t it be wonderful if we could bring Dr. Seamans back and talk to him?” I was thinking about how to reach out to him. He had emeritus status at MIT [Massachusetts Institute of Technology, Cambridge] at that time. By sheer chance it turned out that Dr. Seamans was in the Headquarters Building that very day! So we had the great honor of having Dr. Seamans come to our office in the Office of the Administrator, and I had a chance to talk to that legend, real-time about his experience with that job.

It really was very useful to get his feedback, and frankly he reaffirmed that we were on the right path. I think that he felt that we were approaching it in a way that was faithful to the type of position that he held during the Apollo era. That gave us great confidence that we were taking the right approach. How incredibly fortuitous that we had the chance to interact with the man himself.

WRIGHT: It is. There is a list of key personnel and key issues that you were associated with during your time at NASA. We’d like to go through those so you can share some of the insight or some of the experiences that you had. If possible, please share with us any of the direction or guidance that Mike Griffin gave you; that might provide us an insight on how he came up with decisions. One thing that we’ve learned is that people make decisions lots of different ways. It’s always helpful to gain an understanding of management styles. I’ll let you take it from here.

STADD: Having worked at close quarters with former Administrator Dan Goldin, Sean O’Keefe, and Mike Griffin, I had the opportunity to be exposed to profoundly different leadership styles.

In the specific case of Mike Griffin, he, of course, was very technical. With that said, he greatly appreciated the history and the value of going back and looking at lessons learned from previous governance models. Politics was not, to say the least, a particularly strong suit of Mike Griffin. But during my time with him I found that he was at least open to suggestions concerning issues and situations with political implications. But you had to be very explicit about that with him. For example, if you may recall in one of my previous interviews, I talked about when I headed up the NASA transition for George W. Bush I was struck that in looking at the history of NASA Administrators and Deputies that they were all white males; notwithstanding that there is no shortage of talented women and minorities who are amply qualified for leadership positions both in the Agency and in the industry.

Our transition team had strongly recommended, and to his credit Sean O’Keefe pursued it, putting in the first African American Deputy, former Shuttle commander Fred [D.] Gregory, as the Deputy Administrator. With Mike Griffin, I was one of those who said, “Wouldn’t it be wonderful to bring in the first woman Deputy Administrator?” That’s when Shana [L.] Dale, who at that point was a senior official in the President’s science adviser’s office for the White House, that’s when her name surfaced. Mike Griffin quickly saw the benefits of that. He met with her, was impressed with her, felt that she brought a set of political policy strengths that augmented his technical strengths, and felt they would make a good team.

We had another instance where he and others had talked about the fact that the Agency could benefit from having its own Program Analysis and Evaluation office, PA&E, that would be

modeled somewhat on the Center for Naval Analyses, (a Federally Funded Research and Development Center (FFRDC) serving the Department of the Navy and other defense agencies), which offers an independent assessment of programs for the leadership in the Pentagon. I and others had recommended to the Administrator that he should set up a similar capability within the Office of the Administrator but not as an FFRDC but as an internal agency program office. And, again, to his credit he did.

There was an IPAO [Independent Program Assessment Office] function at Langley that provided an independent analysis on somewhat of an ad hoc basis. As I said, this new PA&E initiative was an effort to elevate it to the Office of the Administrator. Mike recognized that the Agency leadership could greatly benefit from having some strong independent budgetary, technical and policy analysis to ensure that the Administrator was getting the best inputs in terms of looking at future programmatic options. So Griffin stood up that program office and he put Dr. Scott [N.] Pace, my former deputy when I was Chief of Staff, in charge of it. Scott, who currently is Executive Director of the White House National Space Council under President Trump, did a really effective job of standing up and managing the office. Frankly, I was disappointed when the program office was disbanded under Dr. Griffin's successor. I remain hopeful that that office will be resurrected one day.

There were instances thinking back where Mike needed some hand-holding with the White House. He rightly prided himself on his engineering prowess but, as I have indicated, political finesse was not exactly his strong suit. There were times when I, and I'm sure others, would have to sit down and say, "Look, I know you don't have a lot of patience for some of the politics involved dealing with the White House, but it's a necessary part of the job." With such

counsel in mind, he would do what he could to accommodate the transaction costs associated with the particular issue and people.

But I want to emphasize that during that time my job was primarily focused on drafting the AA position description and acting purely in an advisory position. Again, I had no formal decision-making authority.

WRIGHT: Let me ask you a question while we are here in the time period when he came on board. Mike Griffin inherited [President George W. Bush's] *The Vision for Space Exploration*. I believe he mentioned that he definitely embraced going back to the Moon and beyond, but there's a small part of *The Vision for Space Exploration* that dealt with commercial partnerships. Your background for years, for decades, has included an interest in promoting and definitely advocating for commercial interests and entrepreneurs within that industry.

We talked to Mr. O'Keefe about this as well, how the commercial paragraph is just a small part at the end of the Vision statement, that it says that NASA should pursue commercial opportunities for providing transportation to the International Space Station [ISS] and more. How did that impact you—the fact that *what* you had started years ago was starting to grow with more interest and advancing to a program? Share your thoughts about the last say five or six years, watching what's happened with NASA and the commercial work being done.

STADD: One of the reasons that I was advocating for Mike Griffin as Administrator was his industrial background, specifically with Orbital Sciences [Corporation], one of the pioneering commercial space companies. I took great solace in the fact that O'Keefe's successor brought that commercial sensibility to the position. Mike and I had talked a great deal before his formal

nomination about the importance of the emerging commercial space sector, including the Agency's ability to leverage the increasing amount of capital that the commercial sector was investing in launch vehicles and spacecraft. He established early on in that spring of 2005, the Exploration Systems Architecture Study, which was focused on a return to the Moon and looking at the appropriate trades in terms of spacecraft to not only focus on the Moon but establish the technical baseline for Mars exploration. I was very pleased to see that there was some interest expressed in the role of the commercial space sector, and, that he and his team reached out to some of the space entrepreneurs. Some of the fledgling companies at the time did not have the marquee names they do now, but companies ranging from SpaceX to Bigelow Aerospace, among others, did indicate their strong interest in supporting the Agency.

Also, one of the big themes during my brief tenure in that spring of 2005 was, of course, Return to Flight [after the STS-107 *Columbia* accident]. There was a great deal of concern expressed both by the White House and by Congress in managing the cost associated with Return to Flight and the future of the program. When would the Shuttle Program ultimately be terminated? What would its successor vehicle look like? How would we support the International Space Station?

Under Mike's leadership he began to look at how the manifest for the Station could be revised significantly to accommodate those missions between the 2005 Return to Flight—I believe the first Space Shuttle flight after *Columbia* was July 2005 [STS-114]—to the termination of the program in 2011. Griffin and the Return to Flight team had to grapple with the challenges of dealing with the greatly truncated number of missions that were forecast for the Station.

That's when the seeds were laid for the use of commercial launch vehicles not only for cargo, but ultimately to take crew to *Space Station*. I think that Griffin and his team deserve major credit for laying the foundation for the major reliance on commercial space sector for supporting the Space Station by the successor Administration.

The other thing that was important during that period of spring—as I think about it, it was a very busy period—was the supporting the Hubble [Space Telescope] repair. You may recall that Griffin's predecessor terminated a Shuttle astronaut repair mission to Hubble, which resulted in a lot of outcry and criticism from both Capitol Hill and the public-at-large. The Hubble is iconic in America's space program, and I think to Mike's credit during his Senate confirmation hearing and, soon after becoming Administrator, he made clear that resurrecting a Shuttle astronaut repair mission to Hubble was very much a priority of his. In retrospect, it turned out to be technically the right decision, as well as an enormously popular one.

Another major issue during that spring of 2005 was the effort to build the James Webb Space Telescope, the successor to Hubble. I think Mike Griffin was concerned that his predecessor deferred the final decision to commit to a launch vehicle while we were spending significant funds on various and sundry studies. In fact, I remember at the time people were estimating it was about \$10 million per month to keep the design trades—impacted, of course, by the ultimate launch vehicle choice—for the James Webb Telescope option open, and when Mike became aware of the situation he quickly made the decision to have it launched on the Ariane rocket. That was a very important decision that really needed to be made.

Another key issue was the Administrator's decision to reverse his predecessor's stance on earmarks. Today, earmarks, as a prevailing practice, have been eliminated by the Congress. But, at the time we had millions and millions of dollars of accumulated earmarks. Some were

funded, some were unfunded. The senators made it very clear to Mike Griffin during his courtesy visits before his confirmation hearing that a number of them were very concerned that those earmarks had been blocked by his predecessor. Of course, they affected constituents and the senators were hearing from disgruntled people and companies in their districts, universities and others, about releasing them. Mike made a commitment to release those earmarks.

Now this brings me to an anecdote where Mike showed somewhat of a tone-deaf ear when it came to bureaucratic politics and communications. Again, I remind you that I was in a purely advisory consulting capacity, again focused on helping draft that AA position. I recall one of the weekly Monday morning videoconference meetings at HQ, led by the Administrator with all the Center Directors. Mike had greatly surprised me by suddenly announcing to the Center Directors that “Courtney Stadd would be temporarily the AA.” As I say, that was a huge surprise to me. I said to the Administrator afterwards that I could not fulfill that function since I was in a purely consulting role and did not have the decision-making authority to do that, and furthermore had zero interest in seeking to have the authority to do that. My goal consistently remained to quickly finish drafting the position description for the new Associate Administrator position and then leave to return to my company.

At the time, his surprise announcement led me to feeling like the proverbial deer in the head lights. I was not sure how to publicly react at the time without putting the Administrator in an awkward position. I did, however, mention my concerns to Griffin privately right after the video conference. But, in retrospect, I should have been much more publicly vociferous in expressing my concerns, as well as including the General Counsel into the picture to ensure that everything was being handled appropriately. Also, I should have documented the fact that I

could not and would not fulfill that position. But I'm speaking with the benefit of 20/20 vision at this point.

I tried the best I could to explain to the leadership team and the AAs at the time when I would see them either in the hallway or they would come by my office, that the Administrator's announcement was actually a fundamental misrepresentation of what I was doing, and that any and all decisions needed to be directed to the Administrator or the newly appointed Chief of Staff—definitely not by me. Unfortunately, that confusion led to some of the legal challenges that I faced later on, which I'm happy to talk about at the appropriate time in our discussion.

In retrospect, it was clear that spring 2005 was an extraordinarily busy time as Griffin began to make his impact as the new Administrator. I would say that April to June really did help in many ways set the tone early on for Administrator Griffin's tenure—starting with those important decisions regarding the Hubble and the James Webb Telescope, the future of the Space Shuttle Program, as well as laying the preliminary groundwork for the long-term role of the commercial sector in supporting the ISS.

I should add as an aside that just speaking again in my informal capacity, as I watched the Exploration Systems Architecture Study that was being managed by Doug Stanley, there were those of us hoping against hope that there would be consideration given to the Atlas or one of the private launch vehicles at the time rather than simply focused on Shuttle-derived components. There was some consideration given to it but not as systematic as I would have preferred. My sense was that the Administrator felt that the politics were such that he needed to address the concerns of the Alabama delegation, regarding the future role of Marshall [Space Flight Center, Huntsville, Alabama], and that those concerns, as well as other technical considerations (e.g.,

leveraging off the significant engineering know-how at the Center), and that for better or for worse he let that drive to some extent his thinking on the Shuttle-derived side.

My personal feeling was that he brought much technical credibility to the table, and that in the wake of the *Columbia* tragedy he had a lot more running room than he perhaps appreciated in terms of really thinking out-of-the-box, that is, thinking beyond just Shuttle-derived scenarios. But I wasn't Administrator. As I often tell people, it's a breathtakingly challenging job, with a lot of political constraints that shape and drive decision-making. But from my little perch, in retrospect, I wish there'd been more consideration to alternative scenarios such as an enhanced Atlas launch vehicle.

WRIGHT: At that time you phased yourself out?

STADD: Yes. By that point in June 2005 I had completed my primary assignment. We had finalized the description for the new position of Associate Administrator. Rex Geveden, the Chief Engineer at the time, was ultimately viewed as the appropriate individual to hold that job. He met the credentials in terms of his engineering background, his institutional knowledge, his credibility. Frankly, I felt that I had served the Administrator in the way that I had promised and it was time for me to go back to the private sector. So that's what I did.

I should add just to put this in context that when I agreed to come back temporarily I did tell the Administrator that I had client work and that I needed to continue with that work. I was brought on in a contractor status, but in an abundance of caution I actually went down to meet with the ethics attorney, an official by the name of Adam Greenstone. His boss, a person known

for his solid professional judgment, was on leave at that point. This was very unfortunate because I suspect a number of things would have had a different outcome if he had been there.

At any rate, at the advice of the Agency's ethics attorney I transitioned from a consulting status to a Special Government Employee status or SGE. Frankly, in retrospect, that was the wrong decision because it took me from a purely advisory role as an outside consultant to a status that unnecessarily created an impression of me having a more formalized position in the Agency at that point than was actually the case.

Again, my primary assignment was to assist in providing inputs to the new position of Associate Administrator, as well as providing whatever informal advice—based on my prior institutional knowledge of HQ—might have been of use to the new Administrator as he was establishing his own team. I never intended to be in this position more than a couple of months. In retrospect, I should have sought the counsel of an outside experienced attorney instead of relying solely on the advice of this particular Agency's ethics attorney. Nonetheless, I complied with the SGE related ethics rules, including disclosure of my clients. I even went above and beyond the recusal recommendation and actually temporarily separated myself from one of my clients even though I was not advised to do that by HQ ethics counsel. But I decided that from an appearance standpoint I should do that and so, as I say, took a temporary leave from that particular engagement; notwithstanding the loss in income.

Around this time, I recall running into the Inspector General [IG], Robert "Moose" Cobb, in the hallway or the dining room and mentioned to him that I was back temporarily and that I was taking every step I could to ensure that I was protecting the Agency, the Administrator, and my own situation. He advised me, I'll never forget, to ensure that I was memorializing everything I did in e-mail. Frankly, I will go to my grave thinking that given what I now know,

Cobb most certainly gave me that advice with some calculated malice at the time. If you wish, I can give you my perspective on what motivated the Inspector General to ultimately go after me, and become the equivalent of Inspector Javert of *Les Miserables*, the policeman in Victor Hugo's novel, whose relentless pursuit of an innocent man for personal vindictive reasons ultimately turned his life tragically upside down.

WRIGHT: Do you feel like this is the point where you want to move into that?

STADD: If I may, I'd like to make a couple quick comments about that period when I was advising the Administrator before moving into the legal challenges that eventually enveloped me.

Again, in the very informal ad hoc capacity I had, in addition to being one of the voices that suggested Shana Dale for Deputy Administrator, who was then in a senior position in the White Science Advisory's Office, I also was providing some informal input on other personnel decisions. I was one of several who were supporting bringing up Bill [William H.] Gerstenmaier from Houston, which I consider to be one of the better personnel decisions that have been made in the recent past. In my view, Gerst's strong program management background addressed one of the concerns that I had working with the previous Administrator and his personnel choices in human spaceflight. I felt very strongly that when it comes to human spaceflight it is important to have someone, a man or woman like Gerstenmaier, who brings decades of storied experience, project and program management experience, to human spaceflight.

With all due respect to the astronaut corps, I felt strongly that it's important not to have an astronaut running the program. I think it is important to have someone like Gerstenmaier run

the program, and then of course have an astronaut certainly in the senior ranks, including as deputy, if that is what the Administrator so desires. I think that combination makes the most sense. Having that tension between the experienced program manager and the astronaut on the operational side I think is a very creative tension. Personally, I think human spaceflight at its best has been well served by that type of tension.

In my view, to Dr. Griffin's credit, he recognized the importance of that and felt like I did, chagrined that his predecessor undermined what I'll call creative tension by bending over arguably a little too much in the direction of the astronaut corps. Good people can debate the pros and cons of how best to structure the HQ office of human space flight. And I want the record to reflect the fact that I have enormous respect for the astronaut corps and for their talents. This is not in any shape or form a gratuitous swipe at their abilities. But, frankly, in my own private discussions with some key astronauts over the years, even they agree that that type of creative tension is important, and they certainly agree that Bill Gerstenmaier is the poster child, if you will, of the type of talent that makes sense to be running human spaceflight.

Lisa [J.] Porter is somebody that had been brought to my attention by a colleague. I was very proud to introduce her to Administrator Griffin. She has a PhD in physics and is quite a brilliant lady. Griffin ultimately named her to head up the aeronautics program. She became somewhat controversial. There were an array of researchers in the university and corporate sectors whose pet projects had been funded by NASA's aeronautics programs for years and, in an overdue effort to clean house and establish clearly definite priorities, Dr. Porter summarily terminated a number of these hobby horses. Not surprisingly, these decisions led to some aggressive criticism from those who suddenly found that their project funding had dried up. But I think to her credit, to use the expression of a colleague at HQ, she was pretty effective at

“cleaning out the stables,” as it were, of some of the programs that arguably had consumed parts of the budget without demonstrating any tangible results.

There are those who will argue that she focused too much on the research side to the detriment of the operations side. But over time I think history will be kind to the type of effort that she brought to try to rebalance the program. I think in some ways it made it easier for her successors to restructure the program, within constrained resources, to be better focused. Personally, I’m very pleased to see that aeronautics is getting more attention from the political system. I am one of those who believes that aeronautics deserves more resources and attention than it has traditionally received in recent decades.

Anyway, those are a few examples of the type of personnel decisions made by the Administrator during my very limited time there that I thought were very important and I think set the tone for his ensuing leadership of the Agency.

WRIGHT: Would you share your thoughts about serving as the White House Liaison and the selection for the AA for Space Science?

STADD: Sure. Regarding the White House Liaison position. I am the only person, for better or for worse, in the history of NASA that held both Chief of Staff and the White House Liaison jobs. I assumed those positions during the first year of the George W. Bush administration when I led the NASA transition supporting Dan Goldin and then for the first part of Sean O’Keefe’s tenure as Administrator, because I felt that it was important for the Headquarters to build bridges into the West Wing, until we could find the right person with the appropriate skill set as White House Liaison to continue to build on the relationships I had established with senior

Administration officials, as well as ensure that the few political positions at HQ were filled with the appropriate personnel. The person who we named to the White House Liaison was J. T. Jezierski, who held that position through O'Keefe's tenure, and I think held it through a good part of Mike Griffin's tenure if I remember correctly.

When I worked during the [George] W [Bush] transition with Goldin and then O'Keefe, we tried to increase at least a handful of new political appointees at Headquarters. I think Mike with J. T. Jezierski continued to see the importance of doing that. But, again, Mike needed to be reminded sometimes of the importance of the political part of his portfolio, not just the technical part of it. Certainly Shana Dale, as the new Deputy Administrator, brought a needed political sensibility to the Office of Administrator. I was very pleased to see that.

WRIGHT: While we're talking about the White House, let me ask you too. Through the years there's been an official White House or designated Space Council, and other times there has not been. What are your thoughts on the purpose of that Council and its rationale to keep it or to not?

STADD: I was part of the Space Council that was established under Bush 41, and I was Senior Director for Commercial Space from 1989 to 1992. We benefited from the fact that President George H. W. Bush was a big space fan and that his Vice President, Dan Quayle, took his role as Chairman of the Space Council very seriously. So I'm pleased to hear that this current administration, the [Donald J.] Trump White House, has resurrected the Space Council, and it is modeled on the same type of Space Council that we had in terms of its interagency jurisdiction and staffing.

There are critics who claim that a National Space Council adds an unnecessary bureaucratic layer of policy oversight. But, if it is done right, I think such a White House-centric governing body can offer true value-added by, for example, putting the NASA civil program in context and forcing the agencies, both civil and national security-related, to work together to deal with some of the overarching policy challenges facing us today, such as the exposure of our space assets in low-Earth orbit to threats by our adversaries. Another major interagency issue that could benefit from resurrection of the Space Council is dealing with the future of the International Space Station, which after all has not only civil but commercial and arguably national security implications. Also, getting buy-in from the national security, commercial, civil communities in terms of our long range multi-decadal vision and plans for deep space exploration could be yet another important benefit of an effective Space Council.

Now one of the major lessons from my personal experience with the last Space Council is that there should be no “air gap,” if you will, between the NASA leadership and that of White House Space Council. As you know, former Administrator Dick [Richard H.] Truly ultimately lost his position in large part because of a concern by the Bush 41 White House Space Council that he was not effectively executing President Bush’s vision. When he made an effort to appeal to the President and basically forced the President to decide between supporting his Vice President and the Space Council, at the end of the day it put the President in a very untenable position. The President, not surprisingly, ended up of course supporting his Vice President and the rest, as they say, is history.

My hope is that that lesson is not lost on today’s NASA leadership. Equally important is that the Space Council stay in the policy arena and avoid as much as possible micromanaging the Agency when it comes to programmatic. That’s a challenge to which one has to pay very

serious attention. Bottom line: I'm very gratified that this administration has brought back the Space Council. I'm also gratified that the chairman of it, Vice President Mike [Michael R.] Pence, will be wearing both hats as a member of the National Security Council [NSC] and chairman of the Space Council. Dual hatting the Vice President is critical since our Space Council arguably suffered to some extent by not having the full endorsement of the National Security Council at the time.

At the same time, we were lucky that National Security Council Advisor General Brent Scowcroft, who was such a tremendous national security leader, more often than not, supported our efforts. But there were times when there was almost a subordinate relationship with the Security Council that was a handicap at times, frankly. Arguably, this was inevitable given the formidable scope and power of the NSC. My speculation is that the Vice President under this President will have more of a seamless relationship with the Security Council, and I think that's all to the good.

But, frankly, as an old boss of mine used to say, "How many ifs to a maybe?" So the effectiveness of the Space Council will depend upon the administrative and policy skills of the Executive Director, Scott Pace, the technical depth of his staff and, critically, on the level of leadership and support that the Council is given by the Vice President and the President, as well as the cooperation by NASA leadership, the Pentagon, FAA, Commerce, State and other relevant agencies. I have known Scott Pace for over 35 years. He was also my deputy when I was NASA Chief of Staff. I can't imagine a better qualified manager of the Council. So, with that personnel decision alone, the White House is off to an excellent start.

WRIGHT: It's interesting from one administration to the other of what the purpose has been, what the significance has been, what the productive results have been. It'll be interesting to see what history will bring to us on that.

STADD: It is. There are times when I talk to critics of the Space Council I was part of and I often find that the critics are the ones who didn't get their particular program or policy through the process. I speak to others who embrace it, and they are ones who, not surprisingly, achieved much of what they wanted through the Space Council. So, as the cliché goes, where you stand is often where you sit. But I believe that, overall, a Space Council is more a net benefit than not, and that there are a host of outstanding issues that do not lend themselves to resolution by one agency but really require White House leadership. The Space Council at its best can be an effective way to arbitrate and litigate important interagency issues of national significance. But, again, the proverbial jury is still out, of course, as to how effective the Space Council will be under this particular administration.

WRIGHT: Let's just take a few seconds and think about the other areas that you assisted with. It must have been a tremendous busy three months.

STADD: Yes, as is typical for a new Administrator, the first few months are jam packed with personnel decisions and addressing program and policy issues that have stacked up in the proverbial in-box. On the personnel front, among other personnel decisions, Mike was giving consideration to who the new Associate Administrator for Space Science would be. He was considering on his short list an individual, Dr. Mary [L.] Cleave, a former astronaut, who, in my

humble opinion, I felt would not be a strong candidate. I had watched Dr. Cleave try to manage the Earth Science portfolio with mixed results and had heard her give public remarks that I thought were not particularly effective in terms of representing the Agency.

I was one of those who raised objections to Cleave's candidacy. She may have brought appropriate credentials to the Earth Science world, but in my humble opinion he should have cast a much broader net in terms of looking at a new Associate Administrator for Space Science who would bring the prestige, communications and interpersonal skills and knowledge to the overall multi-faceted space science portfolio.

For better or for worse he felt that he owed Mary Cleave something in return for her support for his candidacy, as well as his regard for her technical expertise. Given my insight into the people and factors that played a critical role in Griffin's nomination for the Administrator position, I think—in fact, I know—that he was overplaying the significance of her role in terms of building support for his nomination. But that was certainly his prerogative. Although Dr. Cleave and I enjoyed a congenial relationship, I made no secret of my view as an informal adviser that he should have, as I said, cast a broader net for candidates than he did. He ultimately named her as Associate Administrator of Space Science. Beneath the congeniality, I always sensed that Cleave resented my concerns about her appointment and I am convinced that that helped motivate her to testify against me when my legal case, which I will be happy to describe later, went to trial.

Again, people can argue over her legacy, but I think it turned out as I feared—not especially impressive, particularly in comparison to her predecessors and successors.

WRIGHT: What skills or criteria did you believe was needed by the person who was going to lead Space Science? What did you want them to have?

STADD: Frankly, I think that the current AA for Space Science, Dr. Thomas Zurbuchen, brings an optimal set of scientific credentials, national prestige, and interpersonal skills to the position. Having heard Dr. Zurbuchen speak on several occasions, I can tell you that he's very eloquent and very compelling, as well as sensitive to the complex set of stakeholders that make up the space science community from astronomy to solar physics to Earth science. Frankly, that was the type of individual that I was hoping Mike might consider.

By the way, I thought that John [M.] Grunsfeld did a very formidable job as the recent AA for Space Science. There you have a case of an astronaut who brought an appropriate and formidable set of credentials to the table. John, I think, proved during his tenure that he was able to reach out to a diverse set of networks that make up the space science community. That is yet another example of the sort of person that I, for one, was hoping that Mike would select. But he was the Administrator and I wasn't. All I could do was give him my two cents as a friend and informal adviser.

WRIGHT: You had spent those years either on the outside looking in, or the inside dealing with the inside and the outside. You knew personalities. You also knew those skills that were needed for success along with what personality styles that were necessary to deal with scientists to astronauts to engineers, politicians, constituents, consumers, and commercial people. I'm not quite sure that people who don't have a lot of dealings with the entire environment at NASA have an idea of what type of people that they have to deal with. NASA's spectrum has a wide

range, so what does it take? If you were casting that crew or casting those characters to make a very functional and well-rounded NASA, what are you looking for in the people who can lead areas inside of that Agency?

STADD: You really are looking for almost an impossible set of credentials in one person, but you're looking ideally for someone who first and foremost understands the research culture, understands the development culture.

NASA is that rare federal agency that is characterized by research, development *and* operations. NASA is also known for being a can-do culture. There are many obvious virtues and benefits associated with a can-do, very optimistic culture. But it also can lead you astray if you're not careful. So you need a leader who can see through that sometimes overoptimistic, can-do attitude, and be able to know what questions to ask the engineers and scientists that make up that culture, or at least rely on people whose judgment you trust to ask those questions.

First and foremost, you need someone with the requisite and diverse experience working in the engineering and science cultures. That's essential. By the way, I've met people who are non-engineers and non-scientists who have that experience. Obviously Jim Webb, the former Administrator, was a prime example of somebody who was nontechnical, but by the time he became Administrator he had worked in a number of technical cultures, both corporate and governmental, so that he was well equipped to lead an organization of the complexity of NASA.

He also had enough self-awareness, which is another credential that I would say you need in an Administrator—to know what you don't know, and to know that you need to augment your deficiency, let's say in the case of engineering or science, by bringing into your orbit people with sufficient technical standing and insight. Which is why I believe in the 60-plus years of NASA's

history that the most effective governance model remains the triumvirate model that Jim Webb oversaw with people like Dr. Dryden, Dr. Low, and Dr. Seamans, who I referred to earlier, all of whom brought a diverse set of leadership, technical, policy, and interpersonal skills that really made that a very successful decision-making model. Administrators who have attempted to use a variant of that approach have been the most successful, and those who have tried to do it alone in many cases have been the most challenged.

But I must tell you that first and foremost a NASA Administrator in Washington, DC, in the nation's capital, where you're dealing with the NFL [National Football League] of politics, needs to know how to block and tackle in the political environment; how to interact with the members in the Senate and the House; how to deal with the sometimes adversarial and tribal politics in the White House and the Office of Management and Budget; how to interact and build coalitions with the other agencies; and, of course, how to interact with industry.

As I said earlier, it is essential to have the trust of the men and women in the field who are executing your vision. Also, it is important for the Administrator to be sensitive to the fact that NASA is a *civil* agency. Many of the same men and women who came to NASA could easily have decided to work in the national security and intelligence-related space programs, but they purposely chose to work in NASA's open culture environment. These men and women are particularly sensitive to politically driven decisions and to any sense that they're being undercut or undermined for reasons that have to do with sheer politics. Accordingly, you have to really respect the sensibilities of the men and women that make up the NASA world in communicating your edicts and your desires. I half-jokingly tell people that when an Administrator issues an edict in the NASA culture, it's the beginning of a discussion. It's not the end of the debate so one needs to respect the organizational culture.

Put another way, whoever leads the Agency has to be very sensitive to the fact that the culture of the Agency is markedly different than a command structure in a place like the Pentagon or the intelligence community. I have worked for Administrators who have come in and have taken more of a military commandant approach. I just think that's a total misread of the culture. And, as the expression goes, "culture will eat strategy any day of the week."

WRIGHT: As a person who was very instrumental in setting up commerce with the Space Agency, or I guess I should say commerce for space travel and for space cargo, there's those alliances with the commercial entities. There's the civil agency as you mentioned. Then as you said, there's the military part.

This is more of an opinion question, but it's also one of your insight and experience. Through these decades how have these lines started to blur or maybe even cross? Is there a reason that we need to keep them separate as we move to so many of the decisions that are starting to be discussed now?

STADD: I've been involved in government policy and commercial space for almost 40 years. One-third of my life has been in the government and two-thirds in the private sector. What's been very fascinating to watch is the generational change at NASA, because when I started and was advocating for greater private entrepreneurial activity in space, the immune system in the NASA bureaucratic world was quite remarkable when it came to pushing back against encouraging a NASA-non-dependent space industry.

Over the past generation, I am happy to say that the NASA culture has transformed itself. There are still pockets of resistance, of course, but I take great solace in watching the Agency

leadership be so supportive of fostering a commercial space sector. I see more and more healthy interaction between the civil and the commercial space world in terms of, for example, government support for the emerging commercial satellite imaging industry, as customer and partner.

In the national security sector, it is gratifying to see more and more partnering and reliance on commercial sources, including more emphasis on hosted payloads. All of that indicates that a very healthy synergy is emerging. Challenges such as tackling procurement reform to facilitate greater use of commercial space hardware and software is way overdue but at least we are seeing forward progress on multiple fronts. By the way, on my more cynical days, I believe that the major traditional contractors have a vested interest in the status quo, and behind the scenes they are slowing down efforts to support the government embrace of the emerging space entrepreneurs. But, frankly, such efforts are doomed to failure. The new generation of commercial space entrepreneurs are bringing formidable talent, financial resources and innovation to this arena—such that no responsible government official can afford to ignore the emerging trend lines.

Due to the nature of the national security space world and the premium placed on protecting the government's equities from a range of global threats, however, there will always be a bit of an arm's-length relationship with the commercial space sector, and I think by and large that's understandable and healthy. With that said, I think we will continue to witness efforts by the national security community to increasingly purchase services or otherwise leverage the growing private capital being invested in commercial launch and satellite-related capabilities. But, again, the military and intelligence communities will, for the foreseeable future, approach the non-government with caution and in a tentative manner.

In contrast, what I think we're seeing, what I hope we're seeing, in the civil world is a migration toward a point where NASA—and I would include the National Oceanic and Atmospheric Administration [NOAA], the weather satellite world as well—increasingly looking to purchase its services from the commercial space industry, with the Agency marshaling its resources, its workforce, to focus on over-the-horizon research, which for-profit companies will not pursue due to lack of concrete near-term investment opportunities. Having the Agency invest in long term research and development, such as deep space exploration or over-the-horizon aeronautics R&D, I think is very consistent with NASA's founding 1958 statute which, among other initiatives, directs the Agency to focus on next-generation technologies.

What I see is a very healthy transformation of the Agency. It's taking longer than many of us had expected, and a number of us are still impatient that it is not happening faster. The Agency is also encumbered by a brick-and-mortar infrastructure that is a huge weight on the budget. A lot of it arguably is deadweight in terms of the overhead that the agency carries year in, year out. Nobody in their right mind in the 21st Century would invent an Agency so top-heavy as today's NASA, with arguably a very top-heavy bureaucracy at Headquarters and so much overhead amongst the nine—and if I include non-civil service JPL[Jet Propulsion Laboratory, Pasadena, California]—ten field centers. Instead, you would develop more of a Silicon Valley lean and mean, flat organizational approach to an R&D culture.

But having said that, I think that what we are witnessing—slowly but surely with the emergence of a vibrant commercial industry—is an Agency that is being prompted, organically, to change the terms and conditions of its relationship with the private sector. I think over time such interaction with the private sector is going to turn the Agency more and more, as I said earlier, to a services-based approach. It may well be an Agency that we don't recognize in 50

years or less. In stark contrast to today's agency, the organization will be flatter, more focused on core long term exploration missions and, as I say, more dependent on a robust commercial space sector for services. All this will mean that the American taxpayer should be getting an even greater return on their investment in the years ahead. I may be overly optimistic but that is at least my long-term hope for the agency.

Now my caveat is that as much of an advocate for commercial space as I am, certainly the jury is still out in terms of commercial space proving to be a self-sustaining marketplace. The government still plays a critical role in buttressing the satellite commercial remote sensing world. Certainly, the launch industry is still heavily dependent on government largesse. But I do see signs of industry over time looking to break out and become self-sustaining—especially in the area of commercial CubeSats and CubeSat class launchers. But, even in that market sector, the jury is still very much out in terms of the ultimate nature and scope of that marketplace.

I do think the Agency is doing more right than not in terms of supporting the emergence of the commercial space sector. There's still some conflicting policies, for example, conflicting definitions of cooperative space agreements, from Center to Center that I think need to be cleaned up and harmonized. Speaking of the Centers, I still think there's a bit more duplication among Centers, in terms of capabilities and hardware, than can be reasonably defended.

There are also times, however, when an agency should have some redundancy because you never know, as an R&D agency, when you'll be called upon to use those facilities. Obvious examples include wind tunnels, arcjets, and things of that sort. It is best not to be too quick to summarily terminate certain facilities, because we almost inevitably pay the price for it years down the road when a research program suddenly emerges that may call on formerly under-

utilized facilities. So decision-makers need to use great care when deciding whether or not to terminate a given research capability.

WRIGHT: Chamber A at the Johnson Space Center [JSC, Houston, Texas] right now is being used for the James Webb [Space Telescope].

STADD: Great case in point: Who would have anticipated that some years ago?

WRIGHT: No kidding, walking into that building is totally different. You're exactly right. One of the companies that you worked with along the pathway was Bigelow, who now has a module at the ISS.

STADD: The BEAM [Bigelow Expandable Activity Module], the inflatable expandable habitat, built by Bigelow Aerospace, is currently attached to the ISS.

WRIGHT: Yes. If you can, talk about your work with that project and your thoughts about when the BEAM was attached.

STADD: When I left the Agency in 2005, I worked for Bigelow Aerospace for about two or two and a half years out of their Washington office. I had the great pleasure of working with Mike [Michael N.] Gold, who was a young attorney at that time who's now gained some prominence as former chairman of the Commercial Spaceflight Federation Committee, and the former

chairman of the FAA [Federal Aviation Administration] AST [Office of Commercial Space Transportation] Commercial Space Advisory Transportation Committee.

During my tenure with Bigelow, we did the necessary block and tackle on the regulatory front to get permissions to launch two man-size expandable habitats called Genesis I and II that were launched out of Yasnny in southern Russia. By the way, we did so at single digit prices that would be unimaginable going forward, but it was very gratifying to work with someone like Robert Bigelow, who was financing this venture from the fortune he had built from his great success in the real estate business. He had a vision from early on in childhood for human settlement of space. This is a great example of where NASA was pushing technology, in this case the JSC led TransHab project, which was looking at the use of expandable inflatable technology for ultimately habitats on the Moon and eventually Mars. Back in the '90s Mars human efforts, for a number of political reasons, were looked negatively upon by the political system, and so NASA leadership at the time squashed any effort to proceed with Mars-related initiatives.

The fledgling TransHab project was terminated at the Johnson Space Center. Bigelow at the time was looking around for a program that he felt had commercial viability, and he came upon TransHab. It literally was on the eve of being physically trashed, not just metaphorically, but physically so. He and Mike Gold managed to purchase the rights to the technology.

By the way, it was a very tricky set of negotiations, because really NASA JSC had no real baseline for valuing the technology for commercial sale. Ultimately Bigelow was able to obtain the license and form a company around it. Part of my job was to build bridges between Bigelow and NASA. He had been fairly vocal in his criticism of the Agency at the time and had alienated some officials with this rhetoric. I had worked with the JSC leadership and other

relevant Center officials and so was able to help rebuild some key relationships, with Bob Bigelow and Mike Gold's assistance, between the Agency and Bigelow Aerospace. To the credit of the JSC leadership, they were willing to lean forward to establish a working relationship with Bigelow. Greg [Gregory W.] Hayes, who was running external relations at JSC at the time, and the late Sue [Susan H.] Garman, who was the former Associate Director at JSC, among others, were terrific supporters. I'm proud of the fact that we were able to lay the foundation for a good healthy relationship with the Agency going forward.

Bob Bigelow is a remarkable and inspiring entrepreneur. I remember once visiting him when he was building his factory in the northern part of Las Vegas [Nevada]. In fact, I remember getting a cab at Las Vegas McCarran Airport when I visited Bigelow when I was first working for him. Keep in mind that the vast majority of the cabs from the Las Vegas airport take visitors to Las Vegas Boulevard where the big casinos are located. So when I got in, the cab driver was a bit disoriented, because I asked to go to the industrial part of Las Vegas, the northern part of Vegas. When I showed up, it was breathtaking because Bigelow had secured a pretty large amount of acreage and had built a set of factory buildings, and he'd begun to name streets on the compound after certain space-related themes, including space fiction movies.

As he gave me the tour of his facilities, I was so impressed by this gentleman who had a compelling vision from childhood and was now executing his long-held dream. I was very taken by his methodical testing regime. Frankly, I think that systematic approach is what caught the attention of the NASA people who I invited to take tours and see demonstrations of the strength and integrity of his expandable habitat materials. He was investing his own money in the equipment and facilities to ensure that his space habitats were as rigorously developed as possible.

I was also impressed by Bigelow's decision-making. I recall being on the shop floor one day when a technician came up to him and asked him for a decision. He made it on the spot. I'm not suggesting it was an earthshaking decision, and I don't recall the exact details. But I do remember saying to Bob as we walked away from that encounter, "You realize, of course, if that had been a decision at NASA or one of the large contractors, that would have been at least a multi-week process."

He stopped and he said, "You're kidding."

I said, "No." I said, "That to me is the difference between an entrepreneur and being captive to the rigid decision-making process associated with the government and the major aerospace contractors." This is not to glibly deny that some critical spacecraft manufacturing decisions can be complex involving multiple stake-holders and can involve long periods of expert deliberation, particularly in a human spaceflight program. And it's not to say that Bigelow didn't put in some checks and balances. I'm not suggesting that he made all his decisions on an autocratic basis. But the anecdote captures the entrepreneurial, quick turnaround, agile culture he was fostering. Also, the fact that his own office oversaw the factory floor, so he was no more than a few yards away from the actual construction of the spacecraft, I thought was a very important leadership tone to set.

As I said, he was a very impressive gentleman. As we speak today, I know that he was recently interviewed on *60 Minutes* and was asked among other things about his belief in UFOs [Unidentified Flying Objects]. I must tell you that in my own discussions with him he took the topic very seriously. He invested a considerable amount of money in talking to some of the leading scientists about his belief in UFOs. Whether you agree with him or not, I was impressed with how, again, systematic he's been in approaching the controversial subject matter. But let

nobody mistake that belief for thinking that he's not a very hard-nosed, very pragmatic individual.

As I told an audience recently, think about the skill it took to go from this abstract notion of building these expandable habitats and building a company around it to the point that he's got two expandable habitats orbiting Earth today, and a major module called BEAM, attached to the ISS. That is no mean feat. As to whether he can make a successful profitable business is very much an open question, especially in the absence of low-cost launch vehicles to deploy his modules and people to occupy them.

If somehow or other we can get the price to orbit significantly reduced—the holy grail of space access—I have no doubt that Bob Bigelow and his team will be in the forefront of not only putting these expandable habitats in low-Earth orbit but taking the lead in terms of habitats on the Moon. I was at a lecture recently where a scientist had an illustration of Bigelow habitats on the surface of Mars. I texted that image to Bob Bigelow and said, “I can see you're having an impact even as we speak today, well before these modules are launched. It's nice to see the community-at-large beginning to embracing the concept.” It is worth noting that large-scale inflatable space habitats were just an abstract notion some years ago before Bigelow invested his own capital into turning this technology into reality.

Forgive me if I dwelled so much on Bigelow, but I did so because I closely worked with him and was impressed with his organizational skills. And, although he has yet to generate a profit, he epitomizes the other high net worth individuals who are investing their own capital in building the habitats and transportation systems that are augmenting the government's own programs and may be important building blocks for humanity's continued exploration and permanent settlement of Earth orbit and beyond.

With that said, many formidable challenges remain, including what is the actual market and who's willing to pay for it. Pathfinders, such as Bigelow, Elon Musk [SpaceX], and Jeff [Jeffrey P.] Bezos [Blue Origin], Sir Richard Branson of Virgin Galactic, Jim Cantrell of Vector Launch, Andrew Rush of Made in Space and many others are shaping and driving the future of entrepreneurial space. It's to the great credit of NASA's head of Spaceflight, Bill Gerstenmaier, and his team that they've embraced their partnership strategy with people like Elon Musk, Bob Bigelow, and others like NanoRacks CEO Jeff [Jeffrey] Manber and others.

As I sit here today, I have great hope for the long-term future of commercial space, notwithstanding the many technical, financial and marketing challenges still facing this sector.

WRIGHT: Are there other entrepreneurs that you have worked with, other than Bigelow, that you have seen in your experiences working on both the federal side as well as the independent side, that you have seen their dreams come true, that you've been able to help move that way?

STADD: Yes. One such example is DigitalGlobe. I worked with their predecessor company called EarthWatch back in the '90s and helped establish and manage their DC office and helped push for streamlining remote sensing policy and regulations.

I was also in the forefront of helping support the first government commercial data buy. This entailed NASA pre-certifying several companies who were marketing various sources of remote sensing, including aerial imagery, and became a demonstration case for the government buying certain types of imagery from the private sector versus the government having to build the hardware and capability from scratch. As I recall, NASA invested around \$50 million in the

initial program. It was originally administered by NASA's Stennis Space Center [Mississippi] and had its share of start-up challenges.

But ultimately the program became one of the sources of the model for the intelligence community, which developed a multi-billion dollar initiative which has been buying huge amounts of satellite imagery data. Over the years, it has been gratifying to watch EarthWatch evolve into DigitalGlobe, which is supplying valuable imagery products and services to the federal markets. DigitalGlobe and its sister companies in the remote sensing world are an example of private entities not only benefiting many global markets (e.g., agriculture, urban planning, corporate intelligence), but there are battlefield commanders in the field whose planning is made immeasurably easier due to the easy and ready access to low cost satellite commercial imagery. So that's been a wonderful thing to see, and it frankly started back in the early nineties when I was on the staff of the Space Council and we began to grapple with the issue of so-called deregulating high resolution optical imagery and making that available to the private sector.

That whole policy topic of the appropriate role of the government in commercializing high resolution optical imagery involved a tough set of interagency debates, because you had an intelligence community that had a monopoly on that technology and were fearful of such imagery—even if privately produced imagery was still a fraction of the resolution used by the national security community—being available to the world-at-large, especially our adversaries. I think history has proven that as the late Dr. Ed [Edward] Teller and others had predicted, the more such imagery was made commercially available to the world-at-large, the more the activities of allies and adversaries can be monitored by the global community, the safer we will be. For example, I think it beneficial for the media to show commercial imagery of missile

deployments in North Korea or Russia's incursion into Ukraine. At the same time, it's important, of course, to maintain certain classified information. But, again, I would argue that the world is better off with greater public transparency into the planet's many trouble spots, which is afforded by the increasingly greater access to low-cost high resolution imagery.

Another example of a pioneering commercial company is one that I am currently involved with called Laser Light Communications. Laser Light is a very exciting venture that's actually leveraging some pioneering work that NASA did in the field laser communications-related technology as well as some technology development done by the military, namely the TSAT [Transformational Satellite Communications System] program. The company hopes to finalize its initial capital raise in the near term. The company is dedicated to building and operating the world's first constellation of 12 laser or optical satellites in medium Earth orbit that will provide the first global optical communications. If successful, these types of satellites and their innovative ground segments (capable of switching quickly to alternative methods of distributing the data in case of, for example, inclement weather) would provide an order of magnitude greater capacity for distributing data, at cost effective prices, around the world. The best analogy to this proposed system, in terms of throughput capacity, is not conventional comsats [communication satellites] but to undersea cables. Laser Light Communications is yet another prime example of taking government-developed technology, augmenting it with private sector innovation and commercializing it.

WRIGHT: Along this path, you found a bump in the road.

STADD: A mountain might be more of an appropriate metaphor. But yes.

WRIGHT: You alluded to it earlier in the conversation. Why don't we go down that path so that we can learn more about how you managed to get over that bump and back into operation again?

STADD: It's hard not to be profoundly defensive in talking about this issue. But I will try to be as evenhanded as I can be.

I must start with my philosophy of public service. I was brought up by World War II Great Depression era parents to believe in the honorable nature of public service. When I was given the opportunity to work in my various incarnations in government I also always viewed it as a privilege and an opportunity to serve the American taxpayer. It may sound corny but it is genuinely how I felt. I never felt for an instant that the taxpayer owed me anything. Rather, it was me who owed the taxpayer the best of my ability and to always ensure that the American people's tax dollars were as effectively invested as possible.

Personally, money has never meant much to me. I think anybody who looks at my threadbare and unfashionable clothing and knows my values can honestly say that money and material things have never been a big issue for me or my wife. Obviously, I want to ensure a roof over my family's head and we've always placed a big premium on our kids' education. But other than that money has never been a big priority for me.

So in capital letters, the legal nightmare that happened to me was a great irony, because of the value that I have placed on public service my whole professional life. It begins, this legal nightmare, in April 2005, when I accepted Administrator Griffin's offer to come back temporarily to NASA HQ to carry out the assignment I described earlier. I have pieced together over the years what I believe happened and what the motivations were behind the people who

ultimately went after me. Unfortunately, I don't have much empirical evidence to buttress my claims. Much of this is anecdotal that I've put together. But, after years of talking to people whose judgment I trust and knowing the truth as I experienced it, I am very confident of my beliefs as to the players and their motivations that led to my prosecution.

I had a philosophy professor in undergraduate school who referred to truth as "angular truth." He meant to say that we all have our own view of truth. You're about to hear my version. But, again, it's one that I feel is fundamentally true regarding the situation I found myself in.

When I was advocating for Mike Griffin as the Administrator, unbeknownst to me at the time there was an effort to push for an alternate Administrator. When much later I became aware of the person's name (after Griffin's nomination was announced by the White House), I not only did not regret championing Griffin but I felt that that individual, a former astronaut, was somebody who I felt, in my humble opinion, was not what the Agency required. Again, I was not aware, at the time, of a competing candidate for the NASA Administrator position and so I did not do anything to oppose or otherwise undermine that person's chances. I was focused exclusively on helping make the best case possible for Dr. Griffin.

I was part of a small group of friends and colleagues of Griffin who were discretely lining up key support from Capitol Hill, including the late Senator Ted Stevens, Republican from Alaska, and Barbara Mikulski, senior Democrat from my state of Maryland, both of whom, as members of the Senate Appropriations Committee, carried a lot of influence over the naming of a NASA Administrator. As I understand it, sometime in January of 2005, Senator Stevens was over meeting with then President George W. Bush, and pushing for Griffin be the nominee for NASA Administrator, and he was able to relay the fact that Senator Mikulski was supportive as

well. Unbeknownst to me, the Vice President, Dick [Richard B.] Cheney, apparently had been encouraged to support the alternative candidate I referred to above. Given that this individual was never nominated, I feel it inappropriate for me to name the person.

Now, if I had been aware that the Vice President was advocating someone else, I'd like to think that I was politically astute enough to have stepped aside and conceded to the Vice President. But no one had brought to my attention that the Vice President and his folks were that engaged with the matter. One would have thought he had other pressing priorities, such as fighting terrorism and addressing the nation's economic challenges.

Anyway, as I understand it, Senator Stevens brought up Mike Griffin's name to the President. Others in the West Wing knew of my support (I still carried some credibility from my previous roles as White House Liaison) and I knew that Griffin had received an informal endorsement from the President's Science Adviser, the late John [H.] Marburger, among senior people in the government and industry. So the President was hearing from a range of credible sources that Dr. Griffin would be a good choice—especially given the overriding challenges facing the Agency as it confronted returning the Space Shuttle Program to flight status in the wake of the February 2003 *Columbia* accident. No one could dispute that Griffin had the engineering credentials to oversee arguably NASA's number one priority—that the Space Shuttle Program would receive the appropriate resources to ensure a safe resumption of operations.

From my understanding, in early January 2005, at a regularly scheduled lunch with the President, Cheney happened to mention his proposed candidate for NASA Administrator. Reportedly, the President said that he had already had a nominee in mind—someone who had the informal endorsement of at least two key Senators. Sources tell me that this statement caught the

Vice President completely off guard. He was prepared to make an argument for his candidate and now he finds that the President has preempted the decision. Well, in this town, there's always a fall person, so my understanding is that the Vice President went back and asked his senior staff what happened, and, yours truly got a share of the blame.

Not knowing about the situation with the Vice President and his staff, I made matters worse by accepting Griffin's offer, after his quick Senate confirmation, to temporarily return to HQ, as I explained earlier. At the same time, the Inspector General at the time, Moose Cobb, who as later investigations revealed (too late for me) never respected the independence of his office and was arguably too close to the former Administrator, Sean O'Keefe, as well as very close to some of these same protégés of the Administrator who were now being targeted for termination by the new Administrator. By being posted in the Office of the Administrator, I was perceived as being associated with those decisions by Cobb—whether or not I was privy to them. I guess in his mind I was guilty by association. In recent years, I have been told by sources that the IG was told by a senior staffer on Cheney's staff to focus on me and was explicitly admonished "to see if you could find anything on him." So the IG began to target me. Of course, such intervention by the White House with an IG is totally inappropriate, but, regrettably, there is no paper trail that I can use to make the connection. But, again, I have confidence in the sources who have helped me connect the dots as to what originally motivated the IG to target me so relentlessly.

After completing the temporary assignment that I described earlier, I left HQ around late June 2005. The IG initiated his investigation as soon as I left. Again, his motivation was to basically find anything he could, motivated in part by what sources close to him tell me was his view that I had been disloyal to his former friend and colleague, former Administrator O'Keefe,

and by a prompting, as I just noted, out of the Vice President's Office to find something or anything incriminating on me. To those who are unacquainted with the pettiness and machinations of life in the senior political ranks in the nation's capital, this no doubt stretches incredulity that a White House staffer would engage in such a hatchet job. I wish that I could say that such attacks are super rare, but, regrettably, the abuse of such authority is more frequent than most people realize. Nonetheless, it still amazes me that the IG went after me with a personal animus that rivaled that of Inspector Javert of *Les Miserables*.

With 20/20 hindsight, it is now clear that I made it immeasurably easier for Cobb to make me a target by my returning to HQ to work for the Administrator, especially when Administrator Griffin mistakenly announced that I was the Acting AA (I should reiterate that this had not been discussed with me beforehand; otherwise, believe me, I would have put the kibosh to it). Griffin also announced that he was encouraging the AAs to release the earmarks which had been frozen under Administrator O'Keefe. (The non-release of these earmarks had been a source of much frustration to some Members of Congress.) Earmarks, in which individual Members of Congress "earmark" funds for pet projects are now prohibited, but back then they were widely deployed. This announcement impacted me and became part of the IG investigation because I had a client at the time that I had fully disclosed in my ethics documents, Mississippi State University [MSU], that was a beneficiary of a funding earmark pushed by former Mississippi Senator Thad Cochran.

After Griffin made this announcement regarding the release of the earmarks, the AA for Space Science, Mary Cleave, came in to see me, in my purely advisory role, on an issue. I do not recall the exact details of the issue, but I do recall distinctly that I said to her, "Look. I'm purely an

adviser without decision-making authority, but I hope you realize the Administrator is very serious about releasing these earmarks.” I distinctly remember telling her, “In full disclosure, I am working with MSU, which is one of the beneficiaries.” I don’t know if I indicated it was in my ethics disclosure, but it certainly was. I also quite clearly recall adding, “If you have any concerns related to the earmark issue, you need to go and talk directly to the Administrator.” There was no indication she ever did that.

That discussion ultimately became a charge against me a few years later of unfairly influencing an earmark, even though I was not part of the decision-making flow, and even though I had disclosed my relationship in my ethics disclosure forms. This earmark issue was one aspect of the legal nightmare that eventually befell me. I’ll try to bring the various elements of the case brought against me in a couple of minutes.

The other but related legal issue was that I was working with MSU on a study, involving the use of space assets and homeland security via funding provided to Stennis Space Center. MSU was part of a small group of academic institutions that had been pre-qualified for their technical capabilities in the area of satellite imaging applications, and I was working the project through my long-time consulting firm. Due to my long involvement with remote sensing policies, my firm had a lengthy history of working with MSU on various projects related to the use of space-based imaging. Again, I had fully documented my work on this initiative to the Agency’s ethics attorney. The other individual collaborating on the study, who had been a subcontractor through my firm, a former Agency officer, had disclosed his work on it as well.

Ultimately, the allegation made by the IG was that the study was a vehicle used to defraud the United States government. Even to this day it is hard for me to say those words.

Such an allegation against me, involving the misuse of public funds, is inconceivable to me. As I said earlier, I always took seriously being a good and honest steward of the taxpayer's funds.

In retrospect, my poor judgment call at the time was several fold. One is a matter of appearance. I should have rejected the Administrator's desire for me to work in the Office of the Administrator and, instead, stayed away from Headquarters and remained in a purely contractor mode to advise the Administrator on forming that new position for AA. That was really the fundamental mistake. Although I viewed the MSU study subject matter as compelling—I mean, at the time, no one had really looked at the use of NASA space assets for homeland security from this vantage point before—I should have simply terminated my work on it when I accepted the temporary work assignment from Administrator Griffin. I certainly wasn't driven by the need for money. As I say, I felt it was a study that needed to be done. But I should simply have just terminated it at the time. I had other opportunities to generate revenue, and frankly I got so preoccupied with the work that I was doing at the Agency that I should have given more focus to it. Further, I should have done more due diligence on the ex-agency official who had been subcontracted to do work on the study and had, it ultimately turned out, fostered some interpersonal conflicts in HQ that motivated a disgruntled official to complain to the IG about this person. Since this is my narrative, I do not feel it appropriate to bring this former associate's name into my chronology of events. We are, happily, no longer in communication. So mea culpa on all those fronts.

When I eventually left the Agency, I remember running into Moose Cobb, the IG, in the hallway and saying, "Moose, I'm leaving." I'll never forget the look on his face when he said, "Yes, yes, I think it's about time that you leave." You get very paranoid after what I've gone

through. But I think he was hinting that he had enough circumstantial evidence at that point to trigger his Inspector Javert like investigation and come after me. As I indicated above, it is clear to me that he was motivated by politically-driven and personal animus at that point.

This foreboding was confirmed when shortly after I left the Agency—it was maybe in July 2005—when I got this call from an official from NASA’s Security and Safety Program Office who said, “Are you aware that you’re under investigation?” My blood ran cold, and I said I was completely unaware of it. He said, “My understanding is that they’re looking at your involvement in some agency-funded university study and whether it entailed laundering of funds.” He didn’t have more details. From a legal exposure standpoint, I certainly didn’t feel in the slightest concerned. I mean don’t get me wrong. You should always feel concerned when you’re under investigation by any federal or any law enforcement authority. But I certainly didn’t feel legally culpable in that I had always done things by the book. And I certainly felt if they have any questions they knew where to find me. I would hear, third hand, periodically about this investigation but no one contacted me for a long period of time.

I eventually ended up receiving a subpoena some months after receiving that courtesy heads up from my former Agency colleague. I’d never gotten a subpoena in my life. Although I still had confidence that any fair and balanced investigation would find any allegations regarding illegal intent to be baseless, I have to admit that my blood went cold once again. The reason is that I had been hearing about cases of individuals who regardless of evidence of innocence were prosecuted by the feds, and due to either malfeasance by the investigators or lack of resources to fight the Justice Department, ended up pleading guilty to something that they were convinced they were not guilty of. So I went to my small business attorney, a wonderful lady, and she said,

“Well, this is above my pay grade.” She said, “Let me recommend a colleague, someone I went to law school with.”

I was introduced to an attorney named Dorrance Dickens. He was working out of a boutique law firm in Dupont Circle. He was a bigger-than-life personality. He had clearly a photographic memory, and he was very impressive, and so I secured his criminal legal services. That engagement started a legal horror story that even Stephen King [author] in his worst nightmare plot could not imagine.

Dickens claimed to have former White House Chief of Staff Leon [E.] Panetta, among other prominent people, as a client. He claimed to be a medical surgeon. He even claimed to be a priest, a bishop, who was appointed by the pope. Occasionally he'd even dress up in the vestments of a bishop. He claimed to be an archeologist with expertise in the Mayan civilization. He claimed to be friends with Robert Redford [actor] and a judge at the Sundance film festival. He claimed to have even worked at NASA Stennis Space Center. He claimed to have an expertise in my type of case and that based on the facts of my case, he did not believe there was a basis for legitimate prosecution and that he had the experience to sit down with the investigatory authorities and get the case properly resolved without it ever having to go to Court.

During my subsequent meetings with him, Dickens emphasized that he did due diligence on the case and could find nothing that certainly warranted a federal level investigation, let alone federal indictment or conviction. By the way, other lawyers who subsequently have taken a preliminary review of the government's case have tended to agree with Dicken's assessment. The only problem is that it was too late before I realized that he lacked the requisite experience and knowledge to effectively defend my interests.

Allow me to get to the punch line. Over the years, when it was much too late, I discovered that he was a total and absolute con artist. He was damn good at it, too. By the time that I discovered his duplicity, I had gone through not one but two indictments. I went through a trial in D.C. and conviction. I ended up pleading to a count of defrauding the government in a courtroom in Mississippi and was sentenced to something like 41 months, of which I did 32, not because anyone did me favors, it was just based on a federal rules governing good behavior time off.

It wasn't only until about a year or half or so after I got out of this federal camp—and I should emphasize it's not a James Cagney stereotypical movie prison environment, it was a fenceless federal camp where I was ensconced—that I discovered from another client that Dickens had represented the con artist that Dickens truly was. As I speak to you today, he is a fugitive from the FBI. He's been debarred by the DC Court of Appeals Board on Professional Responsibility for having defrauded, at a minimum, six other clients, and is living, according to credible third hand reports, on Saint Kitts island in the Caribbean.

The court has calculated that he stole a couple million dollars. But I know that he stole from me—not just legal fees, but he actually stole all of my family's money. Claiming that he was also an investment expert and had befriended Warren [E.] Buffett and Bill [William H.] Gates, he took all our retirement funds from us saying that he could invest and grow the money.

As I say, it was about a year or half or so after I was released that I began to embrace the full significance of his fraudulence. It's very clear to me now that he did not do a fraction of what he had claimed he was doing in terms of reaching out to the authorities and trying to get the issue resolved before it reached the indictment stage. It's now also crystal clear to me that he was out of his depth as a criminal attorney, which explains why everyone in the court system—

associated with my trial, to the separate indictment and the plea that I took, to the staff at the federal camp—could never figure out why I ended up where I did.

The answer is starkly straightforward: It's because I had no effective representation. Now I have only myself to blame. I will only say in my feeble defense that I realized when it was much too late that when you have a con artist, a predator, who thinks 24/7 how to ingratiate themselves and charm themselves into your life, how effective they can be. And believe me, Dickens was very smooth, very charming, profoundly devious.

I recently watched Robert De Niro's portrayal of Bernie Madoff in *The Wizard of Lies* on HBO, and I could really empathize with his wife and his two boys. There are those, including many of the victims, who will go to their graves understandably convinced that there was no way that his spouse and his late sons could not have known about the nature of Madoff's pathological fraudulence. But, frankly, after what I've gone through, having been snookered by a master sociopathic con artist I have a great deal more sympathy for Madoff's family than I would have had otherwise.

When you're dealing with what I view as a sociopath, such as my former attorney and Bernie Madoff, you have to recognize that they've got the equivalent of a PhD in how to charm and take advantage of people. If I take any solace, it's that he was able, my former attorney, to fool many others. It does not mean that I do not feel immensely embarrassed by having been fooled by him to the point that his failure to effectively defend me led to a legal nightmarish outcome—including, as I said, his having defrauded me out of literally all of our retirement savings.

By the way, by the time I became aware of Dickens' fraudulence, I had blown through all the statutes of limitations, so I don't really have any standing to go back and appeal the trial

outcome nor the plea agreement; nor do I have the resources (financial, let alone emotional) even if I wanted to relitigate my case based on the incompetence of my attorney. As I said, he literally cleaned me out. To sum up, I found myself in the midst of a perfect storm of a legal nightmare.

I had a situation where I had made some political enemies, who in the case of the NASA IG, had the tremendous strength of his office to go after me. By the way, that same IG, Robert “Moose” Cobb, who came after me with such a vengeance was also was under a black cloud. He himself was being investigated for abuse of power generated by whistle-blowers who worked in his office. There was even a very rare House-Senate hearing on allegations against Cobb in which the civil servants in his office, I thought quite bravely, testified regarding his alleged abuses. There was even a report that was issued by the HUD [US Department of Housing and Urban Development] IG that was quite lengthy and quite detailed in its allegations and recommended that he be terminated. (The reason the HUD IG was involved was that when an agency IG is investigated for some alleged offense, standard practice calls for his or her peer at another agency to lead the inquiry).

To show you the strength of an IG office, Cobb was able to hold on to his position for about six or eight months into the [President Barack] Obama administration, notwithstanding the fact that both Republicans and Democrats were pushing for his removal under Obama’s predecessor, George W. Bush. I understand from sources around Cobb that he blamed me in part for the investigation. This just added further fuel to his desire to find anything he could on me. It would be a blow to his ego to know how little attention I was giving to his issues. In fact, I had no clue as to the allegations surrounding Cobb until the HUD IG investigation was well underway. But I think he, in his own mind, assumed that my perceived disloyalty to the former Administrator, O’Keefe, such as going to work as an advisor to O’Keefe’s successor, who did

not hide his low opinion of O'Keefe, translated, into his paranoid state of mind, that I helped to fuel the allegations that were piling up around him. Nothing could have been further from the truth.

By the way, I live in Montgomery County in Maryland, and talk about irony of ironies, I recently discovered that Cobb is an adviser to one of the councils. I think it is an ethics adviser no less! He also altered the search strategy for his name. I am speculating that the reason is that when you Google Moose Cobb, it surfaces a lot of the negative publicity about him, including front-page *Washington Post* articles about the allegations against him. But if you Google just Robert W. Cobb, such negative publicity is less likely to come up. So that's the name that he's using for his work in Montgomery County.

It's rather interesting that the individual who fueled a lot of these investigations has in many ways a greater ratio of negative publicity than I garnered from my own legal situation. Of course, as you can imagine, I have, to say the least, a very low opinion of Cobb. I am biased, of course, but I think the record shows that he did not have the temperament for the position and was definitely way out of his league and did not effectively serve the Agency. I do not know his successor, but I hear that he is far more balanced and judicious individual and I suspect that if he had been in charge at the time my case would have had a far different outcome. But alas, for whatever reason, the Fates had a different path in store for me.

I was aware of people who worked in the IG's Office who, of course, will never acknowledge this publicly, but who refused to investigate me. They viewed it rightly as a personal vendetta by the IG. There were also people in the Justice Department I was told who viewed the IG investigation as purely a fishing expedition. Nonetheless, Cobb pursued the case for five years. They subpoenaed just about all my clients. I'm very proud of the fact that my

clients, including publicly traded companies, stuck with me to the point where it became untenable for them. I was very proud of the trust that I had earned from them over many years.

Cobb and his folks were very frustrated they couldn't find anything. They even raided my house. I recall a battery of these people knocking on the door in the early morning. I had my two daughters sleeping upstairs. Let me tell you, it is quite an experience to have IG, marshals, Postal Service, come barging into your house. There's nothing more traumatic.

By the way, not only did they not find anything, but what they found were some invoices that I had "hidden"—and I'm being facetious—they were so hidden that they were sitting prominently on the top shelf of a bookshelf in a closet. Anyway, they grabbed everything that they could, including many personal items completely unrelated to the case.

One other source told me that they were disappointed because they were hoping to find some tax fraud associated with the payments I received from the Mississippi State University report. Instead, they discovered that I had paid taxes on all of the funds. When it comes to taxes, I have always taken a conservative approach. In fact, I recall when I was finally pled to open court and ended up at fenceless federal camp, Morgantown, FCI [Federal Correctional Institute], that one of the staff said they'd never had someone like me accused of defrauding the government, yet had paid taxes on the very funds that they allegedly defrauded. They were accustomed to people like Jesse Jackson, Jr., convicted of fraud including buying Rolex watches and vacations at the expense of the taxpayer. Of course, if you are truly seeking to steal from the government, why would you pay taxes on it?

The other thing that was never disclosed by my attorney, and you won't read about it when you Google the case, is that I ended up returning a healthy percentage of the original contract money. The reason was that when I was in the midst of working on this report,

[Hurricane] Katrina happened, and I recall calling the Mississippi State University contract monitor, and saying, “It’s hard for me to sit with this study money,” when at that point we weren’t aware of how many lives had been lost, but we certainly knew at that point that there was a significant amount of devastation. I said, “I wonder if there’s a way for us to terminate the contract and redirect the funds for recovery purposes.” Once the contract was ended, it is my understanding that the Agency did redirect the funds for recovery purposes, but I don’t have the details. My former attorney never brought any of this up as part of my defense.

Further, I had five or six subject experts who wrote letters to regarding the value of the report that my attorney also never used. People have asked why I pled. If you’re, indeed, innocent why would one plead guilty? First of all, I had a trial in around 2009 in DC, in which the government alleged that I had unduly influenced a Congressional funding earmark that benefited my client, Mississippi State. I had what I viewed as a compelling defense, including ample evidence that the decision-making process was so structured that I could not have materially influenced the use of the earmark. So I went into that trial feeling that I had a very very strong case. The whole painful experience led to my disillusion with the US criminal justice system as it is built on several fundamental structural flaws. Number one is that you are tried by your fellow citizens but not necessarily peers. The jury was made up of people who were not even one remotely familiar with the public policy world. It didn’t take long for the prosecution to characterize me as a lobbyist. I was a lobbyist I think for 30 days of my life about 30 years ago. I disliked that world and went back to the policy analyst and marketing/business development fields that I much preferred. But by failing to object to its use my attorney allowed the term “lobbyist” to erroneously frame who I actually was. That term, rightly or wrongly, conjures all sorts of negative images in the minds of the public.

I also discovered that prosecutors are enamored with e-mails. Why? Because they can be interpreted pretty much the way they wish. For example, certain e-mails were disclosed without the tone and intent that I had in mind. My attorney simply wasn't doing or did not know how to conduct the type of cross-examination to bring out the true intent of these e-mails. In fact, there was even an agency official willing to provide exculpatory testimony on my behalf who Dickens did not call to the stand. He claimed that we had sufficient evidence to make put on the case without using him and I allowed myself to be led obediently to the tragic results of Dickens' decision-making and my decidedly poor judgment calls.

I'll never ever forget a visiting law class during one of the days of my short trial. They actually broke out laughing during the cross-examination because it was so adolescent. Mary Cleave, former astronaut and Associate Administrator from whose Space Science Program the funding for the MSU earmark had been directed, was one of the prosecutorial witnesses. You can imagine the impact of having an astronaut on the stand—especially with a jury of folks who have viewed them less as flawed humans rather than heroes who can do no wrong. I'll never forget when the prosecution said to Cleave when she was on the stand, "Do you know Mr. Stadd?" And recall my earlier comments that Cleave and I had a relationship, if not hostile it was certainly not a congenial. But she acted as if we were old friends.

Again, with a more adept defense attorney, her motivations to testify against me could have been surfaced. And, as one of her astronaut colleagues told me once, Cleave may be smart but she is naïve and they were not surprised that she was so easily manipulated by the prosecutors during her testimony. At the end of the trial, when I was found guilty, during the sentencing portion, the judge, Rosemary Collyer, called my attorney to the lectern. She did something that's really unheard of by judges, which is that she intervened in our attorney-client

fee relationship by saying to Dickens, “I hope you can find it in your heart not to charge Mr. Stadd any more legal fees.”

I think it was her way, it took me years to figure it out, it was such a very subtle message, of sending me a message that I should find another attorney. But it was a very nuanced message and I was so traumatized by the outcome of the trial that I never absorbed it. With my attorney making all sorts of excuses and claiming that we had a strong appeal and his continuing to make himself a part of the family, I foolishly, and tragically—with 20-20 hindsight—maintained the relationship.

In addition, terminating an attorney meant walking away from all the fees we had invested in him, but more daunting was the prospect of educating a new attorney about my case, and the agony of having to relive this experience with a new person. It was more than my family and I could emotionally take on at the time. So I retained Dickens. I can be rightly accused of engaging in magical thinking. Actually, it would be more accurate to say that maintaining the engagement with Dickens was truly a self-destructive act.

I was later to learn that Inspector General Cobb privately expressed great disappointment that the judge did not incarcerate me and instead gave me what he and his folks considered to be a slap on the wrist—some limited community service. By the way I ended up being assigned to a charity called The America the Beautiful Fund. We would take expired packages of plant and flower seeds from leading seed companies, and make them available to impoverished communities, including prisons. It was a wonderful nonprofit. So I actually enjoyed my service and the leadership even asked me to be on the board.

Well, after the trauma of this trial, my equivalent of the Inspector Javert, the NASA Inspector General, redoubled his efforts, and basically engaged in what is called “shopping for a

friendly venue” where they could find a prosecutor willing to go after me. They found a friendly prosecutor down in Gulfport, Mississippi. I think it fair to say that they had already pretty much calibrated the ineffectiveness of my attorney at that point, who by the way was counseling me from day one what to avoid the IG investigators or the prosecutors. So, from the beginning of the investigation to the Court trial and to my plea agreement, my former attorney rejected any opportunity to sit down and give my side of the story. In retrospect, I think that was a tragically flawed strategy. Because I remained silent throughout the legal ordeal, it allowed the prosecution and the IG to frame my case in prejudicial ways that bore littler relationship to the real facts and then ultimately resulted in yet another unfortunate encounter with the criminal justice system. I can’t even put in words what it was like for my family and me to go through yet another indictment some months later.

In this instance, they doubled down on the report that was done for Mississippi State, and in essence were alleging that it was a laundering effort. I learned the hard way that prosecutors will often throw multiple counts at you even when they know they are bogus and easily countered—as a way to intimidate the defendant—knowing that it may end up being just one key count. I also discovered that a Grand Jury is basically a handmaiden of the prosecution. They hear just one side of the story, and pretty much the cliché that you can indict a ham sandwich is spot on. Frankly, I used to say that after my experience, I could indict the prosecutors who went after me using the same approach they deployed—that is, if I was allowed like they are to give a one-sided set of arguments to a Grand Jury. By the way, a number of prominent jurists have called for either disbanding or reinventing the role of the Grand Jury so it can be a far more fair and balanced arbiter of seeking the true facts of the charges brought forth by the government.

I was ready to fight these charges, again using Dickens as amazing as that seems in retrospect. Dorrance was not part of the legal bar in Gulfport, so we needed to talk to another attorney who would be the adjunct attorney, if you will, to allow Dorrance to represent me. So I went down to Gulfport and met with an attorney who was not a criminal attorney but was well versed and acquainted with the prosecutors and judges in that jurisdiction.

Frankly, it was in discussion with that attorney, who I've remained in contact with, who said, "Look. You have a strong case. In fact I think it's a very defensible case. But here's the problem." He was very blunt, and he said, "You have the wrong accent, you grew up in New York. You are Jewish." He said, "You come from Washington. I will tell you they will more likely than not populate the jury with people with a per annum income that's low and they will view you with a jaundiced eye, given your background and given where you've come from."

But he said—and this is what ultimately took the wind, whatever wind I had at that point, out of my sails— "Even if we prevail, they'll still continue to come after you." He gave me several cases of people, including a former state court judge who had won a personal case that had been brought against him by the local prosecutor. Yes, occasionally prosecutors even go after judges. The judge prevailed, and according to what this attorney told me, after the verdict was rendered and the judge was standing on the Courthouse steps in Jackson, Mississippi, a courier from the prosecutor's office came up with yet another indictment.

The prospect of sending my family through a legal trauma again was more than I could take. So very reluctantly I accepted a plea. For those who wonder why innocent people take a guilty plea, I refer them to Judge [Jed S.] Rakoff, who wrote a compelling commentary in the *New York Review of Books* about two, three years ago, entitled, "Why Innocent People Plead Guilty." It's written from a judge who's been on the bench for 25 or more years in the Southern

District of Manhattan, who talks about the unfortunate circumstances that lead to so many pleas by even innocent people. About 98 percent of federal cases are pled out. Think about what I just told you. An innocent person, as irrational as it seems, in the face of the arsenal of tools a modern-day prosecutor has to intimidate and threaten, will take a seemingly irrational, self-destructive decision to plead guilty to remove as quickly as possible the unbearable emotional and financial stresses on you and your family.

So a gentleman by the name of Courtney Stadd who took great pride in a hard earned reputation of integrity and ethics above reproach—in fact I was often the person at NASA Headquarters people would come to and seek informal advice, even though I’m a nonlawyer, about doing the right thing—found himself pleading guilty to the defrauding the government. By the way, my advice to any official who sought my informal counsel on issues of ethics was always, “If you’re asking the question, it means that you must have some misgiving about the situation, so there’s the answer. Don’t do it.” How I and others like me end up in a legal horror show like the one I briefly described is something that I intend to write about one day. If nothing else, there are lessons learned that I intend to try to document and help other people benefit from.

I should quickly say that there was a former NASA General Counsel, whose name I won’t reveal but who informally encouraged the IG in advancing my case from the outside. He was motivated by revenge based on the fact that I had opposed a contract that he had wired to benefit his private firm after he left the Agency. The contract was a major waste of taxpayer funds and Administrator Griffin agreed and axed the engagement. I guess this is further evidence of the worst aspects of the swamp that critics of the nation’s capital often talk about.

But I want to say that there was a wonderful former NASA General Counsel by the name of Ed [Edward A.] Frankle, who was both an aerospace engineer and a lawyer, and I am

absolutely convinced that if Ed Frankle had been the General Counsel at the time that I came back to advise Mike Griffin, I don't think any of this would have happened. I know Ed well enough—he was also the Chief Ethics Counsel at the time—that Ed would have protected the Agency, the Administrator and myself. Notice the order in which I mention that. Ed was very skilled and did a wonderful job during the time that I worked with him, during both the Dan Goldin era and the early months of the Sean O'Keefe era. I was very sad to see him retire.

I have no doubt in my mind, and I've said this to Ed, that if he was still with the Agency during my brief time with Mike Griffin he would have ensured that I remained as a consultant and that I did not become an SGE [Special Government Employee]. He probably would have strongly advised that I stay out of the building to avoid appearance issues. Those pieces of advice alone would likely have saved me from the legal horror show I went through.

I should also add that this prosecution by the IG and by the local prosecutors in Gulfport certainly cost the taxpayer \$1 million or more (which includes what seems to be a bottomless pit of resources invested in prosecutors, NASA IG, court related resources), which was considerably more than any of the money involved with the alleged fraud. I've always said that even if you thought that there was an issue here, triggering a federal court involvement, given the infrastructure associated with judges, puts you immediately into six- and seven-digit numbers, because of the bailiffs and the clerks and all the infrastructure that go to support a federal judge. In my judgment, my type of white-collar case is best referred to much less costly options such as an arbitration forum.

Among other tragic ironies of the case is that even though the feds argued that the report for MSU was without value, it was used by at least one professor at a prominent university in a class on the study of federal policy and Earth science. This was yet another fact never divulged

by my former attorney during sentencing—a fact that, if nothing else, might well have mitigated against the scope of the restitution imposed by the judge. To top it all off, the Judge was relatively new to bench and took pride in imposing very harsh sentences. He liked to say that no one innocent pleads guilty in his courtroom. I wonder if he ever read the commentary by Judge Rakoff that I described above? He actually overrode the more sympathetic view of my case by his own staff and, frankly, did not seem very familiar with the facts of my case, and gave zero weight to the 150 or letters written to him on my behalf by long-time friends, family and colleagues calling for leniency. Once again, Dickens made matters worse by calling a character witness to the stand – someone who had known me for over thirty years as a professional colleague and was a subject expert on the MSU report – and then asking him about a report that I had done for MSU that was completely separate from the one under investigation! This did not go over well with the Judge. As the cliché goes, you can't make this stuff up.

I was also left with restitution that goes to the NASA Shared Services Center where the funds seem to go into a bureaucratic black hole. I am happy to say that by selling my home I managed to pay off the outstanding restitution. Such full repayment, by the way, is comparatively rare. It is remarkable the magnitude of the outstanding federal restitutions that exist today. At the end of the day, the Government not only benefited from the taxes I paid on the original contract dollars but, in addition, the entire original amount was paid back in full. The real victim was the absence of anything resembling real justice.

After my experience, I do informally advise officials when they are looking to retire that, “Of course you’ve got to consult with the resident ethics officials.” But I always add, “You would do yourself a service by either talking directly to the Public Integrity Section of the Justice

Department. Also, it never hurts to consult an experienced white-collar attorney. The first hour is free, and if I had done that, and used such expert advice to guide my dealings with the NASA ethics counsel, I would have been spared, I have no doubt, a lot of grief.”

The other lesson that I’ve learned—I’ve learned many lessons—is that when you are the target of an investigation, you’re often not in the emotional frame of mind to make decisions. If I had it to do over, I would have deferred to a respected third party and had that individual do the due diligence regarding potential defense attorneys so that my wife and I could have sat down and had more of a deliberative approach in selecting legal counsel. If we’d done that, we might have realized that Dickens was out of his depth and so choosing a more seasoned attorney would have ensured perhaps a different outcome. But I cannot overstate the emotional trauma associated with these investigations, and it does profoundly cloud your judgment. You end up in a surreal federal criminal justice world that’s very hard to convey to most lay people.

But I have come out of all that. It is now in the proverbial rear-view mirror. Friends and colleagues who have followed my case closely and were appalled that it ever gained traction, let alone resulted in my incarceration, have urged me to write a book about the experiences. As I indicated earlier, I have begun to outline it and hope to complete it over the next several years. If nothing else, I am hoping that it will provide a record for my grandchildren to understand how a man who tried to lead an honorable life found himself in such a legal tragedy. By the way, during the midst of the various NASA IG led investigations, I took solace in a wonderful quote from the 1960s movie about Sir Thomas More, *A Man for All Seasons*. It involves an exchange between the King’s chief minister or prosecutor, Thomas Cromwell, and Sir Thomas More, who was being prosecuted for refusing to defy his moral conscience and pressure the pope into annulling Henry VIII’s marriage. In fact, I even had the quote printed on a bunch of buttons that

I would hand out to colleagues. I regarded the tactics of the then IG, Moose Cobb, and his people to be that of sheer intimidation and bullying. Throughout my ordeal I often thought of a famous bit of dialogue in the movie which I committed to memory:

Sir Thomas More: You threaten like a dockside bully.

Cromwell: How should I threaten?

Sir Thomas More: Like a minister of state. With justice.

Cromwell: Oh, justice is what you're threatened with.

Sir Thomas More: Then I am not threatened.

If there's any interest, I'd be happy to talk for a few moments about my experience at the federal camp.

WRIGHT: You were able to share information about space travel with people that were there?

STADD: Yes. I went into this federal camp, which was in Morgantown, West Virginia. It is the lowest security facility in the system. In fact, it was referred to by some of the staff and inmates as Camp Cupcake, given the lack of fences and the open dormitory nature of the facility. When the staff in the education department discovered that I had a space background, they asked me if I'd be willing to set up a class devoted to space travel, and, after thinking about it briefly, I did.

I have to tell you that the federal camp, the stereotype about the bad food is absolutely true. Also, one of the things that struck me immediately when I arrived was the plantation culture. What I mean is that one is struck by the vast population of minorities, mostly black and Hispanic, and how society has essentially shunted these sizable populations into facilities so they are out of sight, out of mind. I was, as I mentioned earlier in the interview, brought up by Great

Depression World War II types. I have a work ethic ingrained into me. As a result, I did everything from washing dishes to cleaning floors, and I began to incur some animosity because I was brought up that if you're given a job, you do it as well as possible. Frankly, the work ethic that dominated at the camp was essentially, with few exceptions, to do the minimal amount of work, check the proverbial box, with a default culture of general laziness. This was not limited to the inmates. I met a few staff that were really outstanding, very good people. But I met many profoundly lazy staff as well.

There was also a level of patronage that was stunning in terms of facility jobs being passed from family member to family member. The result is that the staffing does not reflect the best and the brightest. Just the opposite in most cases. What I found most depressing were the young inmates, most of whom were there on drug-related charges. I should quickly add that the vast majority of the people were nonviolent with no association with assaults or with sex-related crimes. Those fortunately were sent to higher level fenced facilities. I was surrounded by mostly nonviolent drug or nonviolent white-collar crime offenders.

What was most discouraging were the young people who were warehoused, and in many ways were allowed—due to the lazy work ethic that dominated among the staff—to get away with doing the minimal. The staff basically used television as a babysitter. They had introduced e-mail when I was there, very limited e-mail, and also Mp3 players were introduced during the latter part of my stay there. I felt very strongly that those same young people should be taught a work ethic and taught a trade. There was some carpentry, some welding taught, but those were more the exceptions than not. There were some evening continuing education classes. In terms of education, it was primarily a focus on encouraging the men—it was an all-men facility—without formal education to get their GEDs [General Educational Equivalent certificate].

But frankly, in many cases the inmates were teaching the inmates how to pass the GED, even though the staff by record were supposed to be the instructors. So when I was asked to do the space travel class, I thought long and hard about it, but ultimately I took on the task and it turned out to be a happy experience. The library was not a bad library, made up mostly of donated books from the inmates themselves and families. I found the little outer space section to be greatly outdated by decades, and so when my friends at NASA became aware of my situation and that I was beginning to put this course together, they offered to send materials. But the facility wouldn't accept them even though it was from another agency. I know this sounds crazy but it gives you a sense of the surreal and truly insular world of the Bureau of Prisons.

So the staff allowed me to use books and materials and articles sent to me privately for use in the classroom. I'm proud to tell you that by the time I left, the space exploration section in the library was pretty impressive in terms of contemporary sources regarding cosmology, space travel, and space history. These books and articles were contributed by friends and colleagues.

I taught probably about four or five space travel courses. They went on for months. A couple hours each course. I had a range of people in each course, ranging from people who had a first-grade education to PhDs in chemical engineering. I had a couple of federal judges. Yes, even judges. I had a couple of prosecutors. Yes, even federal prosecutors. I had a number of engineers. I had a number of medical doctors. Amateur astronomers. I had a very interesting range of people from drug dealers to bankers to you name it. As a result, I had people in my class who never realized that the stars were suns like our own, to people who had some level of sophisticated insight into the planets and stars. So from an instructor standpoint it was an interesting challenge to thread that pedagogical needle.

What I would tell each class when we'd start was, "Look, I wish I could teach you a technical skill, particularly the young ones among you who need a trade, but I can't. But, what I can do for the next hour or two is offer you an intellectual escape, and put this beautiful mud ball called Earth, as well as the staff and perhaps that arrogant and somewhat sadistic staff guy down the hall, in perspective." We would then begin our adventure and talk topics such as the mind-boggling distances to the stars. I always took great joy in trying to take the facility we were at and put its size in perspective to both the inner and outer solar system, let alone the cosmos-at-large.

I knew I was making an impact when I began to hear the guys make up exams based on my information for their kids. At visiting time, I became a bit of a celebrity because the men would bring their kids over to visit with me, and I would become known as the star guy or the space travel guy. The wife or the kids would come to me and we'd have some fun conversations about space. It was as therapeutic for me as it was for the men. About 200 men went through the program. We had a certificate we would give them. It was great fun.

It was so popular that when I first started there were about a dozen or so courses being taught, ranging from real estate to taxes to any number of different topics. But by the time I left there were about four courses that remained, and by popular demand they kept my space travel course. I asked a student in my class who was a pilot in his former life to be my successor when I left. I put together a large set of notebooks that contained my lecture notes, and he carried on the course after I left.

So that was, given the circumstances, a gratifying experience. I got all sorts of books and magazines in the mail, and it was fascinating to see how space became of such interest to a range of people. Even outside the classroom there would be guys, the most unlikely characters, former

drug dealers and so forth, who were just fascinated by the planets and the stars. I'd have some very interesting conversations with some gang leaders. I had one gentleman that was Hispanic, and he was a very muscular guy with lots of tattoos. He would tell me that his "homeys" would joke with him about walking around with this four-eyed old white guy talking about space travel.

During my time at Morgantown, I saw a world that I wouldn't wish on anybody. But I also saw a world of largely disenfranchised people that, for better or for worse, in our space community nobody really ever sees. It gave me a glimpse into a world of the disadvantaged and of the alienated part of our American society. Let's face it. Much of our space community is made up of elites. It is mostly Caucasian. Fortunately, slowly but surely we are seeing more minorities and women. But by and large when you look out on our space conferences you see a sea of relatively affluent, elite white males. It's a reminder that our space community represents only a limited slice of American society. When we talk about society embracing our programs and our vision for space travel, we have to keep in mind that there's a huge segment of society that we ignore.

I discovered that those same people who, out of fear, when we occasionally find ourselves in their poor neighborhoods, cause us to roll up our windows, and perhaps understandably lock the doors when we're driving downtown, believe it or not in some cases, may actually be inspired by, and really have the intellectual ability to embrace the vision of traveling to the stars. Of course, in many cases they are consumed with daily financial survival and don't enjoy the luxury we have of contemplating their future in space.

Believe me, I'm not here to romanticize the wrongdoing that's done by some of these folks or many of these folks. But my personal experience opened my eyes to the fact that, under the right circumstances, space has great potential as a topic of interest and inspiration for such

alienated individuals that is largely neglected. It reminded me of why what NASA does in the space education world is so important and could have an even greater impact by more effectively reaching out to the classrooms in the minority communities across America. Well-intentioned people can argue over where the program ought to be housed, but my own view is that education is in NASA's institutional DNA and has been from its founding in 1958, and it's a very precious asset. Although I've met people over the years from different disadvantaged communities who have been touched in one form or another by NASA's educational efforts, it seems that we only touched the edges of those communities. There is so much more than can and should be done by NASA HQ and the field centers. In fact, once I regain more financial traction I am giving serious consideration to starting a non-profit that will try to bridge the gap between our space program and these disenfranchised communities, especially the sons and daughters of the incarcerated.

By the way, speaking of NASA's overall education program, I'm glad that the current administration's early and ill-considered efforts to zero out the Agency's education program was reversed by the Congress. Does the program need to be reformed so that it allocates its personnel and financial resources more effectively? No doubt about it. But simply terminating the program is terribly short-sighted and does a disservice to its dedicated civil servants and educators from K-12 who rely on the Agency generated teaching materials.

While at Morgantown, I was also asked to resurrect a career resource center, which is intended to help inmates on the eve of being released to learn how to put together resumes, as well as how to handle job interviews, including how to dress for them and so forth. I found that effort to be very rewarding. Then another blessing was that there was an ex-felon professor who taught at a local university, West Virginia University, who somehow convinced a very

conservative and cautious Warden and staff at Morgantown to allow her 15 students in her undergraduate senior class on criminal justice to come and meet with a group of us. I was selected as part of 15 inmates. We had about 1,350 or so inmates, so I was fortunate to be chosen in the first class. We met for several months, three hours a week with these students, who had textbook knowledge of the criminal justice system, while we would try to explain to them the real-life experience in the criminal justice world.

In stark contrast to myself, a number of the men had been in the system for extended periods of time and had been exposed to various incarceration experiences. Several described horrific and violent family and neighborhood situations growing up in low income projects. Hearing those stories was quite educational for me, as well as for the local university students.

The class honored me by voting for me to represent them at our class “graduation” ceremony before the warden and her staff, when I described our proposals for continuing the class with yet another group of students and inmates. I am happy to say that the program was allowed to continue. Afterwards, I was asked, along with two other gentlemen, to give a talk at the local university, which allowed us to actually venture outside the facility and travel down to the local campus.

These activities—the teaching, managing the career center, participating in the pathfinding class—frankly kept me mentally occupied. That’s how I kept myself together, just working and trying to help others. I have to say that I got a tremendous amount of correspondence from my family and friends, the aerospace community, including a number of people in government who wrote on their private letterhead. That correspondence was critical to keeping me emotionally healthy and connected to the outside world. I remember when I was finally released that the staff at the local post office at the facility were very grateful that I was

leaving because they were handling more mail for me than anybody else at the facility. So, in addition to my family and friends, the space community, as a whole, could not have been more supportive and welcoming.

I left Morgantown in 2013 in the early fall and returned to my home in the Washington, DC, area. In fact, it was just in time to lead my oldest daughter to the altar at her wedding. Again, my colleagues in the space community were very supportive in helping me transition back to the professional world. For example, a former senior NASA policy official, Alan Ladwig, gave me a call early on and said, “I want you to come join me for a presentation that I have been asked to make,” at something called the Space Cafe, an informal gathering of space advocates in the nation’s capitol who get together to hear speakers on a range of topics. It was one of my first public talks. I knew that it was Alan’s way of getting me out and start to get re-engaged with my passion for space exploration.

As I recall, our presentation focused on how views on NASA can be more effective in reaching the public about the importance of space to everyday lives. Alan is what I call a mensch. Jeff [Jeffrey M.] Bingham, former head of NASA’s legislative affairs and former staff member of the Senate Commerce Committee, is another dear friend who proved to be a mensch as well as in supporting my transition. There were other colleagues who ensured that I got out in the community. The AIAA, American Institute of Aeronautics and Astronautics, has asked to me sit on a couple of policy panels. And a number of other organizations have asked me to come out and talk publicly about space related topics, including most recently the ISSR&D [International Space Station Research and Development] Conference where we had close to a thousand people in attendance.

I've also been invited by a leading professor of criminal justice at the University of Maryland, on a couple of occasions, to discuss my experiences with the criminal justice system. I also talk to other outside groups occasionally about my experiences in the criminal justice system. As I get my financial house in order over time, pursuing penal and criminal justice system reform will be an important part of my remaining years, because what I saw was a degree of injustice that was simply appalling. What I witnessed was a tremendous waste of resources in which the taxpayer is paying an enormous amount for warehousing human beings where they're not getting the type of return that I think is appropriate. I also saw a staggering misuse of resources in litigating non-violent, low-level cases that would be better pursued using low cost arbitration or restorative justice models than processed through the traditional, very expensive criminal court system. Unfortunately, and tragically, there are enough extreme pathological criminal cases in this country that can more than amply fill up the in-box of our traditional criminal justice court system.

During my time at this federal camp you very quickly—because you live in close quarters—found people that were plenty guilty, and certainly needed in some cases to be quarantined for a period of time. But I also was exposed to frankly a significant number of people who were arguably innocent, who pled guilty for expedient reasons. You could tell that they were decent by their daily ethical behavior. At the very minimum, if they did anything wrong, they may have inadvertently tripped over a statute or two but not due to any malice aforethought.

I have often wondered to myself why does our society impose such extreme punishment and quarantine on our fellow citizens with the inevitable negative collateral effects on family and businesses. Again, I am appalled by what this great country of ours has allowed to happen with

our criminal and penal systems. At no time, however, have I ever in any shape or form lost faith in the greatness of this country. I've never felt embittered. Never a day ever goes by, even in the midst of all this legal horror, have I ever for a second regretted living in arguably the greatest country on the planet. But a great people deserve a great and a fair, truly equitable criminal justice system.

I will also add that my friends and colleagues at NASA have been very gracious, and I have been invited more than once to come back to NASA Headquarters, and even though there is no legal constraint on my doing so, and today there is no legal constraint on my doing business with the government, as a practice, I rarely go back to Headquarters. I do meet with NASA colleagues occasionally, but I do it down the street or somewhere else. The reason for that is that I have many fond memories from working at Headquarters, but I also have a couple of bittersweet memories. There are a couple people who work there, I've alluded to one, who I felt (and other professional outside ethics advisors concur) gave me very poor and ultimately destructive counsel. As much of a pacifist as I am, I don't know if I could control my emotions if I ran into them in the hallway. So that's why I opt not to go back into Headquarters too often. But I am ultimately accountable for my judgment calls.

But as I say, I have been honored by being accepted back by the community. For example, I recently delivered eulogies for my close friends and colleagues, the late Sue Garman and Jack [John R.] Garman, former senior officials at Johnson Space Center. Both tragically died of cancer within a year of one another. Ellen Ochoa, the Director of JSC, was at both eulogies on the stage with me along with some other astronauts. That was an example of being welcomed and embraced by the community, and that's been an enormous source of solace to me as I've work to reestablish my path going forward.

But, again, there's no overstating the scarring and the staining that such an experience has on one's life. But I hope to try to take lessons learned from it and help support those that are looking to reform the justice system, while at the same time, as I say, I'm still very actively involved in the space community.

WRIGHT: You've broadened your experiences, and you just now have broadened your ventures to be able to do more. I know that you have your private business up and going again, so that's good that you've been able to do those things.

STADD: Yes, as noted earlier, I am working with a pathfinding satellite company, Laser Light Communications, mentioned earlier. I'm working with an equally audacious project called the Center for Innovation, Testing, and Evaluation, CITE. Both are led by my former boss at the Department of Commerce in the 1980s.

CITE proposes to be the world's first privately funded, managed research facility for innovation. CITE is the world's first patented uninhabited city allowing for limitless testing of smart city and internet related and energy related leading edge innovation for government labs, universities, and companies looking for tremendous scalability. It is a very complex venture to finance and I anticipate it will be a few years before it is fully capitalized.

I also work very closely with a company called TIP Technologies, Incorporated, which is a Milwaukee-based company. After my experience, you could imagine I only work with people that I trust. So in the case of both Laser Light and the CITE program, the leadership are people I've known for almost 40 years. In the case of TIP, I was referred to them by a former White House colleague that I've known for 30 years, and he's known the president for 50 years. They

are leaders in the world of quality assurance for defense aerospace. I'm their first person here in the DC area that is leading their effort on both the policy and the business development front. It's been a real source of pride to work with this company in the mission assurance area. Once a year we hold a forum with our customers, and I'm very pleased to tell you that Fred Gregory, former Space Shuttle astronaut and Deputy NASA Administrator, very kindly agreed last year to be our keynote speaker. Of course, Fred not only has an unbelievable background as a pilot and obviously both in jets and helicopters and the Space Shuttle, but headed up mission assurance at NASA HQ for many years. He was an ideal speaker, and true to form was very impressive.

Outside of space, I helped briefly a company that's in the world of medical fraud and abuse. It is a start-up called Fraud Lens. They have developed a software that helps insurance carriers identify fraud by medical practitioners. They started with the dental world, and are now branching out into the medical world as a whole. I knew one of the founders quite well, so they brought me in, to help with their database efforts, as well as overall government relations. So I take great solace in the fact that here I was accused of fraud and I'm helping a company that has and will continue to help ferret out literally tens of millions and ultimately hundreds of millions of dollars of fraud for the good of the American people.

Finally, I am currently advising an emerging commercial pathfinder space access company, Vector Launch. Vector will be launching CubeSats for a diverse range of uses. It is co-founded by CEO, Jim Cantrell, a long-time friend who believes strongly in giving people second chances and has been a great supporter of mine. I look forward to coming on board full time to support their Washington Operations and help transform their vision into reality.

One of the other things that I took great pride in over the course of my public service career—focusing on saving the taxpayer money. If I can circle back very quickly, I'll never

forget when I worked for one of the previous Administrators, in fact if I remember correctly it was Sean O'Keefe, there was a gentleman out of Hollywood that was proposing a multi-multimillion dollar, a very expensive replacement for NASA HQ's videoconference ability that we used to reach out to Center Directors. One day, this individual came to HQ to make his case for why we should invest millions of dollars in a state-of-the art video conferencing capability. I was very skeptical that it was a worthwhile investment. Frankly, I viewed it as a boondoggle. Before his formal briefing, he came to my office, when I was Chief of Staff, he very coyly and subtly seemed to be offering me a job in the private sector if his proposal was approved. That was enough for me to close the conversation down.

His offer was not sufficiently explicit that I could have proven anything. Otherwise, obviously, I would have thrown him out of the office and headed down to the General Counsel or the Inspector General. At any rate, his proposal went nowhere and the taxpayer arguably avoided a potential waste of a few millions of dollars.

I had other occasions over the years to help save the public significant money, while helping to support space programs that were costly but arguably brought great value to the American people. That's what made my legal saga experience so particularly painful for me. But this is a country that allows one to have second chances, even if the transaction cost sometimes can be pretty high. So with the overwhelming support of family, friends and colleagues, I'm back—bound and determined to continue on with my own version of a second chance.

Since we last spoke some years ago, we have been blessed with a grandchild. I intend to contribute as best I can to ensure that if he and his generation wish to have a future in space I can do my two cents to give him that opportunity.

If you allow me one quick anecdote, part of my coming back into the community and working on behalf of this mission assurance company, TIP Technologies, I attended an FAA space conference. As noted in an earlier Oral History interview, I was one of the first directors of what is now AST at FAA. Anyway, I show up at the space conference and there was a lady researcher from the University of Texas Medical Branch [Galveston, Texas], Dr. Rebecca S. Blue. She was giving a talk about her research, and she requested volunteers for a human centrifuge research she was doing looking at the stresses that average people will be subjected to during suborbital space travel. I was sitting in the back of the audience and my ears perked up, and I was frustrated because I couldn't wait till the panel ended and I could sign up. I thought, gee, by the time I get up there there won't be any slots left.

I show up, and I think I was the only person in line, and I said at the time—I was about a size or two more than I am today—I said, “I'm in my early sixties. I'm overweight.” She said, “You're perfect.” Which I'll probably never hear again! So I went to get a medical exam, got my medical paperwork in order, and a few months later I was part of this research on the stresses that the average person can be subjected to in commercial space travel by companies such as Virgin Galactic and Blue Origin.

I traveled to NASTAR [National Aerospace Training and Research Center] outside of Philadelphia, [Pennsylvania] and there were two other people from other parts of the country that were there. I was put into the centrifuge and subjected to a couple different scenarios, and loved it. So at this point I've now had the honor of riding in NASA's KC-135 [zero-gravity airplane] over the Gulf of Mexico and subjected to microgravity. I've been up in the Zero-G Corporation flight. I went out on an F-18 [Hornet, supersonic jet aircraft] out of Dryden [Flight Research Center, (now Armstrong Flight Research Center), California] some years back and was subjected

to microgravity. I've now been in a human centrifuge. So part of my dream is to one day, once I get my financial house in order and take care of my family, be a space traveler in one of those emerging space tourism ventures.

One of my former college mates, whose company sends cremains [cremated remains] to space, and I have an informal agreement that once I depart these mortal coils my ashes will go to space as well. I'm looking forward to that. Of course, I am hopeful that it will be a long while before I achieve that final goal!

WRIGHT: I appreciate all the information and the details. I do have one question, since you talked about being part of the FAA AST. There's some interesting discussion that's currently in play to move some things out and put it into the Department of Commerce. I was curious about that. Also the possibility of looking at changing the treaty for the peaceful uses of outer space [Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies]. Again, using your years of insight and experience, can you comment on those two? What are the pros and cons of those types of movements?

STADD: A couple weeks ago I was asked by the staff on the House Space Committee [Committee on Science, Space, and Technology] for my perspective on the Office of Commercial Space, located in the Department of Commerce. I was one of the original founders of that office. But I brought into the meeting the original architect, a gentleman by the name of Bob [Robert] Brumley. Bob was a former general counsel who was my boss at the time at the Commerce Department who worked for the late Secretary of Commerce Malcolm Baldrige. It

was under Secretary Baldrige's leadership that Bob and I, with Bob in the lead, formed this Office of Commercial Space.

We reminded the staff that its intent was to be established in the Office of Secretary, with a direct report to the Deputy Secretary who would provide policy support for commercial space industry. The Department of Transportation had the regulatory portfolio. NASA clearly had the lead on the R&D. But the space industry would have its traditional policy voice at a senior level in the Commerce Department.

We also tried to caution the staff that when you're streamlining remote sensing regulations (which originally fell within the scope of the Office) —which clearly are overdue after all, it's been decades since we first promulgated those policies and regulation—be careful, because mixing a promotional shop with a regulatory function is fraught with challenges. I told the staff that the FAA, I think, has done a pretty good job of threading the needle between promotional and regulatory. This is not to say that Commerce could not do the same, but we cautioned the staff to be very careful in mixing those functions.

With that said, I feel that NOAA could benefit from top level department oversight. Frankly, in the case of NOAA, you do still have a hidebound culture where people are accustomed to owning and managing the hardware. There are some people still finding it difficult to transition to a case where they'd be buying the services, buying the data from this new species called commercial space.

So it would be, I think, very important to have an Office of Space Commerce that could help govern and push that culture change, while being in the Office of the Secretary, so that when industry ran into issues with licensing at NOAA, they had a place they could appeal to that could take the big-picture perspective.

There's some very interesting tactical decisions that the Congress has to make, and the administration for that matter, in trying to shape this new office, but I think that the office, unfortunately, and I think tragically, was allowed to basically decline in its impact and authority during the latter part of the Clinton and through the W. Bush and certainly through the Obama administrations. I'm hopeful that they'll resurrect it. My own view is it should not be done at the detriment of the office of the FAA. There are those in the industry who would like to send the clock back and send those launch regulatory authorities back to Commerce. I don't think that's appropriate.

I do feel strongly, speaking of the FAA Office, that we're overdue for AST to be taken out of the FAA and that a separate modal administration, as they call it at DoT [Department of Transportation], should be established. I'm very concerned that the FAA culture, which is very understandably focused on micro prescriptive regulation—after all they're dealing with human lives on tens of thousands of aircraft—that same type of regulatory straitjacket mentality will be imposed on this still fledgling commercial space industry, and I'm very concerned that that could have a stifling effect.

I'm hopeful that this administration will thread that needle properly. By the way, this is another case where having a National Space Council would be an appropriate forum, so that the leadership can hear these competing perspectives in making a recommendation to the President. If they decide to put it in a statutory form, they would have an informed recommendation to the Congress about how to again properly thread the needle between the policy and the regulatory side.

On the Outer Space Treaty side I'm a bit befuddled. On the one hand there are people much closer to it than I am, so I don't want to talk as if I have any special expertise or insight.

But one fear I have is looking at the Outer Space Treaty and trying to migrate the authorities such as they are out of DoT over to this Commerce Office has to be reviewed with great deliberation. Once again, I'm concerned that it may be a mask for a bigger agenda which is to relocate the authorities from the FAA to Commerce.

By the way this is being said by a guy who in the early '80s was leading the charge to have the Commerce Department as the lead agency for commercial space, and only reluctantly acceded to having it relocated to FAA. I felt it ought it to remain distinct and separate in the Department of Transportation. But having migrated to FAA, I've been pleasantly surprised by how well they've managed. But I want to repeat. There's a need, an overdue need, for the leadership of DoT to establish it as a separate mode.

DoT has to walk a fine line between ensuring the public safety and the fact that space travelers are informed of the dangers and the risks, while at the same time not strangling this emerging and exciting industry. It's a nontrivial challenge, but I do think, with all due respect to advocates for sending those authorities to the Commerce Department, it will set the clock back and undermine the tremendous progress that's been made in this area over the last 35 years. With that said, the FAA is way overdue in streamlining and modernizing launch regulations that are decades old and no longer aligned with the innovation manifest in the rapidly emerging commercial launch ventures. For what it is worth, that's my two cents.

WRIGHT: Time is only going to tell at this point.

STADD: I do think too, speaking of the UN [United Nations], the Outer Space Treaty, I think the whole area of establishing rules of the road in low-Earth orbit is critical. One of the concerns I

have as I sit here today, as we deal with a State Department that still is lacking a number of critical appointees, is that we're handicapped in terms of the very important negotiations that we're still facing with our allies to close ranks on an agreed upon set of principles for operating in space in the national security and particularly in the civil commercial realms.

As low-Earth orbit, medium orbit, and so forth become more crowded with more commercial assets in particular, the issue of managing those assets, avoiding collisions, protecting them against adversaries becomes even more critical, both in orbit as well as protecting the ground segment from our adversaries. I'm very concerned as each day, each week, each month passes that we don't populate the State Department, and for that matter NASA leadership, with the appropriate personnel, that we're exposing ourselves to competitive threats. Getting that formula right is as critical for the future health of our space program, commercial, civil, and national security, as anything.

WRIGHT: Thank you. I appreciate you sitting here with us and giving us all this information. I wish you the best of luck.

STADD: It has been a real pleasure and, frankly, a cathartic experience. Thank you very much.

[End of interview]