

THE SHIELD

By

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ABSTRACT

A young boy grows up in a future world buried under snow, a great factory and research lab with his father at the head. As he grows he is torn between the desire to be like his beloved father and the equally strong desire to get out from under his shadow in the eyes of those around him, in a world where there is nowhere else to go.

Between chapters of this story, a trio of smaller stories set in the present day tells the tale of how the world reached the state shown in the future. Each is the same basic story of the invention of the titular shield that brought about mankind's collapse, told from the perspective of a different observer: once from the shield's inventor, once from a government agent who helped make it a weapon, and once from a former spy recalling parallels to historical events. In viewing parallel events from each of these smaller pieces the reader is able to see how all of the individual actions are rational despite the wholly catastrophic result, and the works also fill in the blanks in each other's stories of what happened as a whole.

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Preface

While "The Shield" and its component works were the result of several factors converging at once, it's perhaps not surprising at a place like MIT for me to say that this story began with math. More specifically, the seeds of it came about a little over a year ago, when I was taking a course on probabilities and algorithms. One of the decision-making algorithms that struck me was one of the most basic ones, the greedy algorithm: taking the most individually optimal decision at each branch, without the ability to consider future branches. Computationally easy, this method struck me as interesting not for its own sake but because it represents an all-too-common situation in reality: the combination of individually optimal decisions leading to a decidedly suboptimal or even harmful result. We see this kind of shortsighted behavior all the time in reality, such as attempting to take a shortcut while driving unknowing of a blockade up ahead that eventually makes the trip take longer than it would have.

While the inconvenience from such an event is usually small, the same is not true when such behavior applies to matters of economics and national policy. Most notable as an example of this is the scenario of Mutually Assured Destruction, a precarious situation that arises out of multiple factions making the individually best decision to be able to retaliate against an enemy posed to annihilate them, thus ensuring that nobody will dare make the first move. While certainly a better outcome than any which involves widespread destruction of humanity, this post-WWII situation is also obviously inferior to a scenario in which neither side had built up their armaments to the point of being able to annihilate the other. The devil of the matter is, of course, that the situation is largely unavoidable. One cannot ask one side to be the first to drop its guard, and in the absence

of an outside force to forcibly make both factions stand down, once the situation has begun to develop there is little to no stopping it from either reaching that metastable point or collapsing into chaos.

Thinking about this was one of the things that led me to the concept behind "Recollections", which was the story written first out of this collection and in my mind the heart of the lot to the point where in previous drafts it was actually called "The Shield" itself. If MAD is a metastable point, the shield is what tips the balance it rests upon over. Like the concept of nuclear power which spawned its creation, the shield is a genie in a bottle, capable of producing miracles but impossible to cage once released. And like nuclear power, the shield's creators only realize a fraction of the technology's ramifications.

When writing these stories I had to do some research into the way that technology is developed and applied. Almost every major development in modern science begins with the military in one way or another, from the internet to GPS, and the shield is no exception. In fact, the way the shield spreads into common usage is a direct parallel to how GPS was distributed, being produced first as a military product, then released to the public in a less powerful form (in GPS's case with less accuracy, with the shield's less maximum strength), then finally released in full once other nations discovered how to work around the restrictions imposed on the commercial-grade products. While the ramifications of the shield on society are naturally much greater than those of GPS, the general arc of progression is the same.

Because I wanted to build my story around the idea of this technology spreading, Alan's story wound up stretching itself over an extremely long timeframe.

Approximately fifteen years pass between its start and its finish, which does several things to its structure. When your story is stretched over such a long period of time, the individual scenes seem to matter less, which made writing difficult in some ways. Picking which scenes were actually important and which would have been empty fluff were a challenge for me, especially with my writing style. I find myself prone to brevity in writing, skipping over or cutting short scenes I initially feel are unimportant, and so these stories were a particular challenge because of their timescale. However, I feel a faster pace would not have been suited to a work like this, and would not have done justice to the concepts I was working with.

The longer timeframe also means that the conflict is very impersonal. This is somewhat intentional, as the enemy in "The Shield" isn't something that can be fought. Rather, it's collective human nature, and the need for everyone to make the individually stupid choice to not use the shield, which drives the story towards its conclusion, and this isn't exactly something Alan or any of the other characters can fight. In "The Shield", this becomes the source of Alan's conflict itself during the last part of the story, his decision on what he wants to save seeming to be an example of foresight but really just another case of making the individually best decision at the branch he's come to. While following the greedy algorithm here means that not all of humanity is destroyed, it also demonstrates how even in the end, the characters are locked into doing what they think is best at the time. Because really, what else can you do? This idea of an inescapable conflict is one of the things I wanted to explore in all of the stories, but it is most directly addressed in "Recollections".

The other stories came several months into the project, after I started to find the limits on writing in only Alan's perspective. While Alan is the central character, being the creator of the device and the only person to appear in all of the stories in some form, there are things he simply isn't able to know that are important to bring up. In some cases this came out of unsolved mysteries, such as the reason for Adrian Alkeiv's existence or his ultimate fate, while in others it came out of wanting to make the exploration more robust. In the end I elected to write four stories, with each one dealing with a separate aspect of the shield's existence.

In Alan we have a protagonist who, while perhaps a touch greedy, is not ultimately evil. He invents, produces and markets the shield not realizing its consequences until he meets Adrian. He most directly represents the greedy algorithm in action, as every action he takes - patenting the shield before approaching the government, selling it commercially at reduced power, building a shelter - seems intelligent at the time. Had he possessed foresight enough to realize the consequences, he might have destroyed those first notes on the shield rather than built it. As a result, while his decisions leave him king of a tiny world, hindsight burdens him with enough guilt that it ultimately kills him.

In Hank, I wanted to explore the argument *for* use of the shield, and how that would develop. Hank views the problem differently from the rest of the characters; in his mind, it's vitally important that his country possess control over the shield. Why wouldn't it be? The technology is game-changing, and to say that they should stop using it would be ridiculous. Once the genie's out of the bottle, however, he finds himself in a precarious position, because in many ways Hank actually has more foresight than Alan.

If he were to simply stop production of the shield, making it illegal, it would sound the alarm and lead others to manufacture it for themselves rather than modifying the ones Alan makes. His attempt at a stopgap measure, to reduce the outgoing supply but not cut it off in order to buy himself and his country more time to find a proper solution, is ultimately a matter of too little too late. Like Alan, Hank isn't evil, just doing what is best for his country. The tragedy of his story comes out of how his is a story being repeated all across the world, and the only way to prevent the ending would have been for everyone to make a collective decision that no individual could agree to. The situation is not unlike the prisoner's dilemma, but without trust having ever been established, in the end the only option anyone feels they can pick is the worst one.

Adrian came about originally as a means to make Alan aware of the conflict. However, once I started working with him I thought to make the parallel to the Cold War more explicit by making him a former Soviet agent whose cover identity had eventually become the real thing. Adrian's an old man by the time of this story, with little personal stake aside from a desire not to see everything he put his life towards go to waste. While he does what he can to stymie the flow of events, his attitude is that of someone who has seen all this happen before and now sees it happen again. His conflict is resolved by his giving up, going home at last and letting the world move on without him.

Ian's story is different. It's not told in the same time period as any of the other stories, but rather fifteen years after, in the lab complex Alan built at the end of "Recollections". His story is about displaying the world as it is after the other three stories, and what life is like in an isolated place whose inhabitants must go about recreating a microcosm of society and searching for a way out. That journey is one even

more tremendously long in scope than this story can cover, but Ian's tale, which with the passing of his father marks the end of the previous era, is about taking that first step towards recovery. One thing to remember about the greedy algorithm is that while it rarely produces the best outcome, it never produces the absolute worst either. While not exactly triumphant by any stretch of the imagination, Ian's story at least leaves the world with potential.

In revising the four stories, I discovered the way stories written in this style can inform and change each other. When the first draft of "Recollections" was written, it was done before either of the other stories. The characters of Adrian and Hank in that version of the story were more plot devices than characters, and as I wrote their stories I found the things they said and did no longer made sense when viewed from their perspective, even though they did when originally written from Alan's. As a result, during the revision I instead did the process in reverse, revising the stories done by Hank and Adrian now that I had a sense of their characters and rewriting "Recollections" to match. The result was that "Recollections", even if it kept the same structure, was a very different story after it was informed by the perspectives of all three characters instead of just one.

Ian's story is an exception not just in structure but in content. Originally created as a framing device, the story took on a life of its own upon writing the last part, which covered the death of Alan Corusa. I knew I wanted to write this event from the beginning, as it would cover the ends of all three characters in the sub-stories, but it also highlighted Ian's own central conflict, his desire to escape the shadow of his father. Because of this, the story shifted from purely being an exposition dump of the future world to being about Ian's life and how he views his father across fifteen years of growth.

I find I actually like this story, in terms of the conflict it produces, more than the stories set in the past. The situation has inverted from the original form: instead of Ian's story informing the other three, in my opinion it is now the stories set in the past that inform the future, and Ian's story that is the most central, serving as both bookend and interlude to the others.

One issue that I continuously ran into during the writing of this story was the issue of dangling characters. As a rule I try to avoid including named characters that aren't going to appear at least twice, if not throughout the story, and this was very difficult to achieve in this case because of the wide time range and spread-out cast. Some characters were entirely dummied out in revisions: for instance, in the first revision of his story, Hank had a wife named Jessica who appeared in the middle portion of the story and talked with him about Alan. I eventually reduced the character to an anecdote because she served mainly as a sounding board for Hank's internal monologue and didn't add any value to the story besides this. Instead I replaced the character with a much longer scene of dialogue with Alan, which accomplished the same thing but avoided a loose end and gave me more opportunity to showcase the relationship between them. Similarly, Adrian had a friend back in Russia who was dropped from the revision of his piece, both because the character added nothing that couldn't be better achieved through reflection and because my experience of people speaking in Russian is mostly limited to Westwood Studios games, which is not exactly the best place to go for inspiration in a serious story.

This actually relates to something I frequently found myself running into as I worked on my thesis. Originally the story of "The Shield" was very different, in fact.

The original version was entirely about Ian and a different group of characters, in a version of the future that was distinctly more anime-inspired. While I found writing in this setting to be enjoyable, it was also rather schlocky, and not exactly thesis material. "The Shield" came about because of all the sections of the setting, the bits about Ian's father and the origin of the setting were the least inspired by science-fiction and the most down-to-earth. With a slight overhaul of the events and plot, the seed of "The Shield" was born.

The hard part about writing is often not coming up with ideas. Coming up with ideas is easy if you have the right mindset, I come up with a dozen every week. The hard part about writing, in my mind, is being able to tell which of those ideas can make it to page. These aren't all the ideas I had, or still have, for stories set in the world of "The Shield". But they're the ones that, in the end, made it to page.

In the Blood

"Hey, dad, do you have a minute?"

Alan Corusa looked over his desktop to see his son peeking in through the doorway. He sighed and composed a proper smile. "Sure, what is it?"

Ian entered and let the door slide shut behind him with a soft hydraulic hiss. He was raven-haired, with the same dark blue shade to his eyes as his father's, and at thirteen was in the midst of his growth spurt. "There's the fifteenth anniversary coming up, and I was thinking you could take the day off and we could spend some time together like you've been promising?" *For the last two months?*

Alan gave a tired smile. "I'll see what I can do."

Ian sighed, knowing full well this meant no. "Alright, dad, I'll see you later."

"Bye."

Ian grumbled as he made his way out of his father's office, another attempt at coaxing him out of his sanctum for even a few hours foiled. The dark brown and black of the inner sanctum gave way as he walked to the more familiar whites and blues of the rest of the complex Ian had called home since the day he was born. The offices formed a set of concentric rings, all buried a good four stories underground and leading out into the main terminal. He liked the idea but not the form, often entertaining the idea that when he got the chance he would build his own office far up in the sky, looking over everything.

In any case, the main terminal was much more appealing to Ian's sense of aesthetics. It was far less claustrophobic, one of the few structures that broke through to the surface, with the shimmer of a radiation shield layered above the glass roof allowing

sunlight to shine in whenever it wasn't covered in snow. That and its size lent it to a large amount of traffic, both from those moving about and the kids who had taken to using the open space as a meeting spot. The facility hadn't originally been designed to support its current functions, though sometimes Ian wondered. The population totaled about two thousand, far more than enough to start over if allowed, and the facility could support a bit more than that if needed. The logistical questions of it all fascinated him.

“Hey, Ian!” The young man's thoughts were pulled out from a cascade of questions and half-formed ideas by the arrival of a fellow kid. “You doing anything this afternoon?”

Ian looked up to spot a boy with tousled blond hair and eyes a much brighter shade of blue than Ian's own, his lips seemingly locked in a perpetual grin. Rick's cheerfulness got him smiling in short order as well. “Not unless you count bugging my dad to get out of the office for a bit. Why?”

“We're going to scout the maintenance shafts, see if there's a way to get into the factory floor from there. Mark's on board, so are the girls.” Rick gave Ian a playful nudge. “Come on, we might get to see something secret, and it's better than hanging around in the same old courtyard again. We'll be meeting over by my room. You want to come along?”

Ian brushed aside the nudge, even as his smile grew a little wider at the thought. They were a tight-knit band, the only four who weren't afraid to hang out with the boss's son. It was nice to get the special treatment sometimes, but after a while Ian had started getting bored of it, sometimes even a little frustrated. Having people around who just wanted him for him felt nice.

“Yeah, sounds like fun. I’ll see you then!”

Ian looked after his friend as Rick ran off. Another day in the tiny world he called home.

Recollections

Looking back on it, it all started with the shield. Alan found it odd, really, that such a purely defensive device could have such destructive consequences. He looked out the frosted window, rubbed his eyes, and got back to typing. Even if no one would ever read it, writing it down helped keep the details in his memory sharp, as close to penance as he could get. He wrote, and remembered.

He'd been a student when he first considered the idea of the device, one of those late-night parties where a bunch of drunken engineers found themselves discussing theoretical physics without the usual need to think before talking.

"See, you lot have it easy. Your labs, all you gotta do is run some circuits, dip some samples, crunch some numbers. Meanwhile, we've gotta wear these rad suits if we want to get anywhere near the things we're working on." One of the grad students, a large man by the name of Jake, took another swig of the can he was holding. "They're thick and heavy and they suck."

Alan picked up a pencil that had been lodged into the ceiling earlier, dusting off the tip. "Well, you can't really help that, right? Nuclear physics is some dangerous stuff. If you don't want to get a hefty dose of cancer, you have to protect yourself somehow."

"Hell, I know that, I work with the stuff every day. It'd be nice if you had some magic shield that just deflected light, but you can't do that."

"Why not?"

The debate that followed the "why not" lasted even longer into the night, gradually turning from a discussion of why such a thing wouldn't work to a discussion of how it could. By the time the evening was done Alan had a sheet of paper that was

covered in scratches and equations on it as it was passed around between half a dozen pairs of hands. It found its way into his backpack, and from there survived its way into his bedroom. The paper lay crumpled up as desk litter for about three weeks before he read it again, now sober.

His first instinct was to throw the page away, thinking it scrap paper from a homework assignment, but he paused upon reading it over. While the equations were muddled, they all seemed to check out. It was curiosity that made him save the paper, curiosity and the first inklings of an idea.

By the time Alan graduated, the scrap of paper was long gone, all of its information transcribed onto a more legible set of notes alongside an electronic copy. He always kept it close at hand, adding to the concept, refining it whenever he had the time to ponder on it or whenever a useful thought struck him. What had started as drunken ramblings became possibility, possibility became theory. All that was left was for theory to become practice, and that would elude Alan for a while longer yet. He could tell even then that this was going to be something big, and he wanted it to be *his*, not some employer's.

The first day the shield worked was three years after Alan had graduated and started working. A full room of his apartment was dedicated to the prototype, an ugly ring-shaped device studded with electrical components and exposed wires. But, if everything worked out...

Alan clicked the button, and for a moment fear took him enough that he glanced away. There was no noise aside from the starting of coolant fans. He looked back at the

ring, whose center had now turned into a perfectly reflective disk. He resisted the urge to loose a victory cry and rattle the landlord. Besides, there was still testing to do.

If he'd adjusted the output right, the barrier would reflect light but allow solid matter to pass through. He picked up a long stick and touched it to the surface of the disk. There was no reaction from the still image, and the stick simply passed through as though moving through air. He inserted it further, left it there for several seconds, and pulled it out to examine. He would need better equipment to confirm it, but nothing had visibly changed about the stick. The shield worked.

The shield worked. Alan sighed to himself. Up until then it had been a harmless thought, the ramblings of some college students and a set of equations. Once the prototype was built, once it was real, the rest started happening faster than he could have imagined. He remembered crystal clear the day he'd met Hank Richardson.

Starting a business took more than Alan had realized it might. Once the prototype was built, once it was *real*, the rest started happening faster than he could have imagined, but having the prototype and then eventually its patent wasn't enough. He would need funding if he was to make a business out of the device, not to mention a factory to build it at minimum. He could take out a loan, which might be enough to rent the services of a local factory, but without a design he could yet reliably mass-produce this seemed unwise. And so it was he turned to the military.

"So this thing of yours..."

"A shield." Alan prompted, to the agent looking over his device. Hank Richardson had a bit of a drawl, with the type of short, uniform haircut that indicated a history of service prior to taking a desk job.

"A shield, right...what *does* it shield against, exactly? You're asking for a lot of funding here, now I need to know if it's going to be something useful."

"Right now it's set up to just reflect light. Any kind of light; visible, infrared, radio, UV, gamma..."

The last caught Hank's interest. "You said right now...this thing work?"

"Well, yes, it's just a prototype, though..."

"Turn it on, let me see."

Alan flipped the switch.

"Well now...that *is* something worth looking at, Mr. Corusa."

Hank would remain his contact in the military for the rest of his life. He wasn't sure where the man was now, but he was on the list of people Alan hoped had survived it all. The shortness of the list saddened him, when he thought about it. Perhaps if he had thrown less of his time into his research, he might have - but no, he cut that train of thought off. It wouldn't have changed anything, not by then. Nothing could.

Alan found himself glad he'd patented the shield before approaching anyone about it, as there was immediate pressure for him to give up rights to the shield eternally. While the deal being offered in return was a comfortable sum, both sides knew it couldn't compare to the profit to be made from Alan selling the shield commercially. After several days of negotiations they settled on a deal of ten years of total exclusivity and eternal preferential treatment, with any public version of the shield being restricted to a much lower level of power than the versions sold to the government. This would reduce their number of applications and prevent them from being used as weapons, which seemed to satisfy security concerns. Those first ten years were a whirlwind of

developments, as the ugly prototype was refined a dozen times over into something sleek and elegant-looking that could be manufactured and adjusted however he pleased. While the monetary compensation from the government contract was relatively tiny, they provided something just as valuable in the form of assistance setting up a company to produce the shield. It was named after himself, of course, starting as just one lab and a factory, but expanding quickly as demand for the shield grew, the device proving and re-proving the limitless depths of its versatility almost every day. At the strongest settings, it was capable of stopping solid matter, bouncing bullets off it like an indestructible wall. At the weakest, it could be transparent to visible light but still keep out high-energy rays. It could be a perfect mirror, better than any material surface. It could keep hazards contained in parts of a lab. It could be a sunshade that kept UV rays out but let visible light in crystal clear. Constructed in sets, it could be used to build a far more efficient laser than any before. Even discounting the applications that were declared unsellable, when the shield was finally released to the public Alan had dozens of uses ready and waiting for it. The energy sector was first in line, using the shield to make reactors that were smaller, cheaper, more efficient, and a dozen industries weren't far behind. The profits rolled in from every direction, and Alan quickly found himself rising in social circles. It would be hard to say it wasn't intoxicating.

To be honest, the parties Alan found himself going to now were not unlike the parties that had started the whole affair. Everyone was much better dressed and the drinks were far more expensive, but when a large amount of new money gathered in one place the results could be fairly indistinguishable from a college party. And as at those parties, people found themselves more willing to talk more liberally than usual.

"Let me tell you something, it's all going to go downhill." Alan didn't know the name of the man who'd suddenly stumbled up against the wall and started talking at his general direction. "I give it five years, tops."

"What do you mean?" Alan frowned, sipping at his drink with a bit more discretion.

"This, uh, this whatchamacallit...the shield! Yeah, that's it, the...thingy that Corusa guy built. Man, that thing's gonna get us all blown up."

"I'm fairly certain there's nothing wrong with the shield. It's virtually everywhere by now, I would think any problems with it would already be well-documented."

"No, see, that's it! That's the problem! It's everywhere!" The man gave a shaky hand gesture. "Think about it, what're people using it for nowadays? Radiation! And what's the big reason none of these assholes with nukes are blowing each other up? The fallout, the *radiation*! It's all gonna go down, just you watch. Hang on, I'll be right back."

Alan shook his head. *Somehow I don't think he's coming back.*

"He might not be far off, Mr. Corusa."

The sudden voice made Alan nearly jump, before he turned to look at the new arrival. He was an older man, likely the oldest in the room, his temples grayed and his chin coated in a similarly colored fuzz. His eyes, however, still had that glimmer of energy. "And who are you?"

"A student of sociology." The man had a slight accent, perhaps Russian. He nodded in a manner resembling a bow. "Adrian Alkeiv, at your service."

Alan took another sip of his drink. "And what do you want, Mr. Alkeiv?"

"Simply to talk. You're perhaps the most interesting man in this room. I hear your company has been flourishing of late."

"The shield's popular, not to mention we keep finding new uses for it. It's not hard to be profitable."

"Indeed, though I notice you could certainly be more so?" Adrian gave a slight smile. "Many in your position would sell off your business and patents and either retire or start a new one. Or at the very least, they would go public with their business. You keep yours oddly consolidated for a company as large as yours is growing."

"Nothing strange about it. I prefer to have full control over my company. There's something very satisfying about it. Besides, this way I keep a monopoly over the technology until the patent runs out." In truth, he'd considered it, but the complexity of the deal he'd already made was enough of a headache without having to answer to anyone else over it, leading Alan to keep his company private. His monopoly meant it was more than profitable enough regardless.

"Do you really think that's true, Mr. Corusa? With technology like that, I'm sure there's more than a few ways to use it as a weapon. You really think nobody wants to build their own version, if you won't sell it to them?"

"I don't have any intention of selling the shield as a weapon. It's a tool for science, not a gun."

"I would be more worried about bombs, myself. As that drunken gentleman was poorly explaining, there's a very delicate balance of power when it comes to nuclear weapons. Your shield might provide what everyone has been missing for the past sixty years: a defense."

Alan raised an eyebrow. "And what's wrong with that?"

"To put it bluntly, a weapon is only unthinkable if nobody could survive its use."

"Well, that's..." Alan trailed off, unable to properly respond. Adrian pulled out a card from his pocket and handed it to Alan.

"You ought to do some research. If you'd like, I wouldn't mind speaking to you again." The older man walked away to rejoin the party at large, leaving Alan turning over the card in his fingers. While his thoughts weren't looking to settle themselves any time soon, he pocketed the card.

In the months following that party, there was little outward change were you to ask any observer of Alan. Business continued as usual. The thought had been planted, though, and it began to quietly eat at him. The thought had crossed his mind every now and then before, but it had mostly been ignored in the continuous rush of new ideas. Now that he was confronted with it he found he couldn't find a rebuttal to what Adrian had told him, and he let months and years slip by without calling, wanting to have something he could say that would alleviate his potential guilt. And in the part of his mind that recognized there would never be such an answer, he instead started to think about what he could do about it.

It wound up being Hank that convinced him, though doubtless without his intent, that Adrian had been right. The agent had remained his government contact all the way through from the first days. They'd become friends, or at least friendly, their meetings less formal than if Alan had to go meet another contact. Today, though, Hank was quiet, his attention seeming anemic as though his thoughts were elsewhere.

“Something on your mind, Hank? You're usually more talkative, today you've been all business.” Alan sat back in the booth, idly rolling his fork between his fingers.

"Problem with the wife or something?"

Hank shook his head quickly. "Nah, nothing like that. Jess is great, she's out of town again but that's nothing out of the ordinary."

"Well what is it, then?"

Hank looked down and stirred the salad in front of him with his fork. It was several long seconds before he looked up and gave Alan a firm stare, any usual sense of humor leaving his voice. "Last month the Chinese figured out how to break the limiter on lab-grade shields. Anything they bought for a university, for a reactor, for a darkroom, they can turn it into an armor plate. The cracked ones break down sometimes, but they work."

There was a moment of stunned silence. "...We're in deep shit, then." He realized even as he said it that the word "we" was perhaps inappropriate. If Hank did the same, he didn't comment. Instead he sat back, keeping his gaze fixed evenly on Alan.

"Right now this is need-to-know only, you can't tell a soul."

The words brought confusion. "Why do I need to know, then? Aren't you going to have the whole thing shut down?"

"Trust me, some folks wanted to. I had to fight long and hard to get 'em to see it was a bad idea. Did that because I'm your friend, and because if we shut you down this'll all blow up even worse. You need to know because you're going to help us slow this thing down until we can figure out what to do about it."

Alan sighed. "I'm listening."

"Right now the way it stands, you're the only guy who can legally manufacture shields. It'll be that way for another two years. After that the patent runs out and it'll be open season. Now normally a lot of people wouldn't give a rat's ass about the legality of it, but in this case starting to build their own shields would be giving us an excuse to take a shot at them. It doesn't look like anyone wants to do that if they can just get the shields from you and crack 'em, at least for now. Especially since they don't know we know, it's a lot easier to conceal cracking a shield than building one. If you shut down, though, everyone'd have no choice but to go develop shields, consequences be damned. You're the valve on this right now."

"What do you want me to do about it, then?"

"We need you to slow things down to a trickle without closing up shop. Do some layoffs, restructure, say you're pushing a new model and need to retool your assembly lines. Hell, say you need a new factory, I don't care."

Inspiration struck on that last, a seed of an idea that would soon blossom, but for now Alan filed it away and gave Hank a skeptical look. "So you want me to sabotage my own company for the next two years?"

Hank shrugged. "I'll be honest with you, it's that or we throw you in prison and find a messier way out. Your call."

Alan gave the kind of smirk reserved for someone realizing they're backed into a corner and accepting defeat. "I forgot you had such a way with words, Hank."

What do you do when you can't save the world? The choices he'd made were far from optimal, he was sure, but they were a far cry from the worst he could have done.

"If you had to choose who to save, who would you pick...?" Alan drummed his fingers against the surface of his desk, his other hand pressed flush against his forehead. The question was still theoretical, but growing less so with each passing day. The option was there to just save himself, of course, but he found that answer lacking. As for who else to save, there were two ways of looking at the problem. The more objective manner would be to scout and select a diverse genetic stock large enough to prevent inbreeding, including skillsets that could be used in rebuilding a society. The more subjective was to save himself, then his friends and family, then anyone else he knew. Somehow neither was entirely appealing to him.

In contrast, building an actual shelter to ride out the storm would be the easy part. Hank had handed the excuse to him on a silver platter, and as part of Alan's new stream of busywork he'd announced plans for a new lab complex in the far north, ostensibly for the purpose of research in extreme conditions. Being so isolated, it would of course need to be self-sustaining to be practical. Making it self-sustaining gave him reason to make it larger, making it larger gave him reason to acquire a wider range of personnel. He built the facility, stocked it lavishly with all the material he could gather, made a show of it being the new pride and joy of the company. He made sure it was stocked with his best and brightest, and their families for those who had them.

He made sure he was visiting when the first bombs fell. He'd tried to get in contact with Adrian, but the man had suddenly vanished no more than three days prior. He had never been a particularly noteworthy figure on the global stage, but now he had outright disappeared. Alan didn't know what had happened to him, and would never find out.

Alan looked out the window again, at the shield generators quietly humming away in the night. Everyone had wanted this technology, him most of all. Now everyone who still lived needed it as well.

He paused in his typing, looked over at the son he'd managed to have somewhere in the last ten years of isolation. The child was sleeping in his bed, unknowing of the world before. Even if nobody else was to know the full story, he wanted young Ian to know someday.

"I wasn't a good man, at least not in the strictest sense. I could have done more, and you get to inherit my mistakes. But I trust you'll be better than I was, when this world is yours."

Alan saved the file, stuck it in a folder with a few others and closed it. Tomorrow would be another day as lord of a tiny world.

At sixteen, Ian was due to start working. With so few people in such a small space, there wasn't much room to do otherwise; every available bit of manpower helped, whether it was to do research or just to keep the place running. While his schooling and that of his peers continued, their lessons were increasingly supplemented by practical instruction. In Ian's case, he found himself torn between two fields: engineering and management. He enjoyed the technical challenge of the former, but the latter held a certain appeal by virtue of his parentage. The way the facility's management had originally been structured had undergone adjustments after it was clear the residents would never be leaving. While the majority of the company structure had been maintained for convenience's sake, some of the upper management had been either redesigned or repurposed. Alan oversaw the functioning of the facility as a whole, with an array of eight department heads under him to handle the different aspects of the small society. Successors for positions were handpicked, usually from one's direct subordinates, though there were exceptions. Since for practicality's sake the living facilities had been designed uniformly, advancement was purely a matter of responsibilities. While some of the long-term plans which had been drafted in the first few years included re-establishing a proper economic system once it was possible to leave the facility and establish a global society again, in a society of this size the jury-rigged communism was more convenient.

In Ian's case, entering management would put him in basic information processing to start with, being granted further responsibilities with experience. It was a field with

relatively few members, but offered the unique opportunity to work closely with every other part of the facility. Deciding to enter engineering would instead mean beginning as a technician, splitting his time between learning a mix of sciences and gaining practical experience in repairing the various bits and pieces of technology that the facility relied on to continue functioning: not just the shield, but the environmental systems, lights, doors, and all the other elements that made up a building of this size. The field was the most populated by a good margin, due both to the need for plenty of people to maintain and develop the technology that sustained life in this world but also due to the simple fact that most of the children growing up here were the sons and daughters of engineers themselves. Most wanted to follow in the footsteps of their parents and do as they had done. It was a desire Ian understood quite intimately, even if his own version of that desire came with a bit of a sour twist.

From his desk Ian lifted his head, pushing a stray lock of hair away from his eyes. There were only a few hours left to make a choice and submit his decision to the network so that he could be given his assignment.

Maybe a walk will help clear my mind. Ian threw on a jacket and left his room, glancing around for any others awake at this late hour as he walked through the courtyard outside. It was one of four like it, five stories of individual and group quarters built around a central gathering space that was the closest anywhere in the facility got to giving a sense of being outdoors. Ian didn't linger here, instead heading out the main hallway exit leading to the bulk of the facility. The corridors and any common areas that didn't have glass ceilings were only dimly lit at night, to provide a rough simulation of day and night. They had clocks, and there were plenty who preferred working at night,

but the light cycle helped keep people sane. Personally, Ian found he was a bit of a night owl. Even having grown up in this place, the relative solitude of the night hours was a comfort. As such, walking around the facility in dim lighting was a familiar experience to Ian by now. His first impulse was to head for the factory floor, one of the few places that deviated from the white and soft blue palette which permeated most of his world. A somewhat uniform appearance was unavoidable in a place like this, and light colors helped keep morale up, but the contrasting bare sheet metal and yellow markings of the factory was still a welcome change.

Tonight, however, Ian found himself sidetracked. Not all activity ceased at night, and twenty minutes from his quarters Ian ran into a group of older men playing cards around a table set out in one of the large alcoves that studded the right-hand side of the corridor, providing smaller relaxation spaces.

"Got room for one more?" Ian asked, keeping his face out of the light and his voice a bit lower-pitched than usual. It wasn't that being recognized was terrible per se, but it had grown tiresome even before he reached the age where independence was considered the greatest virtue. It had taken years to convince his friends not to treat him any differently, and even then he wasn't always sure it had taken. Thankfully, none of the players made comment except to give approval to play, and it wasn't long before he'd settled into the rhythm of the game.

"You waiting for something?" one of the players asked after noticing Ian checking the time.

"Have to turn in my assignment request in a few hours, making sure I don't spend too long."

"You haven't sent it in yet? What, having trouble picking?"

"I'm trying to pick between two things." Ian put down his dealt hand and pushed a stack of tokens to the winner. "I like engineering, but my dad's in management. Everyone tells me I'm perfect to follow in his footsteps, but I don't see it. Hard to tell whether someone's just saying that or if they really mean it."

"Well, kid, not much I can say but do what makes you happy. You'll live longer that way Hell, look at me. I wanted to study superconductors in subzero temperatures. Now I'm one of the last eligible bachelors on Earth."

"Aw, c'mon, don't say shit like that." the dealer snapped, practically throwing his next card with how hard he slid it across the table.

"All right, all right, sorry. Too soon?"

"Too soon." The chorus from the other members of the game was almost perfectly synchronized, and it made the now-embarrassed scientist flinch and return his attention to Ian.

"Look, my point is, do what you want to do. Only thing that mattered before, only thing that matters now. Who cares what your dad does? Besides, you're just a kid, your life's not set in stone just 'cause you pick something now. You do what you like, you'll be fine."

"Yeah, all right. Thanks." Ian stood up and returned his remaining chips to the dealer.

"Hey, what's your name, anyway?"

Ian shook his head. "It's not important."

Responsibility

It was with some trepidation that Hank Richardson found himself approaching his last stop of the day, a somewhat dumpy apartment building in the middle of Manhattan. It was the kind of place that obviously had once been built to house only the finest, but over time the rest of the world had moved beyond its designs, and several changes of ownership later it had lost much of its shine and standards. The tiles lining the hallway walls had fallen off or been broken in places, leaving swathes of exposed and long-dried glue, forming ugly canyons of yellow along the walls. Hank glanced down at the card in his hand. "295...295...here we go." The door was dark brown wood covered over with black paint that had begun to chip away along the edges, exposing the wood once more.

Hank gave three quick raps upon the door and stood back. There was the sound of shuffling noises behind the door before the occupant opened it up just enough to poke his head through. Hank's first thought was that Alan Corusa resembled the building he lived in. He had the markings of someone of middle-class birth who had been living like a hermit. His limbs were gangly and his face studded with thick patches of stubble, but there was something in his eyes that nearly frightened Hank with its intensity. He was young, too, maybe three or four years younger than Hank himself. The simultaneity of age and youth in one person was perhaps more disturbing than the intensity of his gaze.

Hank made himself keep his cool. "You Alan Corusa?"

"That's me. Come in." Alan gestured for Hank to follow, and he did, into an apartment that bore the same signs of quiet disrepair as the rest of the building, with one notable exception. One whole side of the living room had been converted into a makeshift workroom, covered from floor to ceiling in tarps taped down to keep them

from sagging. Workbenches, half-finished electrical components, and tools of all kinds littered the area, and in the center was an odd ring-shaped device the likes of which Hank had never seen before. With all the display centered around it, he imagined this was what he was here to examine.

"So this thing of yours..."

"A shield." Alan prompted. Hank didn't particularly see how it could be one, in fact the device looked like it would fall apart if breathed on in the wrong place. At least, he *hoped* it would fall apart and not do something more disastrous.

"A shield, right...what *does* it shield against, exactly? You're asking for a lot of funding here, now I need to know if it's going to be something useful." This was almost the opposite of the way things normally worked; in general DARPA handled generating problems, and funded others to produce solutions. In this case they'd been contacted by Alan saying he'd created a device that would interest them, wanting funding for a startup. It was unusual, but the brief description of the device and the patent information had interested Hank's superiors enough to send him out and take a look.

"Right now it's set up to just reflect light. Any kind of light; visible, infrared, radio, UV, gamma..."

The last caught Hank's interest. "You said right now...this thing work?"

"Well, yes, it's just a prototype, though..."

"Turn it on, let me see."

Alan flipped the switch. In the time it took to blink an eye, the empty space in the center of the ring was replaced with a perfect mirror. It didn't seem like some sleight of hand, the device was far too slender to hold a mirror within the ring. It really looked like

magic had somehow created a reflective surface where none had been before. It took Hank a few moments to regain his composure enough to speak.

"Well now...that *is* something worth looking at, Mr. Corusa."

Hank found himself feeling some of that same energy that had filled Alan as he drove back to the office. "Look, I'm telling you, this thing could be huge. The guy had a prototype, showed me what it did, it was like magic or something. He was going on about how this thing could block out light, block bullets, block rads - we could be looking at gear *decades* ahead of the Chinese! "

"Calm down, Hank. You can give me a full report on Monday."

All that weekend Hank was filled with energy, understanding now where Alan's had come from. Hank was no scientist, but even he could see some of the applications already, and they looked to be game-changing on every level. He sent out his recommendation and waited for word back. As it turned out, it didn't take all that long.

Working with Alan was unlike anything Hank had done in his six years of working as a liaison, and it quite literally transformed his career. It was a relationship filled with ups and downs; in Hank's ideal world, he would have gained exclusive rights to the technology in perpetuity, but Alan had already patented the device to prevent exactly that. Negotiations took several days, at the end of which they settled on ten years of exclusive rights and a perpetual status of preferential treatment once that was past; Alan's company would not be allowed to sell any version of the shield publically which did not have its power restricted, ensuring most of the weaponized applications of the device could not be duplicated. There were economics to coordinate, supervisors to appoint, mountains and mountains of paperwork. But once it all started, the results were

everything he could have hoped for and more. Alan was so eager to see his work finished and put into practice that he was willing to jump on nearly any suggestion offered. For Hank's part, he did his best to keep the results under wraps for as long as possible; the longer they could keep the technological edge secret, the better. The shield made it possible to build smaller, lighter, stronger laser weapons and armor that could be turned from intangible to indestructible with just a moment's warning. The turnaround time on new applications was astoundingly fast; for all the applications Alan had already worked out and proposed, there were dozens more that came about once the project was in full swing. The arrangement was inverted from the norm; normally a project would be a problem looking for a solution, but with this technology they had the solution and were seeing what problems it could be applied to.

Eventually the decade of exclusive rights came to an end, and Hank was able to move his attention on to other things. While he still served as the government's direct liaison with Alan, there was a push from Alan to give him more breathing room, which Hank didn't begrudge him. At first everything seemed like smooth sailing, but after a few more years had passed some disturbing purchasing trends began to surface.

And so it was he found himself sitting in a restaurant across from Alan, a favorite meeting place of his. Food eased the tension and made the atmosphere more casual. The conversation had gone fairly normally in his mind - Alan was always receptive to new business, in Hank's experience - and so Hank was surprised when Alan was the one to broach the more difficult subject first.

“Something on your mind, Hank? You're usually more talkative, today you've been all business.” Alan sat back in the booth, idly rolling his fork between his fingers.

"Problem with the wife or something?"

Hank was surprised, he hadn't realized he was acting strangely. He shook his head quickly. "Nah, nothing like that. Jess is great, she's out of town again but that's nothing out of the ordinary."

"Well what is it, then?"

Hank looked down and stirred the salad in front of him with his fork, composing his response before meeting Alan's gaze again. He decided to be direct. "Last month the Chinese figured out how to break the limiter on lab-grade shields. Anything they bought for a university, for a reactor, for a darkroom, they can turn it into an armor plate. The cracked ones break down sometimes, but they work."

There was a moment of stunned silence. "...We're in deep shit, then."

"Right now this is need-to-know only, you can't tell a soul."

"Why do I need to know, then? Aren't you going to have the whole thing shut down?"

"Trust me, some folks wanted to. I had to fight long and hard to get 'em to see it was a bad idea. Did that because I'm your friend, and because if we shut you down this'll all blow up even worse. You need to know because you're going to help us slow this thing down until we can figure out what to do about it."

Alan sighed. "I'm listening."

"Right now the way it stands, you're the only guy who can legally manufacture shields. It'll be that way for another two years. After that the patent runs out and it'll be

open season. Now normally a lot of people wouldn't give a rat's ass about the legality of it, but in this case starting to build their own shields would be giving us an excuse to take a shot at them. It doesn't look like anyone wants to do that if they can just get the shields from you and crack 'em, at least for now. Especially since they don't know we know, it's a lot easier to conceal cracking a shield than building one. If you shut down, though, everyone'd have no choice but to go develop shields, consequences be damned. You're the valve on this right now."

"What do you want me to do about it, then?"

"We need you to slow things down to a trickle without closing up shop. Do some layoffs, restructure, say you're pushing a new model and need to retool your assembly lines. Hell, say you need a new factory, I don't care."

"So you want me to sabotage my own company for the next two years?"

Hank shrugged. "I'll be honest with you, it's that or we throw you in prison and find a messier way out. Your call."

Alan gave the kind of smirk reserved for someone realizing they're backed into a corner and accepting defeat. "I forgot you had such a way with words, Hank."

The strategy worked, at least as far as Hank could tell. Alan started pouring his funds into some big lab project, tied up his workforce in it and slowed production of new shields to a tenth of what it had been, projects for the military excepting. Despite the tension at that table, nothing disastrous happened that month, or the next month, or even that year. It wasn't until two years later, when Hank was on a business trip, that he received the phone call that signaled the moment everything changed.

"Hank, where are you?" The voice on the line was panicked, speaking too quickly, but Hank recognized it as a coworker.

"Dave, calm down. I'm at the airport in Los Angeles, what's going on?"

"Someone hit DC. It's gone, Hank."

Hank gripped the phone with his other hand, his face contorting into a grimace. He quickly pulled aside to one corner of the terminal. "Gone? The hell do you mean, gone?"

"We don't know who yet, someone slipped a nuke through the coastline. Everyone's in a panic, we're...we're gonna need you back here, right now."

Hank didn't respond for several seconds, still trying to process what he was hearing.

"...Hank? Hank, are you there?"

"I'm here. I'll just...I'll be at Arlington by tomorrow, okay? They're probably going to ground all the planes when this breaks, but I'll think of something. Who's left in command?"

"Secretary of Commerce was the designated survivor, I don't know much more than that at the moment. There might be survivors, the major facilities were either shielded or had shielded areas, but nobody's hailed back or sent out distress calls."

"Shit. Fine, let me know if anything else comes up." Before he could get a response, Hank closed the phone and made his way towards the closest gate. He had to get moving before the news started to trickle out and people began to panic. For that matter, he needed to move before the enormity of what had just transpired really hit him and *he* began to panic. Over half a million people had just been wiped out in an instant,

and even as he went through the motions of securing a flight under a state of national emergency Hank found himself high on the list of who to blame for it. For not pushing Alan harder in their deal-making, for advocating so hard for developing the shield, and even, in a fit of guilty anger as he looked out over the countryside below, for first knocking on that door.

His father was dying.

Ian had been told the news when he had gotten off his shift the week before. Alan had been taking a tour of the factory floor when he collapsed and was rushed to the infirmary. It hadn't taken long to diagnose the problem; he'd come down with heart complications, and his body was well on its way to shutting down. It was something that could have been dealt with, perhaps, if medicine were not so hard to manufacture, but as it stood even the best efforts of every medical professional on staff could only stabilize him for a time.

He'd been to visit only briefly. There was something unnaturally clean about the way a dying man looked on a hospital bed. He couldn't bring himself to stay, so he went to the place he was most comfortable, the domain he'd managed to carve out for himself in engineering. Working in the quiet of a darkened terminal, he could pretend for a little while longer that everything was all right.

The sound of footsteps broke his precious silence. "Shouldn't you be somewhere else right now instead of cooped up in here?" Rick stuck his head through the door - still Ian's friend, after all these years, still his wingmate.

Ian didn't meet his gaze. "I'm not ready." His voice was almost a whisper, and Rick leaned in closer.

"What'd you say?"

"I said I'm not ready!" Ian snapped, looking up at last. "I'm not ready for *any* of this!"

The sudden outburst of emotion stunned Rick, and Ian continued. "You know he wants me to fill his spot? Worst-kept secret in the world. After everything I did trying to be my own man, he goes and dumps this on me! I'm not deaf, Rick, I hear people talk when I'm not looking. Little Prince, that's what they call me, right? Spent thirteen years in this job, and every step of the way I have to fight off dad's shadow over me. Do you have any idea what that's like, having to prove over and over again you're not just some spoiled brat?" The anger in his voice faded, and his tone dropped again. "I love him, but I don't want to be him."

Rick shook his head, rubbing his palm along his face with a sigh. "That's what's been bugging you, man? You know that's why you're managing the division and I'm still a lowly researcher, right?"

"What do you mean?"

"You push yourself *way* harder than I do - hell, than most of us do. You damn near run yourself into the ground. Remember the bubble shield? And the noise canceller? You got a team of guys who'd been floundering on that thing for *years* to get it done in just a couple of months, and we managed to pull a ton of data off the satellites because of it. You're a great leader, I don't care what anyone says. Everyone around here's gonna back you up on that."

Ian looked unconvinced, causing Rick to pat him on the back. "And anyway, I'd way rather have someone who's not after it in charge than someone with an ego bigger than their project list. You keep wanting to outdo your dad and I think we'll be alright. And if anyone disagrees, they can go to me."

Ian's expression didn't change much, but he managed a slight smile. "Thanks, Rick."

The moment was ruined by the sounding of the intercom. Ian pushed the button by his desk to receive it.

"Ian?" Ian recognized the voice as that of the nurse attending his father when he'd visited.

"What is it?" He knew what was coming before it was said.

"Your father, he's...he's getting worse. You need to get over here now."

It took twenty minutes to get all the way across the facility. By that time, it was too late.

Whatever Happened to Adrian Alkeiv?

He was getting old. It was hard to get around that these days, the chill that slithered into his bones more each night. His body, never in the best of shape through a combination of a sedentary lifestyle and some poor decisions made in youth, was failing piece by piece. But he did not intend to fade away quietly. He was still possessed of his mind, and he would never give that up no matter what else time and nature might take from him. Adrian Alkeiv would die with his reputation intact.

He advertised himself as a sociologist, and this was partially true. The way men in his line of work gathered information had changed over the past decade, and the guise was a good excuse to keep up with the times, even at his age. The old tricks still worked – old friends and friends of friends in high places, favors owed, knowing whose tongues were loosened for how much – but oftentimes it was as simple as looking where people advertised their lives for all to read about. And Adrian hardly had to look to find what everyone was talking about.

The first time Adrian had read about the shield, he'd felt a familiar chill run down his spine. It was seven years before the device had been made publically available, when the reports he was still technically privy to see began to make mention of the American military deploying a new type of armor that turned off and on at will like it was magic. What started as scattered reports quickly matured into a cohesive whole: through means none had yet managed to duplicate, they had created a device which created a perfect shield. It was weightless aside from its generating device, its mirror finish seemingly invincible even against weapons that would obliterate normal armor, and the barrier

needed only energy to be maintained. It was a game-changer like none that had been seen in decades.

Despite leaks of the test reports on the results, however, information on the inner workings of the device itself were under much stricter guard, a stance Adrian understood given the potential applications. Because of this he'd been pulled back into active duty for the first time in decades, asked to find out whatever he could about the shield device and how it worked. He might have protested that he was retired if it hadn't been so interesting to him. Instead he set about the task with newfound energy, asking questions and keeping an ear to the ground just as he had long ago. He didn't expect to find what he'd been looking for at the patent office.

But there it was, plain as day: a man named Alan Corusa had invented a schematic for a device that created an impenetrable wall against light. The ones the Americans used were different from the one in the patent, more advanced, but the core concept of how was right there, even if all the actual formulae and detailed schematics were now redacted. Apparently he'd registered it as a civilian patent first before going to the military for funding, and had somehow managed to convince them to allow him to keep control of the device's technology. Adrian reported his findings, even if the information was next-to-useless on its own, and made plans to continue his investigation. His job didn't require it, but this was too interesting to not keep an eye on.

As it turned out, it would have been more difficult in the end to *not* keep an eye on developments with the shield. Seven years after those initial reports, whatever deal Mr. Corusa had made with the military changed, and the company he had founded to produce the shield began selling it commercially. Perhaps it was a presidential directive

to make it public, like with GPS, or perhaps Mr. Corusa had planned this all along and allocated time in his deal with the military to allow him to sell it. The new versions were highly regulated and restricted in performance, of course, nothing like the invincible barriers or their assortment of weaponized variants still being developed and reported on day after day. The commercial shields could contain light strong enough to produce a laser for a laboratory or presentation tool, but their mirror surface would crack and leak before it could build the intensity needed for the kind of cutting beam being mounted on tanks. There were attempts, certainly, and not just from Adrian's country, but the restrictions made weaponizing the commercial shield difficult and unwieldy for most purposes and outright impossible for others. But it was only a matter of time before someone discovered how to break those restrictions. This would not have been nearly so worrying to Adrian, if it weren't for the fact that the intended use of the shield, as written on the original patent, was to seal a place against radioactivity. Memories and fears from over fifty years ago prodded at him, and Adrian decided he wanted to meet with Alan Corusa.

Getting in to the party wasn't a hard task, just a matter of knowing who to ask. His cover identity had gained some repute, if in an obscure enough field to avoid the hounding attentions of the media, and one of the organizers owed him a favor worth a ticket and a drink or two. The tricky part was the approach. From what he'd read Alan was a very isolated type when not in a comfortable environment, so any attempt to break the ice would be quickly rebuffed unless he was direct, and Adrian had no idea how Alan would react if he was direct. Fortunately, someone with a lot more alcohol and a lot less sense in him than Adrian made the problem much easier to handle. All it took was

stirring up a bit of fear to get the blood boiling, and soon Adrian had a ranting drunken man on his hands.

"You know, Mr. Corusa's right over there." Adrian tipped his glass in the direction of the column Alan was leaning against. "I imagine you could give him a piece of your mind if you wanted."

"Yeah...yeah, good idea. Just gimme...gimme a minute." The drunken man weaved his way across the room, with Adrian following behind at a leisurely pace. He resisted the urge to smirk at the sight of his new friend crashing into the wall next to Alan and starting to rant.

"Let me tell you something, it's all going to go downhill." The trip seemed to have been a bit too long for the tanked fellow to remember where he was going beyond a general direction. "I give it five years, tops."

"What do you mean?" Alan attempted to look unfazed by the sudden accosting, though Adrian saw him frown slightly.

"This, uh, this whatchamacallit...the shield! Yeah, that's it, the...thingy that Corusa guy built. Man, that thing's gonna get us all blown up." Not only where Alan was standing, but who he was, apparently.

"I'm fairly certain there's nothing wrong with the shield. It's virtually everywhere by now, I would think any problems with it would already be well-documented." At least Alan seemed to be holding his liquor well, it would make things easier.

"No, see, that's it! That's the problem! It's everywhere!" The man gave a shaky hand gesture, starting to parrot most of what Adrian had said to him but with less volume control. "Think about it, what're people using it for nowadays? Radiation! And what's

the big reason none of these assholes with nukes are blowing each other up? The fallout, the *radiation*! It's all gonna go down, just you watch. Hang on, I'll be right back." With that he stumbled off towards the restroom, presumably to empty the contents of his stomach. Adrian took the opportunity to move in closer while Alan was watching the object of his attentions depart.

"He might not be far off, Mr. Corusa." Adrian noted how Alan nearly jumped; perhaps the earlier discussion had disturbed him.

"And who are you?"

"A student of sociology." Adrian gave a polite nod, aiming to distance his appearance from that of his patsy as much as possible. Best to get Alan interested in talking to someone sane. "Adrian Alkeiv, at your service."

Alan took another sip of his drink, keeping his tone measured. "And what do you want, Mr. Alkeiv?"

"Simply to talk. You're perhaps the most interesting man in this room. I hear your company has been flourishing of late."

"The shield's popular, not to mention we keep finding new uses for it. It's not hard to be profitable."

"Indeed, though I notice you could certainly be more so?" Adrian gave a calculated smile, deciding on a plan of attack along Alan's most notable eccentricity.

"Many in your position would sell off your business and patents and either retire or start a new one. Or at the very least, they would go public with their business. You keep yours oddly consolidated for a company as large as yours is growing."

"Nothing strange about it. I prefer to have full control over my company. There's something very satisfying about it. Besides, this way I keep a monopoly over the technology until the patent runs out."

"Do you really think that's true, Mr. Corusa?" Adrian thought Alan's defensive posture suggested otherwise. "With technology like that, I'm sure there's more than a few ways to use it as a weapon. You really think nobody wants to build their own version, if you won't sell it to them?"

"I don't have any intention of selling the shield as a weapon. It's a tool for science, not a gun."

"I would be more worried about bombs, myself. As that drunken gentleman was poorly explaining, there's a very delicate balance of power when it comes to nuclear weapons. Your shield might provide what everyone has been missing for the past sixty years: a defense."

Alan raised an eyebrow. "And what's wrong with that?"

"To put it bluntly, a weapon is only unthinkable if nobody could survive its use."

"Well, that's..."

Seeing how this statement had set the gears in Alan's head turning, Adrian elected to give him some time to think things over. He pulled out a card from his pocket and handed it to Alan. "You ought to do some research. If you'd like, I wouldn't mind speaking to you again." With that, Adrian made his way back into the crowd to disappear from the party, leaving Alan turning over the card in his fingers.

The following years were a return to Adrian's normal routine. He was for the most part enjoying his retirement, opting once again to listen rather than report. He

waited idly for Alan to call him, but the call never came. Adrian could only guess at why, but he suspected that shame was a strong motivation for Alan to stay away. Certainly the conversation seemed to have affected him, as his company began in the following years to focus more on smaller shields over the large ones meant to guard entire rooms, and the already impressive restrictions on the shields were tightened even further. At the same time, governments the world over were focused on finding a means of circumventing those restrictions and limiters. When one finally did, Adrian decided it was time to go home. Even if the world didn't end, by that time he was pushing ninety, and preferred to spend his last days in the country he'd spent his youth in.

Sitting in the quiet comfort of a cheap apartment in Moscow, Adrian thought back. He'd first come to America in 1939, as a young man looking to attend college, the first in his family. He'd been sent as a mole for the GRU, one of the many branches of Russian intelligence, and had quickly planted himself as a student and then professor of sociology. It was an ideal cover story for him, giving him the ideal excuse to study culture, to investigate, and to travel the country in pursuit of his research. The research was real, of course, it had to be, and he found composing his papers for publication not too different from composing his messages to sneak back home. He'd gotten to watch it all, from the Communist witch hunts he'd miraculously avoided to the second world war and the tensions that filled its aftermath.

There had been many incidents during that time which had the world holding its breath, but one in particular had always stood out to him, even to this day. It was in 1960, when his country had first developed missiles that could be fired by submarines without needing to surface. There was a brief moment during that time where Adrian, by

then no longer a young man but still possessing some of a young man's ambition, realized that only one side had built its capital on the coast. Watching the tension spike then, defused after a fashion by both sides ensuring systems were in place to make it so no one attack could prevent a counteroffensive, had taught him a lesson about how this dangerous balance worked.

The phone rang one day, near the end. Adrian missed the call but found the message. Alan had finally called, speaking of an offer to let Adrian join him in a shelter he'd built to ride out the coming storm. Adrian decided it was his turn not to reply. He'd seen enough.

There was shockingly little fanfare to Ian's stepping up as leader, just an announcement and a change of office, a public appearance to be made later once everyone had time to get past the initial shock. For now he found himself sitting in his father's old office, his office now, looking over the contents of his workstation and trying not to add to the pile of tissues on one corner of the desk. It was only in privacy he felt he could cry.

A beep from the workstation roused Ian from his thoughts, indicating a freshly received file. It would have been ignored, but for the sender; his father's own account. Curiosity was more than enough for Ian to open up the file. It contained a number of important documents; notes on the shield, predictions for fallout distribution patterns, Alan's own observations on most of the current high-ranking personnel, and a long text file asking that it be read right away.

Ian opened the file and began to read the final message his father had left for him. It was both letter and story, describing how Alan had created the shield, produced it, and ultimately built this very facility to serve as a safeguard against its consequences. By the time it was done Ian was left rubbing his temples. So his father *had* known, had known and hadn't told him. He felt his breathing come heavier than usual, a sense of anger building deep in his chest with no outlet. There was anger, but nobody left to be angry at. He couldn't bring himself to direct his frustration at his father, and in truth he wasn't exactly sure what he was frustrated at. There was just such a sensation of magnitude at what he had learned that he couldn't process it all. All of the tension Rick had helped release was back again stronger than ever. For the second time that week, he slammed

his fist upon the desk and let out a choked shout, before bringing his other hand to his face as if to block the flow of tears.

The cry of anguish brought a knock at the door before his secretary, a kindly older woman by the name of Alice, slid it open to peek inside. “Mr. Corusa, sir, are you all right?”

“I’m fine!” He immediately regretted how much volume and shakiness he had let into his voice, and forced himself to quiet down. “I’m fine. I’m just...just reading a message. Something my father left for me.”

“If I may speak freely, sir?” Ian nodded his assent, and Alice stepped fully into the room, turning up the lights in the room by a few shades. “I served as your father’s secretary for twenty years. He was a hard worker; too hard, even. He was always acting like he was trying to make up for lost time somehow. He didn’t give himself time for breaks, even when he needed it. Maybe if he hadn’t...”

Alice trailed off, wiping at her eyes. “Well, all I’m saying is, I think you should go spend some time with your friends right now instead of hiding away in here.”

Ian snorted. “With the way I’m feeling?”

“*Especially* with the way you’re feeling. I can cancel your appointments for today, I’m sure nobody will mind. If you’re going to run the company from now on, you shouldn’t run yourself into the ground doing it.”

The echo of familiar words gave Ian's thoughts an out from the loop they'd been trapped in since he read his father's last words. He was being trusted to be better than Alan had, not just by Alan himself but by his friends as well. He'd been trying to do that by taking his own path, but events had conspired to put him in this chair anyway. And it

seemed as though in a few ways he'd been following the same path after all. Still, there was one thing he had that his father never did.

“Yes. Yes, I think you’re right. Cancel my appointments.”

Ian stood and allowed himself a faint smile. “I’m going to need some help with all this.”