

A Conversation Among Friends

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FADE IN:

INT. LOCAL BAR - DAY

JAMES, a young bookish looking man is sitting at the end of the bar. An American scientist and academic, James is dressed casually. Two fresh MEDALLA beers sit in front of him, but several empty bottles are near by. A small flower blooms on top of the bar, growing out of a bottle of Clorox Bleach. That's the type of bar we're in.

James is joined by KAY. A Canadian, and fellow academic, Kay is young and vibrant. She has an easy grace about her.

KAY: I see you've ordered drinks already. Thanks.

JAMES: What kind of host would I be if I hadn't?

KAY: I'm not sure there's much point to this though.

JAMES: That's just because you haven't opened your mind to alternatives. All I ask for is the benefit of the doubt.

Kay smiles.

KAY: Whatever you say.

JAMES: I missed your speech at the symposium, but I heard about it. Your hostility towards Kurzweil is a little harsh, don't you think?

Kay sits down and opens her cerveza. She turns down the plastic glass offered by the BARTENDER.

KAY: I just think that you techno-optimists are putting too much faith in your flaunted Moore's law. It seems like typical human arrogance again.

JAMES: Ouch. You haven't even had a drink yet and already I'm arrogant?

KAY: Just wait till I get warmed up.

She takes another drink as she settles into her bar stool.

KAY: Before we even get started, I want to know what makes you think that we can create these super intelligent beings when we can't even solve

something like world hunger or poverty?

JAMES: All of these discussions are rooted in human nature.

KAY: Enlighten me.

JAMES: What does it mean to be human? What separates us from the rest of nature?

KAY: I think I could happily argue that very little separates us from nature. Indeed, it envelops us. We exist either in a state of nature that we are in conflict or sympatico with. Either way, nature is going to win.

JAMES: I prefer to look at the tools. The technology that we have sets us apart from the rest of our bio-system.

KAY: There's that same human arrogance I was talking about. We might be able to manipulate our environments, but we still live in a complex world of give and take with nature.

JAMES: I concede that we give and take with nature, but it is our technology that flows from nature. We can be



described as naturally technological beings. Forced to adapt, we use tools as our fur or teeth.

KAY: How? How does our technology flow from nature?

JAMES: I believe that the search for knowledge can be considered one of the essential elements of humanity. We used tools to not only adapt to harsh environments, but also to learn.

KAY: I think I see where this is going. You're suggesting that technological development itself is our nature and probably even our destiny, right?

JAMES: Exactly! I know there are other ways of approaching the argument, but I wanted you to know where I was coming from.

KAY: I can accept that as a legitimate approach. That doesn't change, however, that none of this answers my more practical question of why technology has not solved all of our problems already.

JAMES: Cynicism! The question is key, though. Up 'til now, technology has only been able to frustrate conflicts based around scarce resources. Look at the example of internal combustion. We have powerful engines that cannot run without oil and gas. The technologies Kurzweil talks most about — these knowledge enabled technologies — they have the potential to end these exact conflicts. The technology is already on its way.

KAY: Are you kidding me? It's like we're talking about angels dancing on pinheads. Don't tell me: a break-through in nanotechnology is going to solve all of our problems, right? That seems to be the stock

answer for any trans-humanist I've ever talked to.

JAMES: First off, I'm no trans-humanist. I like my humanity just fine. That doesn't change the fact that these technologies are on the horizon. We've already come so far with miniaturization and advances in computing technology just don't seem to be slowing down.

KAY: Fine. Convince me. I'll even give you that Moore's law will remain at its current level for the indefinite future. Tell me how this is all going to happen.

JAMES: The mapping of the human mind is an eventuality, not a possibility. Can you appreciate the importance this will have for intelligent computing?

KAY: Well, yeah. That's the crux of Kurzweil's position, isn't it? Flowing from the reverse engineering of the human brain, we have conscious computers, a singularity, yadda yadda. All of a sudden we have human-machine cyborgs. Our proverbial six million dollar men.

JAMES: Exactly! But so much more.

KAY: Listen, you dragged me out here and seem willing to ply me with alcohol, so I'm still listening. It doesn't change the fact that I'm very skeptical.

JAMES: It doesn't matter how skeptical you are. We still need to plan for these contingencies! If we don't plan to deal with these emerging technologies, we'll constantly be reeling, trying to react to some pretty crazy social changes. If nothing else, that's what I wanted to convince you of today.

KAY: That's why I still go to these symposiums... That and the heavy drinking.

James raises his glass in a toast.

JAMES: Salud!

KAY: Cheers. Let's just consider what implications follow if any of these prophecies turn into realities. I'll be the first to say that I don't want to find myself in a position where I have to hear "I told you so".

JAMES: I'm glad you're approaching this with an open mind.

KAY: It's probably just the booze. So what exactly are your prophets saying anyway?

JAMES: Well, I guess, like anything else, it depends on what prophets you're listening too.

KAY: So who are yours?

JAMES: Well, I've devoted my adult life to studying artificial intelligence. I really believe that the most reasoned approach has to be Ray Kurzweil's. That's just how it is.

KAY: So you think that the next step in human evolution is a fusion of man and machine to create a superior life form?

JAMES: Well, I guess that's one way of looking at his body of work. I would probably feel more comfortable saying that humans and machines are en route to merging together.

KAY: It seems to me that you're essentially embracing our own extinction. You consider technological progress to be more important than the interests of the human race to thrive



and survive. You're putting technology before humanity.

Kay motions for two more drinks.

KAY: The price for your progress seems either extremely selfless and progressive or supremely foolish. I just can't help but think the latter is a more accurate description of your vision.

JAMES: I can't say that I agree. You've fallen into that trap perpetuated by Bill Joy and his camp. There is nothing selfless about Kurzweil's vision. Humanity is the ultimate winner. We are literally better, stronger, faster. Never mind the cognitive advances that will be available. Imagine never having to sit through another one of Kerr's workshops! You could just upload the whole thing, songs and all, directly to your brain.

KAY: I like his workshops.

JAMES: You would.

James takes a long drink before cracking a smile.

JAMES: Yeah, so do I. MRI: Mens Rea Indicator? That killed me.

Kay smiles as they share the joke.

KAY: Technology is supposed to serve us, not replace us. You're spreading dangerous ideas because you're so blinded by your enthusiasm. You've so narrowed your view of human life that you define us by the lowest common denominator. You're willing to sacrifice the human condition because you consider the supreme efficiency of some uniformly predictable and infallible mathematical system superior to human life.

JAMES: I don't think I'd go so far –

KAY: Kurzweil claims that progress carries risk; development means that along with beneficial creation the potential for destructive invention inevitably coincides. It's simply a fact he admits. The same thing can be said for the human condition. He is obsessed with eliminating the ails of human life, but he seems to forget those ails are simply part of the orchestra of human life; good and bad go together. It is the yin and yang. The solution is not to eradicate the human race. Neither of you seem to realize that you're simply eliminating one kind of evil and replacing it with another. Now instead of human evil we have evil machines. This exchange seems pointless, especially when you consider what we are giving up: the beauty and genius of mankind.

JAMES: Wow! I'm sorry. Did I just have a drink and wake up in a Terminator film? Listen, intelligent machines do not necessitate an overthrowing of humanity. That simply does not balance out. We cannot look at humanity and machines as growing in a vacuum. What you're talking about, this dystopic vision of post-apocalyptic Earth being ruled by shiny, evil robots, amounts to little more than fear mongering.

KAY: Does it?

JAMES: Kurzweil does not advocate the blind, headlong approach you seem to attribute to him. Whether you agree with his end predictions or not, his reasoning follows from sound and ethical premises. There's really not that much difference between Kurzweil and your hero, Mr. Bill Joy.

KAY: Really? That's not how I see it. Joy contends that the only realistic

alternative is relinquishment: limiting development of the technologies that are too dangerous, by limiting our pursuit of certain kinds of knowledge.

JAMES: I just can't swallow that. Kurzweil's response, and I have to agree with him, is that abandonment of broad areas of technology only pushes those technologies underground. Joy just does not seem to appreciate that. When research is conducted in dark rooms by shadowy figures, you can forget about ethics and regulation.

KAY: Joy makes some pretty compelling arguments about why we have to relinquish these technologies.

JAMES: What technologies? Genetics, nanotechnology and robotics? I'd rather listen to User Illusions than his G'N'R rhetoric.

KAY: That's not fair.

JAMES: Isn't it? Let's look at his argument carefully. I'll even put it in the most positive light I can. He contends that these emerging technologies are too dangerous – that we risk doomsday scenarios without relinquishing them. Okay, fine. What's different about these new technologies that we have not encountered before?

KAY: They're knowledge enabled, for one. Secondly, and probably more importantly, there are self-replicating aspects to these technologies. That's what really scares Joy. Scarce resources are not necessary, large facilities won't be required to produce them. He raises the whole spectre of the "rogue individual" instead of state.

JAMES: Now you're using Kerr's language! I knew you were paying closer attention than you let on. Lis-



ten, though: Joy bases his arguments on faulty or unknowable premises. Knowledge enabled weapons? His argument that we're on the cusp of perfecting evil? We've already done that, a long time ago.

KAY: That doesn't change the ideas behind the concept. An individual with the right knowledge could wreak unimaginable devastation with these new technologies.

JAMES: How is that different from the situation today? I can publicly order the chemicals I need to make Anthrax in my basement.

KAY: That's not going to destroy a country.

JAMES: I'll poison the water supply. What about chemical storage facilities? I could blow some of those up with conventional explosives and wipe out a couple of states. Joy's argument that somehow just because a bomb only explodes once, that we're safer with conventional technologies does not seem to hold water.

Kay looks disturbed as she takes a deep drink.

JAMES: This is scary stuff, but we need to be honest with ourselves. There are reasons that countries like Libya are backing away from weapons of mass destruction. The repercussions for using them are just too high. If responsible, liberal minded governments are not going to be the first people to develop these technologies, who is? Shady McGrady? You know we can't allow that. A transparent society can develop defenses and safeguards to ensure that these new technologies will help benefit us and not hurt us. It's Kurzweil's notion of blue goo – the obvious response to malevolent

genetic pathogens and self-replicating nanotechnology is to develop social institutions and technologies that can defeat those so-called "rogue individuals".

KAY: Where do you see Joy's position leading?

JAMES: Well, if we look at history we can see where his reasoning takes us.

KAY: I'm listening.

JAMES: That's a nice change!

James smiles as he picks up his beer.

JAMES: Joy claims that technology – that these new technologies – are going to lead to destruction. As straightforward as that sounds, it has to be recognized as faulty reasoning. The cause of human suffering is not technology! We have brought suffering and mass destruction in countless forms upon ourselves since time immemorial. Whether it be Ghengis Khan or Rwandan genocide; we don't need advanced weapons. We only need people willing to "carry out orders".

KAY: The scale for destruction has never been greater though.

JAMES: You think so? We already have the ability to end all intelligent life on this planet a couple times over. Scientists like Oppenheimer came to understand the dangers inherent to splitting the atom –

KAY: Behold, I am the destroyer of worlds.

JAMES: Exactly! But still, look at how we have harnessed nuclear energy. The 1960s weren't so long ago

that I don't remember how close we came to lobbing some warheads at each other. Why? Not technology, that's for sure. It was because of human arrogance and pride. The problem is people. People and resources. What do we fight wars over? Land, oil, money. These same technologies that Joy would have us abandon might very well be those that can actually solve some of these deeper conflicts!

KAY: There are no guarantees that these technologies are going to lead us to the promised land! The potential benefits are not worth the gamble.

JAMES: Please feel free to tell me how you really feel.

KAY: Come on! It feels like we are playing with fire. At every moment we are making it easier for any human with an inclination for mass murder to carry out his evil deed on a whim. Self-replicating nanotechnology is terrifying. Its shadow is going to be the great plague of our time.

JAMES: Would it be the Grey Death?

KAY: You could say that, I suppose.

JAMES: You're not getting any argument from me on that. Indeed, I'm the choir and you are preaching to me. There are already scary people out there in the world doing scary things. However, your position, and Joy's, only leads to mass panic. If relinquishment isn't possible, then what? We're screwed. Fear quickly leads to irrational behavior. The Luddite movement was inspired by similar sentiments. Besides it seems ridiculous to think we can even stop a process that has been gaining momentum at exponential speeds and continues to do so. We must be realistic. Do you really think that we can even put anything bigger



than a speed bump in the way of technological innovation? We must be prepared and mature enough to deal with each new innovation as it comes. I think that our world is a lot less fragile than some people think. As technology grows, we're going to need to adapt to it.

KAY: I think that on many levels, Bill Joy would agree with that. He just seems more prudent than Kurzweil.

JAMES: Prudence isn't the right word here. This new Luddite –

KAY: Hold up! You are not about to call Bill Joy a Luddite, right?

James pauses for a BEAT.

JAMES: No.

KAY: Uh-huh?

JAMES: Well, if you look at the historical context –

KAY: No. The historical context has more to do with socio-economic conditions and movement of resources than it does technology. It was more political than not.

JAMES: But look where we'd be if we had allowed that movement to progress.

KAY: It couldn't help but fail. The drive for technology and the concentration of resources was too strong –

JAMES: Exactly!

Kay sits stunned, uncertain for a moment.

KAY: What?

JAMES: Technology cannot help but proceed. Even now, the concentration of resources in big business and governments is going to push this technology forward. I am not certain that abandonment is even possible at this point in time.

KAY: That's not what –

JAMES: Yes it is. What about Communist China or Russia? Look at the limits placed on free thought. Who controls the most powerful technologies? The elite. The politburos of the world. That's where Joy's thinking ends up. That's where he takes us. Any day of the week, I would rather have technologies centred in transparent, liberal democratic countries with the social institutions to back them up. Ask yourself this: who is going to suppress something as broad as these areas of technologies?

KAY: I'm not sure.

JAMES: It was a rhetorical question, but I think we can look at it closer.

Kay rolls her eyes.

KAY: Okay.

JAMES: We are talking about wide ranging areas of study. Maybe we can easily cancel the robotics programs at MIT and Carnegie Mellon by restricting federal and private funding, but where does that get us? There is still private research that has to be monitored. Against constitutional arguments we can probably shut Honda and the rest of them down too.

KAY: What constitutional arguments?

JAMES: Well, speaking from the American perspective, some First Amendment issues sort of come to

mind. In any event, that would still leave nanotech and genetics to be relinquished.

KAY: I don't think that Joy advocates such a wide approach.

JAMES: Are you sure? There is no middle ground. His examples of relinquishment in regards to current weapons of mass destruction seem to make that pretty clear. Self-replication needs to be abandoned, but where is the line drawn?

KAY: Let me guess: that's a rhetorical question, right?

James laughs, sipping his beer.

JAMES: Maybe. The areas of nanotechnology and genetics are harder to regulate. They are further dispersed and easier to work at over great distances. I hate to do it, but Max More's ethical argument against Joy's position is compelling.

KAY: Max More? The Extropist? I think the alcohol is clouding your mind.

JAMES: No, really. I generally don't put too much stock in anything he says, but he forwards some pretty commonsense arguments against what Joy suggests.

KAY: You mean when he says that relinquishment is unethical because of the great benefits associated with the technology, right?

James nods agreement.

KAY: Well what about his serial extinction of humanity through quote-unquote "death and aging"?

James shrugs.



JAMES: I never said I liked the rest of his arguments.

KAY: So what, then? Where does our protection come from?

JAMES: Well, following Kurzweil's logic, we are the solution. Embracing technology in an open manner is the best route.

KAY: Right. So in essence you're telling me again that technology is our fate? That enough faith in the liberal traditions of world democracies will get us through the long dark night?

JAMES: That sounds overly dramatic, but yes. In a manner of speaking, I think it will.

KAY: Do you really think that progress is progress? That we're going to somehow replace ignorance with knowledge? It's really better that we're open about it because otherwise any mad man could carry out his unbridled plotting for world domination under the cover of darkness?

JAMES: Unbridled plotting? I'm not sure I said that, but I agree with the underlying argument, yes.

KAY: I thought you would.

JAMES: We need to be more[SJH]I think inclusive is the right word, but I'll leave it to your discretion. Inclusive than Joy's plan calls for. Participation of wider sections of humanity will lead to positive innovation.

KAY: I have a feeling you're going to tell me that we must be guided by the enlightened and progressive ideas of the current day intellectuals and thinkers, right? Humankind must combine all skills, knowledge and insight to ensure the best possible outcome?

JAMES: I honestly could not have said it better. Uncharted territory will be explored by someone.

KAY: And so basically, it's better that it be "us" than "them"?

JAMES: I'm not sure that there is any distinction between "us" and "them". All I am trying to say is that Kurzweil's vision embraces an inclusive future where technology helps bring people together rather than pushing us apart. Is that such a bad thing?

KAY: No, of course not. I'm just not sure that we're headed on that path.

PACO, a young professional type, sits down next to Kay. He looks at the growing number of empty beer bottles.

PACO: Looks like I came just in time. How's it going, James?

James grins at seeing his friend.

JAMES: Fransisco, this is my colleague, Kay, the one that I was telling you about. How's it going?

Paco shakes Kay's hand.

PACO: The pleasure's all mine, I'm sure. You can call me Paco.

KAY: Nice to meet you, Paco.

JAMES: Paco is a lawyer in Rio Piedras. A real super-star. Used to be a policy wonk for the Department of Justice.

PACO: That's high praise coming from you! I'm sorry to interrupt – I saw you from the street and wanted to say hello.

KAY: Don't be absurd. I'll be glad for the injection of new blood.

James laughs.

KAY: So you're a lawyer?

PACO: I try.

KAY: Well, maybe you could help us with a problem.

PACO: Oh no! I bill at three hundred an hour.

JAMES: Will you settle for a beer?

Paco smiles as James motions for another drink.

PACO: I guess I don't have much choice. What's going on?

JAMES: I'm trying to convince Kay of the error of her ways.

PACO: Let me guess: Kurzweil versus Joy?

KAY: How did you know?

PACO: Trust me. I've known James for a while. I know how this goes. Where are we in the debate?

KAY: He's been pushing pretty hard. I think I could take the position that Kurzweil is correct in his assertion that we need to keep technologies like genetics, nanotechnology and robotics in the open, but then what?

Paco smiles.

PACO: Looks like I did come at the right time after-all. This poses a pretty interesting thought experiment. Where do we go from here? We accept Kurzweil's position, so where does the policy come from?

JAMES: Exactly. Kay, this is what I wanted you to understand.



KAY: Alright... Let's start from the ground up, I guess.

PACO: We're looking for broad strokes, I imagine?

KAY: I think that's probably easiest.

PACO: Well, first off, we need to look at regulatory systems. What is the best approach to balancing open research with safety?

KAY: Oh hey! Are we talking about relinquishment?

JAMES: No, but Kurzweil doesn't suggest that we should run head long in to the dark either.

KAY: So you'd be okay with some regulation of these sciences.

JAMES: Come on! Give me some credit. No matter what else you might think of me, I am something of a realist. However, let's just make the statement right now: there is a big difference between regulation and relinquishment.

KAY: Okay, start filling me in.

PACO: Well, you have to examine the underlying philosophy that's going to inform our legislation. From there, we can build upon our guiding premises and come up with broad goals.

JAMES: Okay. Premise number one: in the future there will be robots.

Kay looks at James for a BEAT.

KAY: I already love where this is going.

JAMES: Okay, okay. We'll start more basic than that. Premise number

one, redux: open researching of technology fosters positive innovation.

KAY: I can live with that.

JAMES: Premise number two: emerging technologies in the fields of genetics, miniaturization and robotics will introduce unpredictable and radical innovation.

KAY: So premise number three should be that such unpredictable and radical innovation needs the support of liberal social institutions.

PACO: Right! So what kind of institutions do we want to foster?

KAY: Ones that will help protect the public, first and foremost, I suppose.

JAMES: I'd add "by balancing ethical and technological concerns." These technologies are still really in their infancy and are far from being understood. I don't think any of us, Kurzweil or Joy included, can accurately predict where we're heading. Nonetheless, we need these institutions to develop a system through which we can diminish the potential for evil and still develop these technologies to the full extent of their beneficial possibilities.

KAY: I guess that goes back to your ethical argument before, right? How do we turn our backs on the huge potential for good through these technologies?

PACO: Okay. So we need balancing institutions that will ultimately promote safety and stability.

KAY: Where are these institutions coming from? It's still way too vague to quell my problems with this open system.

JAMES: Granted. So what then? We need to narrow it down.

KAY: I'd like to see more government control.

PACO: What about government oversight committees?

JAMES: I wasn't kidding — Paco is such a policy wonk.

PACO: It's a possibility.

KAY: Yeah, but I don't know how much confidence the public should have in bureaucratic oversight. Doesn't that pretty much just amount to the techno-junta we were talking about before? Where the elite is going to be acting as a gatekeeper?

JAMES: At least it would be more transparent, so long as it was out in the open, but I agree. It's probably too top heavy. Another approach is self-regulation with peer review and open academic directing councils.

KAY: That seems a little better. Especially if those councils could be institutionalized and shielded from bureaucratic interference. It would add freedom of academic work while still maintaining an oversight of development.

JAMES: It would also allow for a useful and efficient spreading of resources. Federal and private funding might be more effectively distributed through these wide networks of academics.

KAY: We'd need more than just academics. Don't forget government regulation and industry professionals. We would need representation from all sides.



JAMES: See, Kay? You're really starting to get into this.

KAY: It's an intellectual exercise. Don't read too much into it.

They laugh. More drinks have already arrived.

PACO: I think that's a good start.

KAY: Yeah, but what about real life situations? Let's say there is a disaster, or God forbid, a terrorist act – what happens then? How do these institutions respond? Academic councils don't seem to carry enough weight in the real world.

JAMES: They need to be backed by international organizations. Emergency and early response mechanisms need to be developed in parallel with the private and public research going on.

PACO: How does that happen?

JAMES: Good question.

KAY: The UN is unlikely as an effective source. Consensus there is next to impossible and the permanent members of the Security Council dominate the agenda.

JAMES: Only insofar as actual security matters are concerned. The General Assembly is dominated by developing countries.

KAY: That's not reassuring either.

PACO: So you need a focused international source of legitimacy behind your emergency response groups?

JAMES: Probably. To make it really work, people would have to trust the institutions. What about NATO?

KAY: Are you serious?

PACO: Sorry, James. Can't back you on that one.

JAMES: Okay, okay. Not NATO. Other ideas?

KAY: I don't see any problem with a similar group of countries interested in collective defense. America's role –

PACO: The United States' role.

KAY: Sorry. The United States' role will be problematic, though. We need the resources that they bring to the table, but smaller countries will cry techno-imperialism.

PACO: Not if you are able to generate a truly reflective and inclusive system.

JAMES: I don't think that's impossible.

Kay turns to Paco.

KAY: Any ideas on how?

PACO: Hey, for that, I would be billing a lot more than you academics could afford.

The GROUP laughs.

PACO: But I don't think what you're suggesting is crazy. If I've got it right, you would want an organization of states, one that is representative and inclusive, that pools resources for parallel research on safeguards on the same technologies being researched elsewhere, right?

JAMES: Yes. Plus we still need to gain international legitimacy.

KAY: I think any legitimacy will come out of the work being done. If it

receives sufficient national funding from the member states, it should begin to build the credibility it needs.

JAMES: In other words the U.S. will be footing the bill.

KAY: Maybe so, but really, you are the ones with the most to lose, and are most able to support the infrastructure needed for these safeguards.

PACO: Not to mention that it is our national research that will be leading the way in many of these areas. Especially in robotics and nanotechnology.

JAMES: Yeah, okay. I can live with that. I'm just glad it's not me who's going to be selling this idea to Congress.

PACO: I'm not so sure. Look at the amount of money being dumped into nanotechnology and miniaturization research right now. Some of that is already being channeled into ethical studies of those same technologies.

KAY: So what are we regulating here? What do we have to protect ourselves from?

JAMES: Another good question. There is a careful balance that needs to be struck between the intellectual rights of our researchers and public safety.

KAY: What about the tax system?

JAMES: What about it?

PACO: I see where you're going. Alright, so we are trying to regulate the direction that researchers are taking these technologies without hindering or banning particular areas, right?



KAY: Exactly. So why not do it through the tax system and capital markets? Certain technologies have greater commercial value. If we are able to organize a system that appreciates that, we can subtly shift the focus of research to those areas that most benefit society.

JAMES: That seems pretty indirect.

PACO: Well, that's another whole issue, isn't it? Is direct regulation of these technologies desirable, or is a subtle, indirect approach the way to go.

JAMES: Yeah. Just look at the example of the Internet. With breakthroughs in new technologies, new legislation is usually necessary. We need to adapt.

KAY: You've made the point yourself. We need to adapt quickly. We can't just react.

James smiles.

JAMES: I'm glad to hear you say that. When it comes right down to it, there is going to have to be a middle ground. To properly regulate these technologies and at the same time make certain that they are free to develop is going to take a lot of compromise.

KAY: You? Compromise?

JAMES: As tough as it might be to believe, yeah, we need to compromise.

PACO: Any regulation of this stuff is going to have legal repercussions.

KAY: You're the lawyer.

PACO: Well, I'm just saying.

JAMES: He's right. We should carry this through to its logical conclusion.

KAY: I'm all for that.

JAMES: So where do we begin?

PACO: Well, the obvious place is personal rights, I suppose.

JAMES: For sure. We've got to take into account privacy rights that might be compromised.

KAY: How so?

JAMES: Well, our academic councils are going to need some authority, even if they are peer reviewed. We still need to know who is researching what and why.

KAY: And it works both ways.

JAMES: What?

KAY: Privacy rights will have to be thought out for both scientists and the people affected by these new technologies.

JAMES: I hadn't even thought of that.

KAY: So we need to keep track of who's researching what and who is impacted by what technologies. This is getting trickier as we go. Are you still sure that we should adopt Kurzweil's position? We could just have everybody give up the research instead.

JAMES: Right, and you'd be happy with the police state that comes with it?

KAY: I don't remember ever mentioning a police state.

JAMES: Truthfully, I think that's what would be necessary in order to repress the technologies we're talking about. Of course that police state would likely have to come with armed resistance and probably international conflict.

KAY: That seems a bit extreme, but at least I see where you're coming from. Okay. More legal implications?

JAMES: No matter how we dice it, there's going to have to be regulation. People like Paco are going to have to be drafting the legislation that brings this all into focus.

PACO: Speak for yourself, James. I get paid three times my old salary at Justice and I'm well on my way to that corner office.

James laughs.

JAMES: Well, in any event, somebody's going to have to do it.

KAY: The restriction of free study and academic discourse probably brings constitutional issues, regardless of the country we're in. That's a real problem. We'd have to make our legislation Charter-proof in Canada.

JAMES: That's true. Though an easy solution is just not restricting academic study.

KAY: You've changed my mind on some things, but don't think that we've come that far. We still need to regulate discourse and distribution of technologies. Maybe even less on the research side and more on the distribution side.

JAMES: Yeah, I know, I know.



PACO: So, we've got privacy rights. We know there's going to be regulatory legislation of some kind, though we're not sure what it's going to look like... What else are we missing?

KAY: What about the distribution of technological wealth?

JAMES: The old "Digital Divide"?

KAY: Exactly. If even a tenth of what you suggest is possible with these technologies, the gap between haves and have-nots is going to grow exponentially.

PACO: I think that's probably more of an ethical implication than legal, isn't it?

KAY: That doesn't mean that it's not still relevant.

JAMES: Don't mind, Francisco here. It's just the lawyer coming out.

PACO: Thanks. Alright. Ethical implications. How do we deal with them?

JAMES: Well, your economic model for regulation, using the tax system and capital markets could actually be helpful.

PACO: You mean that capitalism might actually work for good? I don't believe it.

JAMES: Never under-estimate the power of the invisible hand!

KAY: It actually could, I suppose. A combination of cheap and skilled labour might re-center the focus of global resources.

PACO: Well, before we bring Adam Smith's ghost back through some new

cryonics method, explain to me how this is going to work.

KAY: You don't need massive resources to jump-start a knowledge-enabled economy. Look at the Indian example. India's wireless network is fantastic because of cheap technology. It's easier to get a wireless connection there than it is in Canada with its millions of miles of very expensive fibre-optic cable. If we keep that in mind, then all we need to do is help researchers develop positive, commercially saleable technologies while making disincentives for military application research. Even developing countries would not be left out. Cheap resources and labour may be critical elements in the formative years of these technologies.

JAMES: That's one of the strongest arguments in favor of these knowledge-enabled technologies, if you ask me.

KAY: It's also one of the scariest. How do we decide which countries can deal with having these technologies and which ones can't?

JAMES: I'm not sure any one country is in a position to make those decisions.

KAY: Well that sounds down right un-American of you – especially considering your Adam Smith rhetoric.

James shrugs with a smile.

JAMES: That may be, but that's the way I feel. Bill Joy suggests using a detente model for relinquishment, but I don't think that it will work in this situation.

KAY: Oh, that's right. Building off the nuclear and biological disarmament

treaties and going from there. Yeah, I'm not sure that's what we need here. Does Kurzweil have any better ideas?

JAMES: Not really, to be honest. I think that he really believes that if we are open enough about our research in these new fields, that the emerging transparent society will be enough to regulate world affairs.

PACO: So maybe we just really need to focus on the social institutions we've discussed.

KAY: If you ask me, the more transparent the better.

James raises his beer in a toast.

JAMES: I second that.

Paco and Kay raise their beers as well. There are a few BEATS of contemplation. Kay straightens as she looks at the group.

KAY: I'm honestly stunned. Maybe it's a paradigm shift, but I don't think so. Imagine what awesome results these technologies could lead to. For the first time we may be able to solve age-old problems that have been plaguing humanity.

James looks up sharply.

JAMES: Really?

KAY: I'll tell you the truth about why I still come to these symposiums.

There is a BEAT of anticipation.

KAY: I see the twinkling of a world where we can eradicate the injustices we have created through artificial institutions and where technology can in fact help us discover a more natural



state of humanity; where our infinite potential for infinite creativity may finally be unleashed. Perhaps I have not given humankind enough credit. While we do have a potential for destruction and evil, our potential for attaining a life of divine beauty remains so strong. Maybe it's ironic, but I think for the first time, technology will enable humans to truly live natural and beautiful lives.

JAMES: Inequality of resources is the source of conflict.

Kay is already nodding.

KAY: We still find ourselves in a primitive state of affairs; we are still faced with struggles for mere survival every day and the result is that we are slaves to our needs. Technology offers us an opportunity to level the playing field with equal opportunity for all by satisfying those basic needs. If we take an intelligent and reasoned approach to developing technology and guiding the direction our society is headed, we may come to a point where complete freedom reigns; where each individual is the master of his own life. Once you eliminate the source of conflict – scarce resources, competition and ambition – we replace our world with

new values. Wealth will no longer be each individual's goal, instead it will be to achieve a life condition of complete freedom – where there are no boundaries and no limits for our minds to create whatever their imaginations can embrace. Let's stop trying to control the bad in man and instead let's begin fostering the good. Force is not the answer, it has never been. If we trust mankind to move toward enlightenment, we may be pleasantly surprised. The foundation for this trust is not frivolous: we only need to look to the great men and women of our times to see that the seeds for greatness have been planted in humanity – Plato, Socrates, your poor, unbalanced Nietzsche. We can be more. We can do better. Technology can help us.

James is physically struck by Kay's comments.

JAMES: I don't know what to say.

She shrugs.

KAY: That's just how I feel.

JAMES: I have always tried to apply reason to this crazy world, but in the end... I'm not sure. I am on humanity's side. I don't see robots eclipsing

humanity. I see robots helping humans become more human. To better ourselves, to help us strive. Really, I'm not sure what comes next.

Paco raises his beer one last time.

PACO: I don't think any of us are.

JAMES: I guess I can drink to that too.

KAY: Me too.

A quietness folds over the GROUP as they contemplate the conversation. The flower on top of the bar is still blooming.

FADE OUT.

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