

EPISODE 969

[INTRODUCTION]

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[00:00:00] JM: Automation has the potential to eliminate rote jobs, such as call center workers and truck drivers. The downstream effects of automation also leads to new jobs, such as data labeling and robot operations.

The net effect of modern automation technology is unclear. Some jobs will be eliminated and some jobs will be created. Some of these jobs we can't even anticipate today. So the net effect of modern automation is totally unclear, but we know that it's going to cause some disruption in the job market.

Universal basic income, or UBI, is an economic policy idea in which a government sends money to every person living in a country. The goal of UBI is to reduce the impact of dramatic changes in the economy that are resulting from accelerating technological change.

Floyd Marinescu is the CEO of C4Media, the company that produces the QCon Conference and the InfoQ website for software engineers. Floyd has worked in the software industry for decades, and in recent years, he's become an advocate for basic income. He's a friend and supporter of Andrew Yang, a 2020 presidential candidate who is running on a platform centered around a basic income policy. Floyd joins the show for a discussion of the future and the potential positive and negative consequences of implementing a basic income.

A quick note; we are looking for a content writer and an operations lead. If you are interested in either of these roles and you like the idea of working with Software Engineering Daily, which is just me and Erica, then send me an email, jeff@softwareengineeringdaily.com. I'd love to hear from you, and don't be shy. We definitely are looking to hire somebody and we have no idea what the background of that person will be. So send us an email.

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[00:01:59] JM: Being on-call is hard, but having the right tools for the job can make it easier. When you wake up in the middle of the night to troubleshoot the database, you should be able to have the database monitoring information right in front of you. When you're out to dinner and your phone buzzes because your entire application is down, you should be able to easily find out who pushed code most recently so that you can contact them and find out how to troubleshoot the issue.

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[INTERVIEW]

[00:03:50] JM: Floyd Marinescu, welcome to Software Engineering Daily.

[00:03:53] KR: Awesome! Glad to be here.

[00:03:55] JM: I've been going to QCon for a long time, so we'll certainly talk about QCon, and InfoQ, and C4Media a little bit later. But you have turned your focus to universal basic income and other political and social endeavors.

To get into those subjects, let's start with talking about the economy. From your vantage point, you see all of these new software infrastructure. You see people presenting it at QCon. You see people writing about it on InfoQ, and you see the new companies that are built with that infrastructure.

Describe how software is changing the economy.

[00:04:35] KR: Okay. Well, there's many layers we can discuss that in. But first of all, I want to say before going into anything, is that innovation creates human prosperity. So what we do, creating more efficiencies with software, is saving people from drudge work. It is enabling new problems to be solved that could never be solved. It is creating wealth for a lot of people.

Wealth doesn't only mean money in the hands of those who invest in companies. It also means products and services that work better for everyday human beings who can actually use these things. Just the wealth of options and features and products that we can use that are life-changing in many cases.

So software overall is like turbocharging the economy. It's making it more efficient. It's creating innovation, and innovation creates wealth. We should do more of it. Yeah, I'll talk a bit later how there are two sides to that coin, because there is thing called a labor market and efficiencies can have other impacts that we haven't really been noticing until recently.

But, yeah, software is great. Software is eating the world, as I think Tim O'Reilly said that. When I speak on QCon on stage, I would say software is changing the world. I just like that one better. That's why InfoQ and QCon exist to human progress through technology is the purpose of InfoQ and QCon. Human progress through technologies. We want more technology, but we need a counterbalancing force to ensure that prosperity is shared, and that's where UBI comes in as one of many structural changes that I think we need.

[00:06:01] JM: When the word automation gets used, it's often used to describe changes to the economy that have replaced jobs. It's talked abstractly about replacing jobs with "automation". What parts of labor have been automated away?

[00:06:21] KR: Let me answer a slightly different question that's connected to what you're saying. You've all heard of the Luddites, and the Luddites were textile workers in the – I don't know, hundreds of years ago, whose jobs were displaced with the invention of the loom, which allowed much more productivity on creating textiles.

So what most people – When they laugh about the Luddites, they think the Luddites were these backwards people against technology wanting to live in an agrarian lifestyle. That's actually not true at all. It's the wrong image. It's like that Star Trek episode where like they find those people on another planet who just wanted to live as farmers. What wrong with these people? It's not that.

The Luddites were actually highly-skilled workers making middleclass incomes relative to the time who can no longer make middleclass incomes because the loom was invented, which created labor displacement. Now you needed far fewer workers with the loom to produce the same quantity of textiles. These are people who had to go from middleclass jobs to subsistence living and they are pissed off. That's why they are breaking the looms, because like, "My life is fucked!"

That's the actual story of the Luddites, and that's a story that happened to 4 million manufacturing workers in the 2000s who were automated away, which Andrew Lang likes to say that's the reason Trump was elected, because those people fell into – Many of them fell into despair. Half of those 4 million never went back to work, and half of that half went on disability insurance. Imagine the shame. You're a proud middleclass worker and you have no other options in your town than to go on disability. Not going to make any estimates of how many actually were disabled or not. But that's all they could find.

In fact, they went on a basic income, right? That's a solution that found itself to the form of disability insurance. What happened to the other half? I don't know exactly what happened to the other half, but research, credible research has already shown that when careers are displaced, people end up taking lower income work than before, which happened to the Luddites, and it happened to my father and uncle.

They were in Ontario's automotive manufacturing sector, and when China entered the scene in the late 90s, the competition drove prices down so low that according to my dad who was a tool [inaudible 00:08:26] designer, self-employed, half of all the tool shops that he used to work for went out of business and the other half that survived, they had to automate to stay competitive so they could lower their prices and be competitive within China.

Research has shown that six times more jobs were lost to automation than trade. So all those people who had those jobs, like in the U.S., in Canada, wherever, they mostly had to take lower income work. Because when your job is displaced, it's not like you were fired. You just go apply somewhere else. You can't apply anywhere else, because your job is no longer feasible. You spent a whole life building a skillset that is no longer valued by the market. It's been devalued either through trade, or majority of the times, through automation.

So what do you do? Well, my dad to retire. Luckily, he's in his mid-50s at the time. He's saved up enough. But my uncle was a lot younger. He had to become – I think he's a superintendent in a rental building right now where he's not using his skillset or whatsoever. Now you can see that a lot of people in their 40s and 50s become unemployable. Who is going to hire a 55-year-old with a high school degree?

So Andrew Yang talks a lot about how automation is going to displace truck drivers. It's going to displace truck drivers. Now there's actually been a study from Uber funded by Uber. So take that for what it's worth, that actually says there'll be more trucking jobs. Not less.

Now I actually think that's probably possible, because the question is at what pay scale, what salaries will be those trucking jobs. Let me explain. Again, software and hardware creates prosperity. It reduces the cost of things. Makes things easier. Less drudge work. It also makes things easier for lower skilled people to do.

What economists are finding these days is that automation for the most part has actually let so more low income jobs than high income jobs. It's decimating the middleclass and we're moving towards a two-tiered society, where U.S. and Canada and U.K. and Western Europe will resemble something more like Brazil and India unless we implement something like a basic income, because there will be very few middle class jobs.

So let's take it again as a story. Basically, it happened to my dad and uncle. Well, let's take a truck driver as an example, right? So you eliminate – Automation right now, we had people at QCon speak about – From Uber talk about self-driving cars and trucks and what's going on. It's very easy for self-driving technology to work on interstate highways, right? It's simple.

So which trucking jobs pay the most? It's the ones that are most tedious, require the most skilled, the people willing to do the hardest work, which is the interstate jobs, right? You're going to pay someone to not sleep and do like 14-hour runs across the country. That's a good middleclass salary. A lot of those people are self-employed. They own their own trucks.

So when those jobs go, you're going to see more trucking, because trucking will become cheaper, which so transportation is generally an economic stimulus. So that's a good thing. But the remaining jobs will be more within the city trucking jobs. Guess what? There are way more people competing for those jobs than there are people competing for interstate, like horrible sit on the chair for 14 hours and not be healthy type of trucking jobs.

So if you have a labor market where there's more people now competing for the jobs in the cities, guess what? That's going to drive down wages. So even if there's more trucking jobs than before, we've actually seen historically looking at other industries, is that even though automation and artificial intelligence creates more jobs than it displaces, it create more low income jobs than middle income jobs. So that's what's going to happen.

You might have more trucking jobs than before, but there'll be lower income work done by less skilled people who are very happy to have a trucking job in a city like those UPS postal car drivers. I bet you can compare the salary of a – Well, this is actually very comparison. Compare the salary of a FedEx truck driver, UPS truck driver to an interstate truck driver. I haven't looked at this at all. It just came up in the spot. I bet you, it's like half. That's what the future is for truck driving after self-driving. That's what's happening industry after industry after industry.

[SPONSOR MESSAGE]

[00:12:25] JM: You probably do not enjoy searching for a job. Engineers don't like sacrificing their time to do phone screens, and we don't like doing whiteboard problems and working on tedious take home projects. Everyone knows the software hiring process is not perfect. But what's the alternative? Triplebyte is the alternative.

Triplebyte is a platform for finding a great software job faster. Triplebyte works with 400+ tech companies, including Dropbox, Adobe, Coursera and Cruise Automation. Triplebyte improves the hiring process by saving you time and fast-tracking you to final interviews. At triplebyte.com/sedaily, you can start your process by taking a quiz, and after the quiz you get interviewed by Triplebyte if you pass that quiz. If you pass that interview, you make it straight to multiple onsite interviews. If you take a job, you get an additional \$1,000 signing bonus from Triplebyte because you use the link triplebyte.com/sedaily.

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Thank you to Triplebyte.

[INTERVIEW CONTINUED]

[00:14:41] JM: It could be a generational thing though, because the generation that's growing up right now, most people learn how to use a computer. They learn how to type. If they don't learn how to type, they learn how to type on a cellphone. If they don't learn how to type on a cellphone, they learn how to use a voice interface. People everywhere are going to learn how to interact with computers.

If you know how to interact with a computer, you have a much more durable set of skills, and it's not even a set of skills that you grow up expecting to be something that is something that gives you employment. You grow up using it like we grew up using a toaster. It's just an appliance that you use in your everyday communications and it has a set of easily transferable skills to knowledge work, like people who grow and have computer fluency. They have a much more durable set of skills than somebody who didn't grow up with computer fluency and is a truck driver.

People who grew up with a computer today can be social media managers. They could be doing like analyst work. They could be working with spreadsheets. They could be doing like scheduling podcast episodes on WordPress. There's all kinds of crazy knowledge work jobs, and if you don't believe me, you can go look at Upwork and just find a bajillion long tail like Twitch streamer assistant or something.

Even beyond that, we've got the rise of data labeling jobs, which are not the most glamorous jobs, but they can pay the bills and there's actually a developing strata of different types of data labeling jobs. You have almost white collar level data labeling jobs. Maybe not that degree of salary, but you do have a tiered salary, because there are degrees of sophistication for data labeling.

So I just say that to post to you perhaps although we should more in the truck drivers and we should do something about it, I'm with you on a societal level. I want to make the case that perhaps this is a generational thing. Perhaps truck drivers are an argument that we can stand up, but it's kind of a straw man because eventually these people are going to age out.

[00:16:54] KR: I'm glad you pointed that out. So let's unpack that. I would say there're two aspects to that very astute observation. So those whose jobs are displaced, it's not like they can just immediately go and reapply for something else. They need a runway. They need to preserve their dignity. There's a lot of suffering for those people who have lost their jobs.

I mean, the rise of the opioid epidemics is linked directly and is correlated in those areas where most manufacturing jobs were lost. A lot of suffering gets creates. Basic income is an answer to

that. It's obviously basic. It's not like what they were making before, but at least they can keep it without having to ask for help, without having to go on some line and convince some bureaucrat that something's wrong with them and they need monetary support. At least they can have a long-term perspective, which may allow them to go and retrain.

I remember my dad telling me like, "I'm too old to go and learn all the latest versions of CAD and all the new design things to do." But luckily he had an Stec, so he could have made that decision. But if you as someone a few years younger like my uncle, he needed money now. So he took what he could find and now he's a superintendent in a rental building. But if he could have not worked for a year, maybe he would have had time to retrain as whatever the cutting edge thing to try and put himself up above the hundreds of thousands of others in his area that were competing for the same work.

So there's a lot of suffering to your point of a generational change that, frankly, I think it's mean and wrong and inhumane that we're ignoring it, especially when there's more than enough money going around that we could implement a basic income right now, which would make the economy more efficient. It would make the economy bigger, because the money goes back into the economy. It stimulates market expansion.

The way Andrew Yang's argument of do a VAT tax, I frame it as the market funding its own expansion, because you're ensuring there are enough customers out there who are above basic needs so they can participate fully in the economy beyond even just being able to buy things, but being able to invest and taking risks, like retraining, or switching states, or moving around, or starting a business, which all those three things by the way are at historical lows. More businesses are closing than opening every year in the U.S. since 2008.

[00:19:01] JM: Do you believe that statistic?

[00:19:02] KR: Yeah. Well, it's been verified. You can look into yourself. Less people are moving locations for jobs. So the generational change, yes. Now, let's look at the other half of that coin. You mentioned a lot of new jobs. Again, automation may disrupt the labor market even if it creates more jobs than it displaces, because most of those jobs are lower income jobs. So

you're replacing the middleclass with a lot of low income jobs that have limited ladders, limited rungs and ladder to move up into middleclass and beyond.

So only 8% of all jobs being offered today in the U.S. are STEM. That doesn't leave a lot for the other 92%. What are they going to do? Just be podcast assistants and social media managers? You know how much that pays? You know how much it pays. Go up in Upwork. You can see how it much pays. Guess what? Those people here who are trying to become social media managers and podcast assistants, they're competing on Upwork with South America and Easter Europe where people can charge three times less than they can.

So in this case, software in the form of creating these marketplace SaaS platforms for jobs is further disrupting opportunities for local people, because you can hire people anywhere. I remember myself looking for a podcast editor a few months ago, and I could have picked the person here for \$15 an hour or the person in Serbia for 15. I mean, the choice is obvious, because it's the same work.

[00:20:20] JM: It's actually not obvious, because I started with the lowest market, and I found that the quality was not great. I found that there is actually a lot of subtlety that you need to communicate to the podcast editor. You wouldn't think that there would be that much, but there actually is a lot. I ended up paying more for somebody that speaks fluent English and it more reliable.

[00:20:44] KR: Yeah. Well, that was your situation. But if you look at overall over the last 40 years, if you look at stuff that we can get into soon, the great decoupling, the shares of national income. How that's changing. What we're seeing is a 40-year pattern of disrupting of the middleclass through automation and globalization, and globalization is not just trade policies. It is automation-driven, because you can't have a global supply chain for an iPhone if you don't have emails and you don't have geo-track tankers and all the things that currently enables, which is a sophisticated supply chain to cross planets for companies seeking the cheapest possible production method. That couldn't happen in the 60s, right?

So when people talk about trading automation in Mexico and China. Well, guess what? Technologies underlying that too, otherwise it'll all be built within the same town the way things

used to be done where you have all your supply chain components in the same area. That's another thing that's disrupting manufacturing hubs, is that – Well, they don't need to be built there together anymore. So it's just not needed.

So, yeah, we see 40-year pattern of decline in the middleclass, of decline in earnings potential for most people, and much of those gains is going to the top, the top 1%, top 10%. Again, if 8% of jobs are STEM, then you got those 8% that are – And you have the top 1% of the investor class and you basically have a two-tiered stratified society where you have the technocrats making great incomes at the top, and the bottom 80%, 90%, taking whatever is left as the middleclass gets displaced. That's what is happening.

[00:22:12] JM: I mean, I agree with you to a certain extent that like, again, we should mourn the truck drivers, and those people are objectively not well-equipped to retrain in many cases. They don't have technological aptitude. They don't even know how to type. They probably don't have great influences. They're not listening to podcast. They don't even know how to listen to a podcast. They don't have access to right mindset.

I actually wonder how much of it does have to do with mindset. How much of it does have to do with culture. Did you read Hillbilly Elegy?

[00:22:45] KR: I read the first third of it, and I want to continue.

[00:22:47] JM: Okay. So that book – I mean, you can take what you will away from it. My interpretation was that there is a really deep cultural problem in the United States. Almost as a byproduct of our success, we developed this problematic pharmaceutical industry. We developed a whole lot of problematic cultural things that happened to be most acute in places like what gets written about in Hillbilly Elegy, the Hillbilly territory.

That is not necessarily a problem that will be solved with the universal basic income unfortunately. I think there are a lot of cases where people lives could be alleviated by universal basic income. The Hillbillies of the world are not going to be alleviated by universal basic income. Would you agree?

[00:23:38] KR: I acknowledge those problems exist. There is something called a labor market, and if there's enough jobs out there that pay enough, eventually you can coax anyone to do it. But the problem is jobs aren't paying enough. Yes, there is a displacement, a misalignment of where those jobs are. So even the top economist in the world are acknowledging that globalization, the gains from it have not been widely shared. So you have entire regions like the Appalachian regions that used to have local manufacturing hubs that are gone.

So, yes. Is there a mindset issue? Of course. You're not going to expect a lot of people suddenly listen to Tim Ferriss podcast and like do mindset stuff. But there're not enough jobs around. You still need an opportunity. You need a ladder rung to grab on to. So I think that basic income – I think not having a basic income furthers and perpetuates the problems that create and also perpetuate those mindset issues, which I think a lot of come down to a lack of hope. When all you have around you is nothing, what hope do you have and what risk can you take if – What are you going to do? Pack up when you're poor. Move to another city in dreams of getting something? You might end up on the street.

Basic income creates a base level of hope where you know you can take risks. I know for my example, of course I'm – You might say I'm an entrepreneur or whatever, but I was part of a small startup from the early 20s and had some money that came out of some stock options, and I bought a rental income property in order to alleviate myself over the financial pressures of worrying about what if I starve one day? What if the whole software system collapses? Who knows?

The absence of financial fear gave me such a long-term perspective, let me dream again, that I quit my job because there was a company that had bought the serverside.com. I didn't own it, but I was one of the creators of it and I had a smaller share in that training business. It enabled me to quit. A pretty good situation to start InfoQ, and QCon, and C4Media, and I don't think I would have done that at that time if I didn't have the rental income. I basically gave myself a basic income and the psychological effects let me address my risk tolerance. I had a higher risk tolerance.

Now, I would have started probably a couple of years later, because I would have saved up enough. But guess what? A couple of years later, it was the 2008 crisis. I would have been

crushed. So there'd be no QCon and InfoQ right now if I didn't have a basic income because of the rental property decision I made.

So timing is everything. If you have an idea, if you're – I don't like using these terms. I don't know. If you're someone who lives in those regions, in Kentucky or something and [inaudible 00:26:08] typecasting here. But if you're in area where there's not much opportunity and you think, "Oh, I have an idea." You need the resources to pursue that idea, and you need it now when you have that impulse, because life is short. Time is passing. So a basic income will unlock people's risk tolerance and will enable hope

[00:26:24] JM: Those people won't even have the impulse, because they don't have the inputs. I mean, I heard you on that other podcast, Amir – What is it? Amir explained? What's the name of his podcast?

[00:26:34] KR: Amir Approved.

[00:26:35] JM: Amir Approved. Right. I enjoy that podcast. But one of the things you mentioned is before you purchased your rental property, assume I have the timeline correct, you had read stuff like *Rich Dad, Poor Dad* and whatever, *Think and Grow Rich*. Whatever the self-help or build your own small income stream and De Jure at the time.

I mean, I've read those kinds of things myself. I'm not criticizing it. I've read plenty of self-help and Robert Kiyosaki diatribes as the next person, and that stuff – I mean, I'm super bullish on self-help stuff, and Tim Ferriss kind of stuff as well, because for me the mindset is as important or perhaps more important than having the money.

Without the mindset, you won't have the impulse, and that's kind of the case I'm trying to – I'm trying to make another counterargument here, that like if you give people a basic income but you don't fix their tendency to opt out of the labor market and go play Fortnite all day, they're not going to opt in to the labor market. They're not going to stop playing Fortnite. They're going to use their thousand dollars for something dumb or for buying more suits in Fortnite, right? They're going to be like, "Sweet! A grand more of dance moves in Fortnite." I seriously think that's where the money is going to go without the impulse, without the influence.

[00:28:02] KR: So, first of all, I love it. Keep it going. This is great. On compassionate grounds, I want to point out that you said there were those people. So when there's another ring occurring, it's easy to frame people in a certain way, because they're not like us. But in fact, surveys have been done that have shown that when you ask a bunch of people, would you stop working on a basic income? I don't know. 20% say yes, although I don't think they know what it actually means, a real basic income. But when they're asked, "Would you think other people stop working?" Two-thirds say yes. So there's a bias inherence in the human mind, things that those other people will do something bad with their time and money, which is just not true.

We're all data-driven developers, right? So there have already been over 16 studies, clinically tested studies of over 105,000 people who have received basic incomes in the last 50 years and they showed no meaningful reduction in work. Some people stayed in high school a bit longer. There was a reduction on the second earner. For example, a spouse who stays home with the kids, which is probably a good thing, but there was no meaningful reduction in work.

So the data shows, you don't see reductions in work. In fact, it shows an increase in work in cases of extreme poverty where people can fulfill their – Can actually emancipate themselves. So let's talk about mindset, because I find it – I definitely acknowledge we need education. We need mindset, of course, but basic needs first, then mindset. Because if you have no hope for something better, you're going to adopt the most self-defeating, hopeless mindset, most depressed way of life you can find. I bet you, some of those people are playing a lot of games maybe because there's not enough good jobs around and maybe they don't want a bullshit job. Maybe all they can find is bullshit jobs that don't pay enough.

So maybe if you give a thousand dollars a month, those bullshit jobs would have to pay more or have to improve the culture in a work environment to attract people. We blame people for not working. Why aren't we blaming businesses for not being good enough to work at?

[00:29:54] JM: Well – But I mean, the jobs of the future for – Not to other them, but these people. The jobs of the future for these people, it's going to begin on Fiverr and Upwork. These are going to be knowledge work jobs. They're going to be "low-skill jobs". They're not actually low-skill, because an American podcast editor knows the colloquialisms. They know how to edit

a podcast that's in English that's recorded in America much better than somebody in Poland. So they are going to have a defensible salary, whether they're charging \$5 or \$15 more than the person in Serbia.

[00:30:31] KR: Assuming they had a chance to get enough work to get there, right? That they actually had a chance to underbid for a while to attract the bids and train themselves, because we're no longer in the 60s where the male room clerk can work their way up to the president. Because we have this atomization of work through gig economy and subcontracting and all that, most people have lost those rungs in the ladder. They need a base to build off to undercharge and build those skillsets.

[00:30:56] JM: Then take a loan.

[00:30:57] KR: Who's going to give a loan to someone who has no money and actually is even in debt?

[00:31:00] JM: Payday loan services.

[00:31:02] KR: Okay. That's very optimistic, but I don't think it works that way. When I said 8% of all jobs are STEM, there're just not enough middleclass jobs. The system is trending towards a two-tiered stratified society, and that's the biggest problem we need to address.

[00:31:15] JM: I mean I know that talking point, but like the Twitch streamer assistants can make pretty good money, and there's like a burgeoning market for Twitch streamer assistance. There's a burgeoning market for podcast editors. I'm not saying I'm sure that this is going to fill the drying up river of labor with enough water to sustain the hallowed out "middleclass", but we don't know, right?

[00:31:39] KR: We don't know, because we have 40 years of the numbers trending in a certain direction. What are going to wave? It's not going to change in the next year or in like 10 years. It's going to accelerate, and these are the numbers that I'm most concerned about. If you look at the share of national income that's going to the bottom half versus the top 1%, the share of

national income in a study in steady decline, and the share going to the top 1% in a study steady increase, and all these have changed around the mid-1970s.

First let me tell you why I'm scared, and then I'll tell you what happened in the 1970s.

[00:32:06] JM: All right.

[00:32:07] KR: Why I'm scared is that, again, since the mid-1970s, there's been trending in the wrong direction. The bottom half is getting increasingly less and less and less the national made. Top 1% is getting more. If you just draw a line graph out a few decades, you're going to see the top 1% taking in 35 cents of every dollar made and the bottom half getting six cents of every dollar made. That's not capitalism anymore. That's feudalism. That's pre-French Revolution stuff. That's why see billionaire investors, like Nick Hanauer doing TED Talks say that pitchforks are coming.

Ray Dalio, another celebrated investor saying that capitalism is not working for most people. Even the fucking CEO of J.P. Morgan said we should do a basic income, because capitalism is leaving most people behind. They see what's going on at a macro-level. All your examples are micro-levels. Some person should read *Think and Grow Rich* and become a podcast editor. But I'm talking about macro, the whole system, is trending the wrong way. So that scares me, because that's a future that either leads to a police state, or it leads to a communist revolution. If we want to maintain freedom, we want to maintain all the things that make America great, we need to make sure that people have an access to the middleclass. I would argue that basic income is how we secure and expand the middleclass for everyone, because in the future, automation, AI will be doing more and more of the heavy lifting. If we can share in the gains from that, everyone can have a middleclass lifestyle. You're going to have still inequality. Inequality is fine. You need some inequality in society, but nobody needs to be poor. There's enough automation, enough wealth.

In fact, John Maynard Keynes, the economist, whose ideas created the golden age of capitalism said that by now, we should all be working a 20-hour week, because there'd be so much technological productivity. Well, guess what? Maybe we could right now, except who can make that decision if they don't have any money or income? So maybe it's actually the inheritance of

humanity. It's actually our due evolution to find a capital system right now that can install the plumbing to circulate the gains from technology and software and hardware such that half the country can choose to decrease their work hours and choose to have a better life, because there's that much technological innovation.

The internet was paid by public financing. Zuckerberg didn't create the internet. He just made a website and have the right idea at the right time and found the right investors. He has billions of dollars. Do you think it's fair that he should pay the same tax rates as a brick and mortar company retail in a small town that didn't use the internet and just getting by? Something's not right with the system right now.

I argue in my TEDX talk, which should be out by the time this airs, technology is our shared inheritance. We are allowing the gains from technology from all the investors of the past, the gains to go to very small number of people when the gains could be shared to some small extents to get us all above basic needs, and what a great society that would be. I'm sure a lot of the listeners of podcast loves Star Trek, right?

Well, the choice we have in front of us is Star Trek, or Star Wars, or Mad Max if you're very pessimistic. What is Star Wars? Star Wars is an extrapolation of what we have today. You have wild wealth inequality. You have people in poor circumstances fighting right people's wars and getting involved in empires politics. What do you have in Star Wars? You have a giant middleclass and you have some wealthy people, but people are above basic needs. They can pursue jobs of passion. They can pursue jobs of meaning, because I fundamentally believe that every human being wants to be useful. I think at the end of the day, usefulness is a core human need.

So even those people in the areas described in the book Hillbilly Elegy, they want to useful. Maybe they're playing games because there's nothing they can do of use that can pay enough for them to get by and feel proud of what their work is, and that is a system problem with the region. It's not a problem with their mindset. It is as well, but the region itself is depressed.

A basic income would be an investment in all these regions, allow people to expand their horizons, because behavioral economics research has proven that when people are hungry and

they have financial fears, IQ goes down by like 12 points standard deviation. In other words, if you're being chased by a grizzly bear, all you see is right in front of you. You can look to a wider perspective in life. If we get people above that trap, then we'll see real innovation. We'll see people I think pursuing jobs of purpose, which may not all be market value jobs, but that's okay.

Maybe you need someone who will be happy at minimum wage doing something that they literally love, because the basic income on the side makes enough that they can live well. That will be great.

If technology has brought us to this of prosperity where people can choose really low income jobs that they love because they're subsidized by the basic income or even jobs that don't pay. Maybe someone wants to be – I don't know, a tarot card reader on the side street. They're offering value in solving your problem that some people have or they wouldn't have clients. So the market doesn't value that work. But, hey! Maybe the people on the street value it. So there are a lot of things that are valuable, like raising your children, that doesn't pay; or taking care of your parents, that doesn't pay.

There are a lot of nonmarket value jobs that would be unlocked with the basic income. So I think you would see a huge surge of pride, of well-being, of useful, but not necessarily market pay high paying jobs in these regions that currently have very little hope.

[SPONSOR MESSAGE]

[00:37:24] JM: Email has been around for longer than I've been alive, but there's been surprisingly little innovation in inbox management. SaneBox is a new way of looking at your inbox that puts features like snoozing, and one-click unsubscribe, and follow-up reminders as first-class citizens.

If you are overwhelmed by your inbox and you're almost ready to declare email bankruptcy, tryout SaneBox. In the onboarding process, SaneBox analyzes your emails and helps you sort them into categories. You can get a free 14-day trial and a \$25 credit by going to sanebox.com/sed. That's S-A-N-E-B-O-X.com/sed.

These days, I spend more time in my inbox than I do in front of my coding environment, and back when I was programming a lot I would spend hours configuring my coding environment because I wanted to maximize productivity. If you spend as much time managing email as I do, it's crazy not to set yourself up for success with your inbox. Stop the craziness, get sane with SaneBox. Go to sanebox.com/sed and get a free 14-day trial as well as a \$25 credit.

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[INTERVIEW CONTINUED]

[00:38:56] JM: I want to disclose. I'm in favor of this idea. I think some of the arguments for it are really weak, especially the data-driven ones. The macroeconomic trend, like the pitchforks are coming out kind of things. The middleclasses getting scooped out, and we can say this because of macroeconomic data. This stuff I'm really suspicious of. Because macroeconomics, it doesn't work. It's very hard to measure. Do we actually know how much labor is being created by the digital economy? Can we actually measure that? Do we have good measurement tools? Do we actually know that data labeling jobs are not good enough to resuscitate a middleclass? We don't, because we're in the early stages. We really don't know.

All you really need to justify, the universal basic income idea from what I can tell, is like 10% to 15% of the population that is receiving universal basic income getting 10X the value that you would expect from that kind of investment. It's almost like the venture capital model at a smaller level. Venture capitalists aren't afraid of making investments in the wrong company. They're afraid of missing the investment in the big company. So if you think of it that way, like if you make a universal basic income-sized investment in 100 people and one of them manages to use that money to do online courses and make some breakthrough discovery in machine learning, that is going to pay for the 99 other ones. That's all you need to justify the universal basic income. You do not need to go down the path of like truck drivers are losing their jobs or like anything like that. It's like a much simpler argument from my point of view.

[00:40:48] KR: So I've been talking to a lot of people for a longtime, and I love that that's your view, because that is fundamentally an innovation oriented view and you have a positive outlook, and I wish everyone thought that way. But I'm surprised when I talk to people who think,

“The only reason we should do basic income is to save on government services and create more efficiency.” I’m like, “Really? That’s why you think we need this?” because that is an argument. You actually eliminate the welfare trap. You reduce the size of government.

Governments are good at writing checks, but you don’t need a lot of people to do that. So you eliminate all the shame, all the bureaucracy around welfare, and people, to your point, can then choose, and you might have 1 in 20, as they say, VC investments grow. That’s why Sam Altman, the Y Combinator president, is all for basic income. He calls it seed funding for the people.

[00:41:33] JM: Perfect.

[00:41:33] KR: So, for you, that’s the reason. For deep conservatives it’s like let’s eliminate bureaucracy and welfare state and ensure we have a quality of opportunity. Not a quality of outcome. That’s communism. Quality of opportunity is we all have a chance to get ahead, even people in depressed areas as you discussed in the Hillbilly Elegy.

My person view is I want to see us get to a Star Trek future where the system itself has the plumbing in place to be sustainable and allow people to pursue their passions. But more important, for me personally, is allow people the absence of shame, the absence of being in an environment where they’re unsafe, but they can’t get out of it, and there’s a lot of those environments. Happened too in my own family, like if my mom had a basic income, she could have left or she would have had more respect with my dad and knew she had options.

So freedom requires options. We celebrate freedom in this country, but if you have no options around you, you don’t have freedom. So you can talk mindset all you want. If you’re in the middle of the desert and you have a great mindset. You’re not going to find water. You need water first. So you love the innovation argument. Other people love the efficiency argument. I love the freedom argument. Then Andrew Yang is scaring people with the automation argument, because that seems to cut between left and right.

[00:42:42] JM: But dishonestly in my book, that’s –

[00:42:43] KR: I don’t think it’s dishonest. Stats are correct.

[00:42:47] JM: People haven't gotten displaced by self-driving trucks yet. That has not happened.

[00:42:51] KR: I just told you 20 minutes ago, my father and uncle were displaced by automation in manufacturing. Four million jobs were displaced in manufacturing. Those people, half of them didn't work. The other half went on disability from who didn't work. That's real. It happened.

[00:43:04] JM: Absolutely, and that's terrible. That's tragic.

[00:43:07] KR: And it's happening everywhere.

[00:43:08] JM: Today is a different world than it was when your uncle and your dad lost their jobs. I mean, I'm not saying it's so different that we know that if your uncle and your dad lost their jobs today, they could get data labeling jobs that would be good enough. Probably they couldn't. But we don't know for sure. This is my problem with the statistical argument, like, "Oh! We have X-million truck drivers, and these truck drivers are going to be displaced." It's just like dishonest.

[00:43:38] KR: Well, it is honest, but the context of the argument, it's difficult to impart in such a statement the full context.

[00:43:46] JM: The problem is you have Andrew Yang who he's presenting himself as this very scientific person, which I love. He's like very scientific, very data-driven, but he's using dubious, empirical statistical data from my point of view. I'd love the guy. I would vote for the guy in a heartbeat, but like it's –

[00:44:07] KR: Okay. Let me give you – Since you love the microeconomic [inaudible 00:44:08], let me give you the ultimate one, and you can take it as you wish, and to the readers. What motivated Yang, because I know this personally, and also motivated me at a macro level, besides the whole share of national income thing, which we should all be really scared of if we become a two-tiered society. I mentioned that one already. It's not a healthy society with the

bottom half for making 7 cents in every dollar. That's where we're heading to in the next 20 years.

But put that aside, let's pretend that wasn't happening. There's something else that all developers need to know about. It's called the great decoupling and it coincides with modern computing. That's why developers should feel responsible for this. If you look at post-World War II, productivity versus wages, they were going up in lockstep. They're going up together for 40 years. We had wages going up almost 3% every year, while productivity is going up. It was a happy marriage.

That was a time when all the new productivity we created, you needed human beings in the production cycles of almost anything to produce things, which meant the labor market valued their time highly so that you're seeing wage growth that was very strong. What happened around the mid-1970s, that become decoupled. Not a good decoupling like microservices. A very bad decoupling, because wages stopped growing in the last 40 years, and productivity continued to increase.

So just look up the great decoupling, look at that graph. It's frightening, because around the time when mainframes were already in mainstream adoption, around the time when personal computers were starting to hit the scene, before email were invented, suddenly you had thinking machines that could do the work of a lot of people. At that moment you saw wage growth stopped. As more and more inventions came in over the last 40 years, wage growth didn't recover.

So my interpretation of that graph is that humans became less valuable in the production of almost anything since the mid-1970s. Otherwise, if they're more valuable, wage growth would be increasing like it did before, but computing changed the game and robotics changed the game. In the 1980s, you had fetish fantasies of manufacturing companies to implement something called blackout manufacturing. Meaning that the factory has lights off and it runs by itself. Well, they were trying really hard to displace work. Guess whose jobs you want to displace the most? Middleclass jobs, because those are the salaries are the highest they want to get rid of.

So what we have seen in 40 years is a pattern of technology creating so much efficiency that the labor market is not increasing wages in a natural manner as it did, and you might think it's the demise of unions. Well, unions themselves are displaced by technology and globalization. They have no answer to that. Technology is at the root of all of it.

As software developers, we should feel not responsible, but we could part of the solution, which case we should advocate for at least the basic income to install the plumbing, to help share prosperity from our work, or we're part of the problem, where we're actually continuing to displace jobs.

[00:46:53] JM: I have so many issues that I'm like at Stack Overflow at this point. I just want to like totally change the subject at this point. But I think we've given people a taste of why this is an interesting argument, at least, and why it does relate to software, it does relate to technology, which I'm glad we did, because people are going to be wondering why there's an episode about basic income on the Software Engineering Daily podcast and we haven't really touched on software engineering.

InfoQ and QCon have been pretty influential in how I've built Software Engineering Daily and the way that I've structured the content, the way I've thought about content. So you know Robert Blumen pretty well, right?

[00:47:31] KR: Yeah.

[00:47:31] JM: Yeah. So Robert Blumen, the creator of Software Engineering Radio. He taught me to software podcast, and very early on, I went to QCon with him and he was like, "Oh! QCon is a great conference," and Robert goes to a lot of conferences. He's been to a lot of conferences. So I trust his judgment. Over the years I really have seen the durability of the selection of content, the QCon content.

So I guess just to wrap up, give me a perspective for what makes good software engineering media content. I mean, you mentioned Tim O'Reilly earlier. I'm sure you've taken a page out of Tim O'Reilly's book to some degree, because he's built a gigantic software media empire. Tell me what are the ingredients for good software engineering media content.

[00:48:21] KR: The golden rule of editorial, as we speak about internally, is that bit of content you're consuming, whether it's something you're reading online, it's something you're seeing in-person, should give you takeaway value whether or not you chose to take on those products. So that's the first thing. Nobody likes sales pitch. Nobody wants a bait and switch type of experience where you have to go buy something after. So that's the first thing. It has to be reusable. That's one of the guiding principles in InfoQ. Content you can trust is one of our editorial core values for InfoQ and QCon.

But we understand our mission as human progress through technology, and the way we do that is by helping software development teams adopt new technologies and practices, and the way we do that is by looking at the technology adoption curve in the context of software engineering and we map out all the various trends that are various stages of adoption, and you can just see this on any QCon website. We have an adoption curve in the top half of the site. On InfoQ, we've been publishing what we call trend reports, where we're looking at say Java, or programming, and we publish an adoption curve and we map out all the various practices and frameworks and platforms on the adoption curve.

So we just stay focused on giving our mission, human progress through technology. We stay focused on things that are early adopter stage and early majority stage and somewhat innovator stage. Because our readers, we want to serve enterprise software developers. So we're not serving startups. We're not serving hobbyist. So they need something that is maybe a bit bleeding edge for the enterprise, as one our attendees told us. It's bleeding edge if you're an enterprise. It's not bleeding edge if you're working from home by yourself. You can take risks.

So at InfoQ and QCon, we try and focus on what early adopters are doing. Present it in their own words. So at QCon, and one of our another guiding editorial ethos is engineers over evangelists and practitioners over trainers and coaches. I don't like going to conferences and hearing from coaches and consultants. They all want to sell me something. At QCon, you can be assured that every talk is actually by a pure engineer, about what they've done, what worked and didn't work.

Actually, it makes it more difficult to run our events that way, because most of the great

speakers who work at the circuit are working at the circuit because they have a financial incentive. They're consultants or trainers or evangelists. We actually avoid those people. I said those people. Sorry. Those people are great.

[00:50:30] JM: Playing Fortnite and evangelizing their software.

[00:50:34] KR: I mean, they're wonderful, but I think that our readers and our attendees want to learn from each other. So we want peers presenting to peers, and that's kind of the secret sauce of InfoQ and QCon.

[00:50:43] JM: Floyd, thanks for coming on the show.

[00:50:44] KR: Great. Thank you.

[END OF INTERVIEW]

[00:50:55] JM: I remember the days when I went to an office. Every day, so much of my time was spent in commute. Once I was at the office, I had to spend time going to meeting rooms and walking to lunch and there were so many ways in which office work takes away your ability to be productive. That's why remote work is awesome. Remote work is more productive. It allows you to work anywhere. It allows you to be with your cats. I'm looking at my cats right now. But there's a reason why people still work fulltime in offices. Remote work can be isolating. That's why remote workers join an organization like X-Team.

X-Team is a community for developers. When you join X-Team, you join a community that will support you while allowing you to remain independent, and X-Team will help you find work that you love for some of the top companies in the world. X-Team is trusted by companies like Twitter, Coinbase and Riot Games.

Go to x-team.com/sedaily to find out about X-Team and apply to join the company. If you use that link, X-Team that you came from listening to Software Engineering Daily, and that would mean that you listen to a podcast about software engineering in your spare time, which is a

great sign, or maybe you're in office listening to Software Engineering Daily. If that's the case, maybe you should check out x-team.com/sedaily and apply to work remotely for X-Team.

At X-Team, you can work from anywhere and experience a futuristic culture. Actually, I don't even know if I should be saying you work for X-Team. It might be more like you work with X-Team, because you become part of the community rather than working for X-Team, and you work for different companies. You work for Twitter, or Coinbase, or some other top company that has an interesting engineering stack, except that you work remotely.

X-Team is a great option for someone who wants to work anywhere with top companies maintaining your independence, not tying yourself to an extremely long work engagement, which is the norm with these in-person companies, and you can check it out by going to x-team.com/sedaily.

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[END]