

A New Angle

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Justin Angle This is A New Angle, a show about cool people doing awesome things in and around Montana. I'm your host, Justin Angle. This show is supported by First Security Bank, Blackfoot Communications and the University of Montana College of Business.

Bryce Ward Hey, folks, welcome back and thanks for tuning in. Today is our August edition of Incentives and Instincts, a recurring series in which I speak with professor and friend Justin Angle about some of the broader challenges facing our society. Justin, how are you today?

Justin Angle I'm great Bryce. How are you doing?

Bryce Ward I'm taking on a different role, as our listeners may have noticed. So today in our August edition, it is wildfire season here across the continent, across the globe.

Justin Angle Well, we'll get into that. Is there such a thing as a wildfire season anymore?

Bryce Ward Yeah, but here in Montana, August is the month where, you know, I certainly have a bunch of dread. Is my nice summer weather going to turn into smoke? So it's a great time to talk with Justin and his colleague and coauthor, Nick Mott about their brand new book, *This is Wildfire How to Protect Yourself, Your Home and Your Community in the Age of Heat*. Nick, thanks for being here with us.

Nick Mott Thank you so much for having me. It's good to be here.

Bryce Ward Before we get into the heart of the book, I kind of want to just unpack the journey that you guys took to getting here. And one of the things that actually happened to me as I read it, was I found myself reflecting. I lived in the Pacific Northwest almost my entire life. So wildfire has always been present. And I found myself reflecting on just how much it intertwines with my life and my memories. And so, you know, I mean, like, my first memory of fire was driving along Interstate-5 and just above Valley of the Rogue State Park between Medford and Grants Pass, the mountain was on fire, and my dad even kind of pulled off and we looked at it and it was kind of awe inspiring and yet terrifying all at the same time. And then when I got

home, I could see the glow of the hill because that was just over the hill from my house. And so, you know, I figured I'd ask you guys, you know, what were your earliest experiences with wildfire and what emotions kind of wrapped up with that? And then I want to ask you then, how has that journey progressed? So, Nick, I guess we'll start with you.

Nick Mott So I grew up in the suburbs of Kansas City where wildfire's not really present at all. It would have been historically, but I didn't learn that until like recently. So I didn't encounter fire until I moved west. So after college, I spent a little bit of time waiting tables and then took an AmeriCorps job for the Nevada Conservation Corps and headed to Nevada. And, you know, my first summer was all spent actually kind of doing the job that wildfire would have normally done. So I began to learn about the impacts of fire suppression. I was in like this high desert, pinon, juniper country, where historically periodic wildfires would have actually wiped out those pinions and junipers, and it would have made great habitat for sage grouse. But because of fire suppression, these trees had encroached on the landscape and the sage grouse weren't doing so hot. So, I remember one day I was out in the field cutting down trees and we saw a smoke plume out in the distance and we were like, is it safe to be here? We called our project partner and he was like, yeah, you guys keep working, don't stop working. It was the first time I saw like up-close wildfire and it was definitely a little frightening, a

little awe-inspiring. And, you know, throughout my time, this was the first time I was poking my head into the West and I never left. And wildfires became more and more real. You know, at that same job, I spent a lot more time doing fuels reduction, both around communities and just in forests. I spent a lot of time just interacting with fire in a sort of preventative way, as well as, you know, actually seeing it happen.

Bryce Ward All right, Justin, how about you? You didn't grow up out here either, so you probably came to wildfire later in life, is that correct?

Justin Angle That's right. So I grew up in New Hampshire, and wildfire wasn't really much of a thing. My only real recollection of wildfire as a concept was the father of a good friend worked for the Forest Service as a soil scientist, and he would ship out for most of the month of August to fight fire. And all I can really remember him saying was that he would earn kind of double his annual salary and hazard pay just for that one month of work. And then when I moved out here in 2012, I had lived in Seattle before moving here. And, you know, I certainly knew that wildfire existed, but Seattle is such a rainforest relative to other areas I lived in that it still seemed like a foreign concept. But living here in the fall of that year was an intense smoke year and it became salient super fast. So much so that my wife and kids, young kids at the time, moved back to Seattle for three weeks to stay with family to avoid the smoke. And I was trying to find

my way in this community, meeting a lot of people that work in fire, whether they're faculty here at the University of Montana College of Forestry and Conservation, or people working for the Forest Service, smokejumpers, fire scientists, policy makers, land managers, etc.. And my intention was to learn more about the world I was living in. But this new sort of social network became a great avenue to do that and that kind of set me on this path of trying to learn more about wildfire.

Bryce Ward I think most people, myself included, and it sounds like you both as well, your first experience with fire is, there's awe, because wildfires can be pretty impressive, right? When you see one up close. There's also awe in the machinery that fights it, the helicopters, the airplanes, the whole deal. But there's also a lot of fear, whether it's the fear of the fire itself or fear of the smoke that comes with it, particularly here in Montana. But what point did you make the transition, which is a major theme in the book, which is fire isn't just something that's bad. Whenever I see a fire, I'm like, let's get that out, I don't want smoke and I don't want fire. But I also learned at a relatively young age because my sixth grade outdoor ed, the summer before the camp had burned, so we literally had to walk like a half a mile and we were in a wilderness that had burned. And they then taught us about, wait a second, this is actually really good. You know, that's what I learned, all of that. So what point did you

start to, in your journey, do you start to kind of get this different message of, you know, fire actually has real value?

Justin Angle Well, Nick, on that fire crew, was that your first experience because you were sort of simulating the role that fire would normally play?

Nick Mott Yeah, exactly. For me, it came really early because, like doing that work, I was directly in touch with the beneficial impacts that fire would have had.

Bryce Ward It was explicitly framed that way to you? You're just replacing fire? That wasn't something you're projecting on now?

Nick Mott No, that's we were told, that was part of the assignment. Like we are doing the work that fire should have been doing here. And, you know, same thing with the thinning work we did later out in the Tahoe area, you know, cutting down the smaller diameter Ponderosa pine out there. We were simulating the work that a wildfire might have had here. Now, that said, like we were also told if a big fire came through, a lot of this work we did in terms of community resilience and fuels reduction would have been kind of pointless. The fire wouldd probably still burn just as bad here anyway. But like we were acutely aware of the ecological impact and the ecological necessity of fire at

the time. Now, that said, like, I still grapple with both sides of it, like fire is still a scary thing. It's still a huge bummer when smoke happens. So like, just personally, you know, I go back and forth, all that, like in the abstract, I understand how important fire is, but in day to day life, like when a fire happens and that smoke blankets town, it sucks. It's no fun and I want it gone. In a lot of senses, we need certain kinds of fire.

Justin Angle Yeah. I really had no conception of, I mean I guess, yeah obviously there had been natural fires that have occurred for millennia, but I didn't really think about that much until it's my first or second time driving up Highway 200 north of Potomac through the Lubrecht Experimental Forest that's part of the University of Montana's College of Forestry, and I looked into the woods and the vegetation looked sparse relative to what I had seen in other hillsides in Montana thus far, and there are a bunch of through piles of slash. And it was like, why is this? Is this part of the experiment? Is this this forest looks really neat and tidy, what are they doing there? And I asked a forestry colleague, Solomon Dombroski, about what was going on up there, and he said, so dummy, that's actually what a healthy forest should look like. Like we've allowed our forest to get overgrown, we've over planted in areas that we've logged and so what you're seeing might look foreign to you, but it's actually what a healthy forest would look like. That was sort of the moment where, oh, a lot of my assumptions about what a healthy forest is, what a natural landscape is, what or what

are natural ecosystems should be, and sort of humans roles in manipulating the world around us. These these ideas started to sort of swim around at that point more explicitly.

Bryce Ward Several years ago, you sent me a text message asking me if I knew people who worked in fire. You wanted to do some sort of different version of the podcast on it, and at that point I'm thinking oh, you're just going to do a slightly different version of A New Angle. And instead this grows into this amazing award winning Fireline podcast. Why Fireline? What made you think this is something I'm going to now spend a big chunk of time learning about and trying to actually spread a message about fire. What was the what was the genesis of that?

Justin Angle It was a couple of things. One, as a scholar here, so part of my job is, you know, I teach and then the other part is research. And, you know, I research consumer behavior and psychology and how people construct and manage their identities through their brand choices. I mean, at the end of the day, there's some interesting things in there, but we're not saving babies or curing cancer, right? It's not the most consequential stuff. And the way social science works often as it is in my area, is you just, you learn more and more about less and less. And it's really hard, to publish something at a high level, it has to be so specific that it's really hard for anybody in the

real world to do anything with it. However, I did publish a paper on American Indian mascots that kind of broke through and gained some public interest, and that sort of opened my eyes up to this notion that, you know, as a scholar, as an academic, as somebody in this role, as an educator, maybe I should be doing things to help translate knowledge to broader audiences. And at the time I was doing the interview show, you know, that's when I reached out to you and said, hey, I want to do something in the fire space. I met a longtime smoke jumper, Wayne Williams, and Wayne has a lot of opinions about a lot of things and it became clear that, well, fire or wildfires are really complicated topic and one where it doesn't break down into clean narratives. And I thought, well, we could do a couple episodes about this, and it just became clear like this is a big topic, super interesting, relevant. I'm interested in it and I need help. So reached out to Nick and a few other journalist friends, reached out to Montana Public Radio and we sort of thought like, let's make a separate entity. I think it fits broadly with what faculty at universities should be doing. I mean, we should be generating knowledge, but we should also be communicating that knowledge in ways that a broader audience can make sense of it and use it in ways to inform how they operate in the world.

Bryce Ward And you guys have done that. I mean, the podcast is great, the book is amazing. It's just another extension on it, you know? And that thorny issue that got you

interested in is where I really do want to go for the rest of our time, because fire is a very interesting and particular public policy problem. It's scary. I certainly don't want it burning millions of acres every summer. But I also now and particularly after listening to the podcast and reading the book, fully understand, yeah, we really do need fire. You know, the article in the Washington Post that kind of came out simultaneous with Fireline, had this wonderful graphic showing that healthy forest that I had also probably never seen before. And now I see it. I recognize it as I drive along Highway 200. I'm like, Oh, that's a good one. Oh, that one is probably overgrown. And if it catches fire, it's going to burn intensely. And I've come up with this term, I call it Goldilocks policies, where we have to kind of get it just right. And that's a really hard thing both the message, it's a hard thing to pursue because it's not clear what that optimum is, and it's worth understanding. You know, Nick, the first section of the book is about the history where we did try and pursue a simplistic version of what this vision is, which is full suppression. And you talked about how your, you know, your exposure to fire was in trying to replace fire in the ecosystem. Would you just talk really briefly about that history of, you know, why did we try and pursue it, and why is it now that we recognize that, yeah, that simplistic goal of full suppression of fire, of no fire isn't going to get us where we want to be.

Nick Mott Yes. I mean, the easiest answer to how we got here in terms of history goes back to 1910. There had been a number of big fires before that, but in 1910, there were a series of fires across the west, across the northwest, many of which were started actually by the train, so commerce, and in this sort of intensely hot, dry, windy period, they all blew up together. They burnt more than 3 million acres of land. And it was called, that particular moment, was called the Big Blowup. Timothy Egan wrote a great book about it called *The Big Burn*, and that, you know, New York City, just like this summer, experienced the smoke. And so that sheer pervasiveness, the hellishness of that single conflagration, it created this mindset that was like all fires should get put out. This was the very, very, very early days of the Forest Service. So the Forest Service was like, all right, we got to do something. Not only are we putting fires out, but we're doing it to protect what we're made to make money on, which is the timber resources of the West. And so, you know, soon after this happens, there is something that goes into effect called the 10 a.m. policy, meaning that every fire should be out by 10 a.m. the next day. Basically build up this whole apparatus that we still have today dedicated to snuffing out all the fires we can. And the really interesting thing that we write a little bit about in the book is also this was like almost not the case. There were a number of people advocating for smaller what now today we'd call prescribed burns. You know, at the time they were called light burners. They had noticed that Indigenous people had been doing this on the landscape since long before they were there, and

they noticed that forests needed fire. But the Forest Service was like, hell no. They actually rigged some studies to show that it was damaging to use so-called light burning in the landscape. It was bound up with racism. They called it Paiute Forestry at the time, and it actually caught on in the South. And to this day, the South is what's called the Silicon Valley of prescribed fire. But back then, as the Forest Service started, this sort of full suppression policy, put out all this public education, Smokey the Bear was born. They actually sent psychiatrists to the South to like, try to understand why are you still burning, you heathens! They just couldn't grasp that like, maybe burning was a good idea in some cases.

Bryce Ward So what's the consequence of not having fire? You know, it's just that the fuel load builds up. Is that is that the simple version of it?

Justin Angle Yeah. I mean, one consequence is the accumulation of fuel on the land. So forests are, they just have not experienced periodic burns, burns that would clean out the understory. A lot of the trees in the West, Ponderosa pine is a great example, are adapted to be able to withstand periodic low intensity fire, fire more on the ground than in the canopy. And so the accumulation of fuels causes, you know, a higher risk, higher potential energy in the system. It sets us up for more intense fires, not just because there's a higher concentration of fuel, but because there are an overabundance

of what are called ladder fuels. So sort of mid height vegetation that can transport flame from the ground where low intensity fire would traditionally be, up into the canopy where it can spread rapidly and gain intensity and take out a lot of trees that would ordinarily withstand fire. Beyond that, too there is this sort of fuel problem, but there's a an ecosystem problem as well. What a healthy forest is, is a bit of a contested concept. We've actually talked to ecologists who don't like to use the term healthy because it's a bit of a misnomer, but it is an ecosystem that's out of balance. When you take an important force that has had a regular influence on the ecosystem and totally remove it.

Justin Angle We'll be back to our conversation with Bryce Ward, Justin Angle and Nick Mott after this short break.

Justin Angle Welcome back to A New Angle. Nick Mott and I are here with Bryce Ward discussing our new book, This is Wildfire.

Nick Mott You know, some tangible examples of how fires might impact or enhance ecosystems are like, not only do some trees withstand fire, some trees require fire to reproduce. So sometimes you need fire for trees to actually make more trees. Other times, you know, that fire, that thinning also actually makes trees healthier because

when we have this crowded forest there's less to go around to the trees to propagate.

So and when trees are less healthy, they're more you know, there's all kinds of more fire risk and other risk that goes with it. Also, you know, we can talk about habitat. So lots of species really actually like low intensity burn landscape, or sort of the mosaic that fire provides. Like fire when you when it generally burns, it doesn't burn in this sort of massive crazy way that's just incinerating everything in its path. You know, historic fire might have some hot patches, but also other patches that are lower intensity. And so what you end up with is a forest that is very much a patchwork of different stages of life. And that patchwork of different stages provides really excellent habitat for all kinds of things from like lynx and grizzly bears to deer and elk.

Bryce Ward Just getting back to us as, you know, our own fears of fire and our dislike of smoke, because where we're trying to find this Goldilocks level, what's just right, right? And you're right, we don't know what that is and we don't know what that is from place to place. It's not even clear that it's the same.

Nick Mott What's very much not the same, we should point out like, fire intervals, when fire would have burned historically in different ecosystems is totally different. It varies based on elevation and vary based on type of tree. Even is looking in Montana, like I'm in Livingston, where we have a lot of lodgepole pine around, nearby Missoula

there's so much Ponderosa. Those fire regimes historically look very different. So that's part of like finding the real, finding a so-called Goldilocks solution, there isn't a one size fits all. You know, it would require very particular policies in very particular ecosystems, in very particular regions. So it's a very hard thing to understand, much less communicate.

Bryce Ward Let's move to the subtitle of the book. So it's How To... protect yourself, your home, your community, because there's definitely a current throughout this which is not just, oh, hey, this is how we got here and this is the world of climate change and these are different things. You know, there's definitely this notion of, okay, so what? What do we do about it? So what is it that you want the listener to take away in terms of what are they supposed to do to protect themselves and their home? And why is that something that they should actually do?

Justin Angle We want readers to come away with a sense of both agency and responsibility. The biggest risk to a home is a floating ember from a fire, it can be up to miles away. That floating ember can find a weak spot, you know, some pine needles in a roof or in an unclean gutter. So there's a whole host of things you can do to kind of manage the area around your home. And we outline a lot of those concepts. Some of the things are easy to do, like cleaning your gutters is relatively easy to do. Things that

are harder to do are like replacing your roof. A great number of homes in the West have a wooden roof, that's a huge risk, that's a ton of surface area for a floating ember to find and ignite your home. Those things need to be fixed. It's hard and a large expense for most homeowners. That's an area where we call for some potential public investment to help subsidize those sorts of things. But that's the category of things, that you kind of manage the area around your home, manage your own home. And in so doing that understanding that there's a community aspect to that as well. It's not just you cleaning up the area around your home, it's that all your neighbors kind of have to do the same, right? Because if a home goes up next to you, it doesn't matter how clean your gutters are. If that home goes up, it's now a tremendous risk to your home. That's where I think that responsibility piece comes in. You have this responsibility to protect yourself, which I think is intuitive to most, but also to to be an advocate within your community. If you have this knowledge, tell your neighbors about it, if they can't do this work themselves, help them do it. Help them connect with resources that can do it. It's a big scary problem as we've talked about, but there are things we can do. There's things we need to do. We want folks to come away from, whether they read the book or not, to feel like there's a role they can play in helping to solve this hard problem.

Bryce Ward There's spillovers there basically. You can do what you can to protect yourself, but you also need other people to do what they can, you know, literally on the street level. But Nick, it seems like it's even broader than that. What is our responsibility in terms of engaging with policymakers, with city council, with the Forest Service, with the BLM, with the State, to try and work on the management of it outside of our neighborhood.

Nick Mott Yeah. I mean, there are several levels here. So if we're talking Federal, I would say the biggest thing we need is investment. We need more resources available to get the kind of work that Justin mentioned done. At a more local level, state, county, we need zoning and regulation, and that's really, really hard to do, especially out West. In Park County where I am, for example, the littlest bit of zoning ignited such backlash there is no way it was possibly going to happen. But we need those rules on the books to get stuff being built safely. Like the amount of homes being built in Montana that are in the so-called WUI, the wildland urban interface, the area that are vulnerable to fire is terrifying.

Bryce Ward What is the WUI? How do I know if I'm in the WUI? You know, because obviously that's the place where, you know all the things that Justin just talked about, you're the one who needs to be paying attention.

Nick Mott It really means, you know, where homes and flammable stuff intermingle.

So, you know, if you're living as Justin does near the Rattlesnake, you might be in the WUI. And it's not necessarily just trees and forests either. You know, tall grass can be a big fire risk. So one really easy to understand way of finding out if you're in the WUI is to Google it. So there's a great website, wildfirerisk.org, you can put in your address and find out what your fire risk might be. Also there community resources available. A lot of towns and cities and communities have folks whose job it is to help people understand if they're at risk and if they are, what they can do to mitigate that risk. So I advise all of the above. Go to wildfirerisk.org, and also just find out what's available in your area in terms of these resources.

Bryce Ward One other part of the book that I do want to bring up that kind of is a part of the calculation, which we haven't talked about. There's also a real cost to fighting fires. A cost that we measure both in dollar terms, but also in human terms. So, Justin, would you talk a little bit about how does the, you know, the cost to firefighters affect your thinking, the calculus in terms of, you know, where you think that optimum is in terms of, you know, our fire suppression policies?

Justin Angle I think of it broadly as an allocation of resources question. Right now, we allocate the vast majority of our fire management resources toward fire suppression. How do we take this sort of reactive spending that we're doing, ramping up spending on fire suppression and allocate some of those funds to the work that is preventative and needs to be done, whether that's prescribed burning or thinning or some combination of the two. We need more money to be put toward the preventative measures or we need policies that allow for that money to flow from category to category at the discretion of a land manager more freely. I don't exactly know how to create those, but that kind of flexibility in the system, I mean, Nick explained it a moment ago, like what needs to happen varies so much from place to place and year to year that we need to have systems and policies and people in place that are able to be flexible and how they manage, but in how they're managed as well.

Bryce Ward Well, you know, so I was going to end with I mean, you guys going out, you guys doing any touring, is there any place, you know, people can follow up, meet you in person? Are you guys going to do the book tour or is that happening?

Nick Mott You know, a lot of book tour stuff is online these days. We have a bunch of online events, but we do have a handful of in-person ones in Montana. At the Montana

Book Festival, we're at Elk River Books in Livingston. We're at Fact and Fiction in Missoula, probably.

Justin Angle Yep. The Fact and Fiction date has been set yet, the Montana Book Festival is September 10th and the Elk River event will be October 26th out in Livingston. So yeah, excited to kind of get the word out.

Bryce Ward It's definitely important. You know, going back to my childhood, wildfire was always present, but things have changed. I mean, anybody who's lived in the West continuously over at least 40 years knows that wildfire is different today than it was in the past. And so, you know, this book and, you know, other things like it are, it is imperative for us to get on top of it so that we can start shaping both our own actions as well as, you know, collective policy action. So, hopefully this book and others, people like you can help us navigate a path towards a better future. So thanks, guys, for doing the work. I certainly appreciate it.

Nick Mott Thank you, Bryce.

Justin Angle Thanks for listening to A New Angle. We really appreciate it. And we're coming to you from Studio 49, a generous gift from UM alums Michele and Lauren

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