VIEW to the U transcribed
Season 7: Without Further Ado; Episode #1
Professors Benjamin Wolfe and Anna Kosovicheva
Department of Psychology

[intro music fades in and out]

Anna Kosovicheva (AK):

So, the idea of translational research is that you can take methods or techniques or tools from the lab and carry them over to clinical settings.

I'm Anna Kosovicheva I'm an Assistant Professor in the Psychology Department at UTM and I co-direct the Applied Perception And Psychophysics Lab.

That involves taking tools that are used for studying vision in people who have normal vision and using that to develop assessments and treatments for patients who have visual impairments.

Benjamin Wolfe (BW):

We're professors because we're deeply passionate about our research.

I'm Benjamin Wolfe, I'm an Assistant Professor in Psychology at UTM, and I'm a co-director of the Applied Perception And Psychophysics Lab.

You see something in the world that seems like, hey, maybe Professor Wolfe has something to say about this, or knows about this, come and ask us. We're professional nerds, we're totally happy to talk about what we're passionate about. So, bring us cool questions and ideas and observations about the world, because that's really why we're here.

[theme music fades in]

Carla DeMarco (CD): Setting sights on visionary research and researchers

Hello and welcome to *VIEW to the U*: An eye on UTM research.

I'm Carla DeMarco at U of T Mississauga. *VIEW to the U* is a monthly podcast that will feature UTM faculty members from a range of disciplines who will illuminate some of the inner workings of the science labs and enlighten the social sciences and humanities hubs at UTM.

Weeeee're back…with a new season – lucky #7!

To kick off this new season, we are picking up where we left off – with representation from UTM's Department of Psychology – but this time round I chat with two new faculty members, Professors Anna Kosovicheva and Benjamin Wolfe, co-directors of the Applied Perception and Psychophysics Lab, or APPLY Lab, that was recently established at UTM.

Anna and Ben are helping me launch the new season of *VIEW to the U*: "Without further ado" is the theme for the year, and throughout this season, I will introduce you to some of the new people from UTM's vibrant and ever-growing research community.

Over the course of today's interview, Anna and Ben talk about their research in the APPLY lab, which focuses on how we take in information, particularly visual perception and overall how vision works, and the applications for activities such as driving and reading.

We also talk about some of their out-of-the-lab pursuits and the creative ways they spend some of their free time.

[theme music fades out]

Anna Kosovicheva is an Assistant Professor in the Department of Psychology at the University of Toronto Mississauga. She completed her BA and a PhD in Psychology from the University of California, Berkeley, before going on to do a postdoctoral position at Northeastern University.

Ben Wolfe is also an Assistant Professor in the Department of Psychology at UTM. He earned his BA at Boston University, worked for two years as a research assistant at Vanderbilt University, before also completing a PhD in Psychology from UC Berkeley. Prior to coming to UTM, Ben was a postdoctoral associate at the Massachusetts Institute of Technology.

Both Anna and Ben joined the faculty and established the APPLY lab at UTM in 2021.

BW: Really what I study is visual perception and a bit to unpack what this means in terms of what we see in the world, how we perceive the world, our brain has to do a remarkable amount of work interpreting the input that comes in, in terms of the light that comes into our eyes. Our experience with the world is not just the light that comes into our eyes that goes into the retina and that winds up perfectly in the brain. That's not how vision works. It's really a cognitive process of perception. I'm particularly interested in how do we get the information we need from the world? The world is enormously complex and yet we move through it essentially effortlessly. We don't notice that the world is full of detail, and full of change, and full of motion. We happily drive down the road, walk across campus, do everything that we do in daily life without worrying about this much.

So, I'm interested in the question of how do we get what we need from the world? And in particular, this is in the last few years, really focused on driving. Driving is a case where you really do need visual information in order to be safe. It's probably a really bad idea to drive blindfolded. And it's a way to study these questions in a somewhat constrained and confined space. I'm also interested more broadly in how we get information from other settings, particularly in reading. And this is something that we've been doing, you know, we've all been doing quite a lot lately. We're reading papers and assignments and blog posts and tweets and everything else online. What does it mean to make that readable? What does it mean to make that easy? And I'm interested in really the perceptual side of

that. How do we acquire textual information from the world not just say I'm walking across campus and I don't want to walk into a deer?

CD: That is very important, along with the safe driving.

BW: Yeah.

AK: Just to expand a bit on what Ben talked about, so a major focus of our labs of the Applied Perception Psychophysics Lab is really to kind of look to the world for problems that can benefit from an understanding of how visual perception works. So, as Ben said, it's not only driving, but readability how we read and understand and process texts as well as applications of vision research to human health. So assessment of visual impairments, and at the same time we're also really interested in understanding more basic visual phenomena and mechanisms of vision. Because if we can understand something fundamental about how vision works, we can get a sense of how we perceive and we act on things in the world.

And so, an example of that is how do we represent the space that's around us? How do we accurately perceive where something is? That's really important for situations like driving or even something as basic as catching a baseball that's flying through the air. So these are functions that really rely heavily on having accurate spatial information. So where is this thing relative to where I am? And so there are many factors that come into play here. And, so one of the things that I study is really the mechanisms of how we take in and we process, and we understand this spatial information and how we use it to guide action.

CD: You've made me think of a point and again, I don't know if your research touches on this, but I'm just thinking about the current COVID situation. And I'm hoping that we're out of it soon, but how seeing people in these boxes on the screen, because you did mention about spatial perception. And so you forget about like what people actually look like or how tall people are and things like that. Like it's kind of messing up our spatial perception. So I just wonder does your research touch on that at all?

AK: A little bit. So that has kind of... I think of it obvious having relating more to recognition of objects, recognition of say faces. There are kind of a lot of interesting visual questions that have to do with Zoom because he kind of, well, there are a number of them, right? So one is being able to extrapolate from a single viewpoint as to what someone might actually look like in person, right? You're getting like one single view. So object recognition, we're used to recognizing objects from different vantage points. Other kind of visual phenomena that relate to Zoom have to do with being able to process multiple faces at the same time.

It's kind of something that we're not used to doing a lot, but when you have a large screen with many boxes at the same time, you kind of have to look around and pay attention to different people simultaneously. So it does rely on some spatial processes, but I think a real challenge there is that you have to rely on your peripheral vision a lot to kind of get a sense of I'm looking at one person over Zoom, but there turned out to be other people

there as well. So I'm kind of trying to take in all this visual information simultaneously. So that does relate to spatial processing in subways doing it over Zoom makes it more challenging based on how the information is presented and laid out.

BW: I'll add to that, that the peripheral vision side of things. So peripheral vision is vision beyond where you're looking. So if I'm looking at you on Zoom, everything else I can see is essentially my official periphery. What you can do with this is actually a really big question in my research, not just in terms of faces, although a great example in teaching is. On Zoom, if you're teaching a class, most students leave their cameras off for various reasons, whether they're not comfortable, they're not somewhere they can have their camera on or just they don't want to. So you can't really get a sense of the classroom as a whole from a sea of black boxes.

Whereas in person, if you're standing up in front of a lecture hall, you're understanding the group as a whole and how they're engaging using peripheral vision and really processing all of their faces and expressions simultaneously. You don't have to stand there and look at this student in the third row, this student in the sixth row, this student in the first row. You can do this at a glance and this is something that we've actually studied, howbeit a few years ago now and not in the context of Zoom.

CD: Well, I think you've done a really good job of sort of providing the outline of your work and you talked about how visual perception your research works a little bit, but what I'm also curious about is how you do your research. So you did talk about how some of the focus is on driving safely and taking in that visual information. So is it done through some sort of virtual reality simulation?

BW: So again, one of my major interests is what information do drivers need. So a particular version of this, isn't just you're on the 401 and you're dealing with Toronto traffic which is wretched. But imagine you've got a partially self-driving car say something that Tesla will sell you that's okay on the highway and not so great everywhere else. What happens when it says, please take over? Because it's going to, it's not perfect. It's going to need you, the driver to take over. I'm really interested in questions like, all right, you have to look at the scene and understand what's going on now. So how do we study that in the lab? We can't really do this on the road those situations are rare and it's not safe. We could do this in a simulator except that most simulators, both look like video games from a few generations back, which is great if you want to really see how people try to drive a car, but if you're interested in how weird and different the real world can be, they're not great.

So, what we actually do is we use dash cam video and the nice thing there is that dash cams have gotten really inexpensive and people like to put dash cam videos online. So YouTube has at this point, probably millions of dash cam videos from all over the world of all sorts of situations, everything from I'm driving through the Prairies and I haven't seen another soul for six hours to I'm driving in downtown Toronto and three pedestrians walked out in front of my car and decided to start dancing. The world is incredibly weird

and complicated. And so we use real world video in the lab to actually ask questions about how drivers perceive changes in their environment.

BW: So that way we have really ecologically valid experiments in so much as they actually take stimuli from real situations. We don't have to try to invent what's the weirdest situation we can find, someone's already run into it for us and we just have to find it. We basically use these videos to build what amounts to weird, boring video games that sort of bridge between being a little bit scary and a little bit boring. You'll watch a lot of clips very quickly because we're interested in say, how long do you need to understand these situations? But we do them all based on real video. That's not to say that simulators aren't useful tools they are, but we're really interested in how we perceive the world and for that, real video is the best way to go.

CD: That's very cool and I never even would have thought about that, but it's true that you would have all of that material or the resources since it's out in the public domain, I imagine it's just free to use, right?

BW: Yeah. It's one of these things where, because we're not making money off it no one particularly worries about this. What we do is we generally look for online sources, whether it's YouTube or Reddit, we do a certain amount of processing on the videos. We take the audio out because no one needs to hear the driver screaming at something on the road or the radio blasting whatever music they were listening to. We processed them to use them as stimuli and then we actually put them up as stimulus sets for the research community to use. So we were actually the first group to do one of these real world stimulus sets and make it publicly available a couple of years ago.

AK: Just to expand on that, I think one direction that we're taking this in the future too, is recording our own dashboard camera footage as well. I think a lot of the scenarios that we can get from the internet often involve near collisions. But if we want kind of things that are perhaps a little more representative of everyday driving and having kind of a variety of videos is important too. So we're planning on doing here at UTM is kind of building a large database of dashboard camera footage from normal driving scenarios.

CD: Very cool and this is very off script, but you just reminded me there's some channel that my spouse found that every once in a while we watch just for fun, but it's one of these like a low bridge where the truck or the whatever ends up bashing into it.

BW: Yep. 11-foot-8 it's the bridge that eats trucks. Yeah. So we lived in Cambridge, Massachusetts for about six years after graduate school and Storrow Drive in Cambridge has roughly 10 foot clearance on some of the underpasses and the local phrase is [storrow bend 00:11:38] because it will eat box trucks. And it's usually people who like rented a U-Haul and are moving apartments they're like, "Oh wait, I don't fit." Crunch.

CD: You know, I guess they thought they could make it. It's mostly funny as long as no one gets hurt.

BW: Yeah. If the truck just gets *can-openered* that's just funny. That's just the insurance agents going to go face palm and you know, go, "Oh, not again."

AK: Hopefully something we have to be pretty careful about with our stimulus that we'll have undergraduate research assistants buying some of this footage for us and sometimes it's a little too scary. You see something where someone's not walking away from a collision.

BW: Yeah, we try to actually be very careful about this because the world is incredibly weird. And the number of situations people get into is just so variable. The world is weirder than we could simulate so why not use the world, because that's what people actually have to understand.

CD: You're talking about the visual perception in driving, but I just wonder because you did mention about the blasting music, does your work take into account though, just not only the visual perception, but sometimes those distractions that come into play when people are driving?

BW: Yeah, absolutely. So we sort of think about distraction as actually being in two forms. So things like blasting music or talking on your cell phone or talking to your kid in the car, those are all really cognitive distractions. You're engaged in a cognitive task that's taking some resources away from monitoring the environment. And that's a really heavily studied topic, particularly in driving. It's why you get all the warnings about use a hands-free device for your cell phone. Don't necessarily talk with your passengers if you're in a dangerous situation. What we're really interested in because we're more interested in visual perception is visual distractions.

BW: So this is, let's say you're a driver for Uber or Lyft, and you've got that smartphone on your dashboard or your windshield that lets you pick up fares. You're looking at that, you're not looking at the road. What does that do? Or you've got your GPS, you got running ways for traffic or something and you shouldn't do this in Ontario because it's illegal here, but you're texting and driving. You've got your phone maybe in your lap because that's what people do when it's illegal. We're really interested in this because it changes the information you can get. You're looking away from the road and you're relying on peripheral vision to monitor the environment around you.

BW: So, we've actually studied this in the lab and what we find is even if you look a little bit away from the road ahead, you're looking at the infotainment display in your car, that's that big LCD that every manufacturer has been slapping into the car, instead of all the knobs and buttons that you used to have. You're looking at that you can be a third of a second slower to react on the highway. A third of a second is an eternity on the 401 because it's several meters of travel and on the highway on the road in general, time is space and time is stopping distance. So that's really a huge piece of what we're interested in.

BW: Also related to questions of distraction, what does it mean to be distracted and like not see something and not attend to something? And these are a really interesting class of

errors that gets called looked-but-failed-to-see errors. So people might look at something directly, say like a moose walking into the road and they say they didn't see it and they don't respond as if they saw it. And understanding what on earth is going on here is a really interesting question. And it's one thing that we're really looking forward to getting into as on-campus research resumes, because it takes tracking where people look, we can't really do that online. So we have to bring people into the lab, put them in front of an eye tracking camera and we can try to understand, okay, you've looked at this, but you didn't respond to the moose. And so that's really a big question that we have going forward.

CD: You also just made me think about when you talk about the failure to see something, but you know how if you are unfortunately in an accident and how people talk about how times sort of slows down. And so I'm just wondering again, I don't know if this factors into your research, but I remember having a close call with a deer in a car. A friend of mine was driving, but all of a sudden this deer appeared out of nowhere crossing the 401 when we were driving, but it felt like time slowed down. And I know people have described an accident situation in that way. There seems to be the two things going on, because it's your visual perception, but also that feeling of time shifting, I don't know.

BW: Oh, yeah. That's both the temporal shifts and your sense of time and prediction. Those are things that we've poked out a little bit. It's really one of these things that's hard to get at, particularly in the lab because we don't really want to put you in a whole lot of dangerous situations. But the sense of that deer or the motorcycle or something else came out of nowhere, that's a really, really common report from people who get into collisions or who get into near collisions. And it's something that turns out to be a really big issue, particularly with older drivers, they're more prone to this. And so it's something that we're really interested in is how our perception of the environment and particularly if the driving environment changes with age. And it's something that expertise is a big issue here, age is a big issue here and really sort of probing what's going on there is a key question.

CD: I got this from your website and it also said “translational work,” and you might've already described this. I didn't understand that term so I just wondered if you could explain that a little bit?

AK: So, that is part of my research emphasis, so you can kind of think of translational research as a subset of applied research that focuses on health-relevant applications. So the idea of translational research is that you can take methods or techniques or tools from the lab and carry them over to clinical settings. So in my case, that involves taking tools that are used for studying vision in people who have normal vision and using that to develop assessments and treatments for patients who have visual impairments. So just to kind of walk you through one specific example of that, Ben mentioned eye tracking. So this is basically a technique where we use a camera to monitor where somebody is looking either on a computer screen or something else. So that's a common tool that we use in the lab and so one area of mine is to kind of take this method and apply it to evaluating

people who have impairments in binocular vision. So specifically people who have strabismus or eye misalignment and these cases the two eyes don't work together as well.

So one application of eye tracking is that we can actually use it to measure how much the eyes are misaligned. We can measure the angle of misalignment. We could also use it to develop sort of training tools to get the eyes to work together a bit better. So getting the eyes to move together in a more coordinated way. There are a lot of different tools and techniques that we can take from the study of vision and apply them to health-relevant settings, apply them to understanding visual impairment. We can also kind of bridge some of these applications that we've been talking about. So one kind of direction where we're taking the lab's research is to link the study of visual impairment to some of these more applied settings like driving. So one thing that we're currently working on is looking at how having reduced vision or impaired vision might affect someone's ability to say detect a hazard on the road. So that's kind of a question that we're looking into at the moment.

CD: And I'm also very curious about how you got interested in studying in this research area in the first place?

AK: Yeah. So I can talk a bit about how I got interested in vision more broadly. So that was actually initially through my introductory psychology courses so that was in undergraduate. So I took a psychology course as an undergraduate thinking that now this has mostly to do with understanding mental health, understanding disorders, sort of more social personality areas of psychology. But then I kind of took this course and realized that there's actually a whole world out there of studying mental processes, studying how we take it and interpret information from the world around us. And I think what really kind of got me hooked and into studying vision specifically is the idea that we don't necessarily perceive the world accurately. That our brain does a lot of work in interpreting what we see and that isn't always accurate so we can occasionally misperceive things. The whole idea that you could actually spend some of your research career studying illusions was what really got me hooked because I always appreciate a good visual illusion, right?

They show failures of our perception of the world or cases where people might disagree about what they see. Classic example of this is the image of the dress that went viral a few years ago, right? Is it blue and black or is it white and gold? It really shows that there's a lot of work that our brain does in kind of constructing what we actually experience. And so it's phenomena like that, that initially got me hooked into studying visual perception, kind of extended my notion about what psychology involves more generally.

So that was kind of initially a lot of my research is kind of studying these failures of visual perception. And then over the years, I kind of branched into more applied research based on the idea that it's important to understand the mechanisms of how vision works, but being able to apply them to the real world is incredibly useful as well.

BW: I got into doing this kind of work, particularly because I've been interested in really how do we get information from the world? As I was saying earlier, the world is just incredibly, visually complex and detailed. How do we select what we pay attention to? How do we select what we look at? And that as a graduate student really led me to studying how we plan eye movements. And I did that in a very fundamental way for my entire graduate career. And by the end of that, I really started getting more interested in applied questions and pivoted quite hard to questions of driving.

I wanted to do something that really had me connect more with the world and have a bit more of an impact. And I found when I made that transition, that driving was really a space in which I could still ask the fundamental questions that motivated me to study vision science and visual perception, but I could do it in a way that was relevant to real world problems that helped to solve them. So I find that intersection to really work very well for me.

CD: And so, I know that you're relatively new to UTM. I don't know how much time you've been actually on campus, but I'm just wondering when we are allowed to really go back. Although, I think you're there today you said, what are you most looking forward to? You kind of touched on a little bit of being able to do the eye tracking, but what are you excited about being on the UTM campus?

BW: So, we've done some teaching online, but really teaching and mentoring online works and it's in response to the current pandemic times. And you know, it's nice to be working from home where like the cat can join calls. It's always fun to see people's pets, but there's no substitute for working in-person and we both interact with so many passionate students who were interested in the questions that we're also interested in and just having that kind of interpersonal connection and that time to talk about ideas and bounce ideas off each other in a way that doesn't require scheduling a Zoom call. Is just, I think that's something I'm really looking forward to.

AK: Yeah, just to add to that, I've really enjoyed so far being able to teach and mentor students virtually. I think the impression that I've gotten so far from students at UTM is that they're a very curious bunch and really enthusiastic about learning, which makes me even more excited to meet them in-person, be able to mentor and work with students in-person and also getting to meet with and collaborate with colleagues in-person is something that I'm looking forward to, in addition to starting up our physical lab. So being able to do some of the research that we do in-person.

It's kind of been an interesting challenge coming up with ways to make our experiments work virtually, but I'm really also looking forward to doing some of the work that we've been talking about using eye tracking, using 3D displays, stuff that's a little bit harder to do online. I'm excited to kind of build up our physical lab in addition to our virtual lab.

CD: I think that's great because it touches on something that Alex Gillespie said about just how researchers are so resilient, but good at both coming up with creative solutions when

you're kind of thrown this a little bit of an obstacle and you have to figure out your way around it to continue on with your research. But I was going to say though, too, I'm looking forward to... Like I'll run across a researcher somewhere on campus and you have these sort of impromptu chats and it's like, "Oh, while we're talking, can I ask you a question about... " And it's like, you don't have any of that happening with this weird sort of removed situation so...

BW: Yeah, I'm just thinking back a little bit to when I was a post-doc, I wound up making connections with staff member in my university's funding office because I put out a call for participants for a study. He raised his virtual hand and said, "Yeah, I'll come and be bored for science for 45 minutes." And then he worked a few floors over from me in the building I was in, but he then knew what I did. When someone came to him of like, we want to give the university money, we want to talk to researchers. Those were connections that are almost impossible to build through a screen and that's a huge piece.

CD: Yeah, 100%. And so the focus of this new season of the podcast is really about let's meet the new people that are coming to campus, but so you're going to be starting with a whole new cohort of students and new faculty members. And I know you've been at a couple of different institutions in the past, but do you have any particular strategies or things that you would offer up as advice when it comes to embarking on this kind of new adventure?

BW: Yeah, absolutely. The biggest thing, and this comes out of having made a really large pivot research-wise when I became a post-doc was be open to weird changes in your research, be open to new ideas and new research areas. If you'd asked me when I was finishing graduate school or even before then, "Ben, are you going to study driving?" I'd have looked at you like you had a beaver on your head. It would've just made absolutely no sense to me and yet that's my career now. And I enjoy it and it's interesting. I get to ask the kind of questions that really work for me. It's very unlikely that you're going to wind up doing exactly one question your entire career, whether you're an undergraduate or graduate student or post-doc, faculty, anything.

BW: And so being able to say, "Hey, I've got these skills and these expertise." That's a cool new question I'm going to try to apply them and branch out or reach out to find interesting things to work on. That's really what moves us forward as scientists. And that's really the best advice I can give is your expertise in a given area is probably valuable in another domain. So be willing to go off and use it. We do better science together than all sitting in our own little silos.

CD: That's great advice because I just think, again, it goes back to just being open to, as you said, didn't think this is where you would end up, but it's like one thing ends up sort of leading to the next.

BW: Yeah, I mean, I have a sideline essentially in readability research, which originally it came out of the driving work five, six years ago because the group I was part of at the time was interested in you've got that display in your car, it's got a bunch of icons on it, or you've got the icons on your smartphone. You glance down at that, you need to figure

out, okay, this is the Instagram app. This is Twitter. This is your email or something. What phone do you use? What makes that readable? What makes that not readable? And now I'm part of a huge collaboration with researchers all around the world trying to make text more available on screens. And that's useful for students. That's useful for professionals. That's useful for everybody and I have a little piece of this and I wouldn't have guessed I'd be doing that either.

CD: That's amazing. And Anna do you have anything to add about tips for people new to face or place?

AK: Yeah, I think for UTM specifically and for undergraduate students, I would say I think it's very important is to not be afraid to reach out to people, especially faculty, if there's some area or some topic that you're interested in, or if you're enjoying a course. I always love hearing from students. I know it's something that can be kind of intimidating, especially these days when everyone's at home, but reaching out to people is important if you're an undergraduate and you're interested in something reach out to faculty because they love talking about the work that they do. And it's a good way to kind of start getting involved in science if that's something that you're interested in as an undergraduate.

CD: Yeah.

BW: I might just add to that, but all of the faculty that if you're a student that you interact with, we're professors because we're deeply passionate about our research, that's why we do this. We're passionate about our research and we'd like to teach on the topics that we're passionate about. And if that seems interesting to you or you see something in the world that seems like, "Hey, maybe Professor Wolfe has something to say about this or knows about this." Come and ask us we're professional nerds. We're totally happy to talk about what we're passionate about. So bring us cool questions and ideas and observations about the world because that's really why we're here.

CD: Yeah. And you know, you're totally tapping into one of the reasons why I wanted to start this podcast. I feel like this is a way in to find out about, and to showcase our researchers, but also to make researchers more approachable because I just feel like if the students are listening in, they get to learn a little bit about what you do, but also, hey, I can talk to them. Because like you're obviously very open and honest and passionate about your work. So I feel like this is meant to be maybe a gateway to some of our researchers and just feeling that you can approach them about your questions. Because again, I always feel like I'm a student, like I'm still learning about people's research and maybe that's a good segue for my next question though, because I did want to ask... Because you know, again, sometimes it's nice to find out about commonalities of people's interests. And if there's something that you like to do sort of outside of the lab that you want to share or something that people might not know that you like to do.

BW: Yeah. So my big hobby outside of research is I'm a baker. I'm a scientist by day, I spend a lot of time pounding my head against data or experiments or this paper came back from the journal and the reviewers want 20 pages of changes. And that can all be really

frustrating and really slow. But if I go home and I walk into the kitchen and I grab the eggs, flour, butter, sugar, and chocolate. An hour later, I have cookies and that tangible product is just so incredibly important. I mean, it solves the breakfast problem *too*, but the ability to say I've actually done something today, and there's a tangible end result, as opposed to they're a bunch of texts in word is really helpful for me. And it's been incredibly important during the pandemic, but just even before then, it was just a huge part of what I do to be happy.

BW: In fact, when I was interviewing for the job that I now hold at UTM, one of my friends was on sabbatical here and told all of the other faculty in psychology about my baking. And so the introduction to my job talk was, "This is Ben, he's done research on this, this and this." And faculty on sabbatical says that he's an amazing baker and maybe he'll bake for us if he come here.

AK: Baking turns out to be a good way to make friends…good strategy.

BW: Yes.

CD: I love that because it hits on a lot of levels because you're making me think I have a sister who is an amazing baker. And she said, she's always considered her baking almost like therapy, because just like you say, getting away from the screens, then you have this thing that you've made so it's like a creative pursuit as well, but you can eat at the end. There's a satisfaction related to that and also the chemistry of it. It's like you're taking these ingredients and turning it into something else, which is pretty remarkable.

BW: And the ability to share it, that's actually something we've really missed in the pandemic is it's hard to share baked goods when you can't go and see anybody. And as things are trickling back to normal on campus, few of our colleagues have been around. We may have been giving away baked goods with an eye towards not eating them all ourselves.

CD: Yeah. That's great. And Anna what about you?

AK: I would say I kind of have a very similar desire to produce things in my free time, just because it is kind of frustrating if you're spending all your time working on something and then the experiment doesn't work or you could work for a while and stuff doesn't pan out. So it's nice to do hobbies where there's a tangible product. So for me, that's actually sewing. Is actually something that I got into when I was a graduate student and I find it very satisfying and therapeutic. Where you start off with some fabric and you can construct something that's actually useful at the end. So that can be tote bags, cushions, stuffed animals. I've made several of those. Clothes, some of which are even wearable outside of the house, but I find it really satisfying to make things. I think it nice to kind of work with your hands and get away from a computer screen from time to time.

CD: Yeah. And like you say, it's practical. You have something at the end that you can sort of display or wear.

BW: In terms of the baking, my Twitter is about, I think it's about 25% baking pictures and about 25% cat pictures and maybe the rest of it's science and other silliness.

CD: Yes. But I did see on your Twitter the other day, you made ice cream, right?

BW: Yeah. I actually make a lot of ice cream.

CD: That's amazing.

BW: That ice cream was a blackcurrant ice cream because we went berry picking. Being able to pick and get fresh black currents is actually something I'm not used to because they were banned from growing. You couldn't grow them commercially in the US from the 1960s up until about 10 years ago. And so there's a very, very small US crop. It was never banned in Canada so I made blackcurrant ice cream and it's fantastic.

CD: It's true when you're making it yourself, you put together the combination that is most pleasing to you.

BW: A few weeks ago I made what seems like a fun idea. I made coffee coffee crisps. I said, you know, why not add coffee to your coffee? Because it's good. I think at one point I poured a shot of espresso on top so it was coffee cubed. It was coffee, coffee, coffee, crisp.

CD: You're just on so many levels making these new creations. That's amazing. And so my last question is while we were kind of sidelined not doing our regular activities, going to places, was there something that sort of kept you afloat or interested either movies aside from the baking and the sewing, movies or books or podcasts or something that you just really were enjoying while we were sequestered at home?

AK: I will, freely admit to watching a lot of TV. So when sort of guilty pleasure of mine is actually reality competition TV shows, so kind of related to baking and watching the Great British Bake Off and now that we're here, the Canadian Bake Off as well. So there are lots of variants of these reality competition shows. There's always new ones popping up on Netflix. There's one recently on glassblowing and makeup artistry and things like that. I think it's really nice to kind of watch people who are really talented at their craft kind of competing against each other. I think it's kind of something enjoyable about doing that.

CD: Yeah. And you made me think I saw some pottery ones-

BW: The Great Pottery Throw Down.

CD: Yeah, exactly. But it's like you get so impressed by just the creativity and the people's skills and how they conceive something and then bring it to fruition. It's amazing.

BW: Yeah. I think the thing that's really kept me going is various science fiction fantasy novels, both reading them and listen to them as audio books. One that I've actually had just re-read this past weekend has been Katherine Addison's *The Goblin Emperor*, which takes basically every trope in fantasy of, you know, the new emperor comes to the throne. The trope is of course that the emperor is going to banish all of his enemies and be the terrible overlord. And takes that trope, turns it on its head and says, what if the new emperor just want it to be kind? I just wanted to make the world and the empire better. And it's this incredibly lovely novel. There's an unsequel that's just out called *The Witness for the Dead*, taking a minor character from it and basically turning that into a detective novel.

BW: But that's just such a positive world where it's asking you have power why not use it for good? Why not try to make things better? And that's... It feels like something that at least I really needed right now. I'd also plugged a novella that came out a few years ago by Amal El-Mohtar and Max Gladstone called *This Is How You Lose the Time War*, which is an epistolary novella. So it's written as a series of letters between two warriors who are falling in love with each other. And it's just this incredibly sweet, beautifully written piece of work. And it's a lovely little novella, but it's also a completely gorgeous audio book and things like that have been what's been getting me through.

CD: Those are going on my list. I have kind of turned also too to physical book just because again, to get away from screens and I listened to a lot of podcasts, but I just feel like, you know what, I need a break from the screens and from the podcast. So I've been actually having a lot more physical books.

BW: I usually do the audio books while I'm baking and they sort of work well together because I'm going to be in the kitchen. I'm puttering around, I'm waiting for this tray of cookies to finish baking or something. I'm cleaning up and then it's a nice time to listen to a book and be doing something else.

CD: Yeah. I do the same with podcast every night when I'm making dinner, I usually have *Fresh Air* with Terry Gross or the *Post Reports*. Like there's certain ones I like to listen to when I'm making dinner. Yeah. I relate. You know it's so nice to get a chance to meet you both because again, like I say, since we're not on campus, I'm missing the run-ins and the just meeting people at UTM. So I'm so looking forward to meeting you in-person one day, but I'm so appreciative and grateful that you took the time to tell me about your work and to coordinate this time together. So I really appreciate getting a chance to meet you both.

AK: Yeah. It's nice to meet you.

BW: Yeah. This was really fun. Thank you.

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CD: I would like to thank everyone for listening to today's show.

I would especially like to thank my guests, Professors Anna Kosovicheva and Ben Wolfe from the Department of Psychology at UTM for being so generous with their time and for telling me about their research in the APPLY lab at UTM and for the food for thought about their other creative pursuits. I do hope to meet them in person one day!

I would like to thank the Office of the Vice-Principal, Research for their support.

If you are new to the UTM research community, please get in touch with me! I would love to meet as many of the new researchers on campus as possible.

Also, if you can take the time to rate the podcast in iTunes, it helps others find the show and hear more from our great UTM researchers.

And this year marks the 5-year anniversary for *VIEW to the U*! With roughly 50 tracks, over 20,000 downloads, and everyone's support, it feels very celebratory. I am eternally grateful to the researchers who participated and those who have supported me – you know who you are! – along the way. A heartfelt thank you.

Lastly, and as always, thank you to Timmy Lane for his tracks, tunes, support, and everything!

Thank you!

[theme music fades out]