Burst Communications with Chris Riedl & Anita Williams Woolley

PAYCHEX®
HR
Leadership Series

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Full transcript

Rob Parsons:

Welcome to the Paychex, HR Leadership Series. I'm your host, Rob Parsons. I lead the content team here at Paychex, and we write extensively on a variety of HR topics, covering everything from HCM technology, to team engagement, to compliance with state and federal regulations. In this podcast, we speak with leaders and thinkers in the industry to provide our audience with the latest HR insights and information, and hopefully more than a little inspiration. I'm really excited about today's guests, Chris Riedl and Anita Woolley who have recently completed some very interesting research around communication in remote teams. But first, our team has spent hundreds of hours researching the latest HR and management trends we think leaders should be aware of. We have thousands of downloads now, and we're excited to have that connection with you. If you're enjoying this podcast, let us know… Go and rate us on Apple Podcasts, Spotify, Google, iHeartRadio, wherever you're listening to us today. Leave us a comment on topics you're looking to hear about. We want to serve you with insights you want and need to know.

Rob Parsons:

Okay, let's get to it. Chris is an Associate Professor for Information Systems and Network Science at the D'Amore-McKim School of Business at Northeastern University. He holds a joint appointment with the Khoury College of Computer Sciences, and he is also a fellow at the Institute for Quantitative Social Science at Harvard. Anita is an Associate Professor of Organizational Behavior and Theory at Carnegie Mellon University's Tepper School of Business. She has a PhD in Organizational Behavior from Harvard University where she also earned bachelor's and master's degrees. At the Tepper School of Business, she teaches MBA and executive education courses on managing people and teams in organizations. Chris, Anita, thank you so much for joining me today.

Chris Riedl:

Glad to be here.

Anita Williams Woolley:

Thanks for having us.

Rob Parsons:
Perfect. So communication, remote teams… It's a timely topic to say the least, but I imagine this research was prompted by more than just current events.

Chris Riedl:
It was. We started this research as… An interesting opportunity presented itself to run an actual experiment in collaboration with Topcoder to study remote teams in the software development space. So we partnered with them to set up an experiment that allowed us to control certain aspects of the data that is really unique in kind of… Not unique, but special and important… when you study teams. And the key driver for our research initially was this question of, how do remote teams that don't know each other, they're randomly assigned groups of people, how can these people communicate efficiently? How can they work together as a team efficiently when they're all new to each other, they're distributed across the globe, they're in different time zones and they are faced with these really challenging problems that require a lot of creativity and insights to solve?

Rob Parsons:
And they don't already have that connection established. So they've got to build connections at the same time that they're trying to handle these challenges.

Chris Riedl:
Exactly right.

Anita Williams Woolley:
Yeah, and I think it really was, as Chris points out, a unique opportunity because of course, distributed teams have been studied in the literature for a few different decades now, but often the data that's available is really correlational. So people choose to work in distributed teams or a certain organization might choose to use distributed teams more. And so we might establish some patterns that lead to good performance, but we really can't say definitively that it would have an effect in a different type of team because who knows why they chose to be in those teams. So being able to do this experimentally was really unusual and a really important part in terms of how we can generalize those findings.

Rob Parsons:
So is that where you came upon or… discovered is too strong a word… but I know I personally work in a very "bursty" fashion, is that where this idea of burstiness around communication, not just work, but communication, is that where you discovered that and that came into play?

Chris Riedl:
Yeah, very much so. And especially given the fact that those distributed teams were distributed globally, key starting point for us really was, how do these people communicate? They've never met each other before, one of them might be in Russia, one of them might be in India, one of them might be in the U.S. How do they communicate? And so what we did for that experiment was we carefully captured data on the communications sent by these teams. They all communicated through a text-based messaging system and we recorded when they sent messages and the content of those messages. And we also collected data on their work product. So when did they write software code? When did they share that software code with the other members of the team? And from that, we then started to look at the temporal patterns and that's when this kind of pattern of burstiness caught our eyes that that was really one of the key drivers of performance.

Anita Williams Woolley:

Yeah, that's right. So just to build on what Chris is saying, we might see two different teams that exchange exactly the same amount of communication. And we know that communication is already important for performance in teams in a variety of settings. So we would expect to see that more communication would be better, but even if two teams communicated a lot, if one did it in a more bursty pattern, meaning that they'd have a rapid exchange of messages followed by periods of silence, they performed a lot better than if a different team with the same number of messages had them equally distributed throughout the 10 days that they were working on their software problems. So that was really interesting to us, especially in light of the fact that they were in very different time zones. All of the teams were spanning these time zones. So to have a rapid exchange of messages would really require people to be changing their schedule quite a bit in order to collaborate. And so it was really quite striking that this occurred.

Rob Parsons:

So as a manager of my own department, because I first found this really interesting just in a very personal way, and then thought, "HR leaders, even, would want to cultivate this in the organization." How do I foster this kind of environment that allows these bursts of activity, these bursts of communication.

Anita Williams Woolley:

Well, this is something that we've thought about also. And it was especially intriguing to us because in a subsequent paper, a student of mine explored some data in a bank, in a retail bank where people were working in a more traditional setting where at least some of the people who were working face-to-face. And looking at the email patterns there, we found that burstiness was predictive of how the retail banking teams did in terms of their financial performance. So that organization got very interested in those findings. And so we have started to plan a field study with them, where we are going to try to instill some norms and patterns to help at least some of the teams, hopefully randomly selected, to engage in more bursty behavior, either by maybe establishing schedules and norms around when email will be exchanged. We've even talked about maybe more fancy digital tools, which might prompt people to say, "Hey, it seems like Chris is available now," and to try to prompt them to think about initiating communication at a time when their collaborators might be available to quickly exchange messages.

Chris Riedl:

That's exactly right, and if you think about what is the opposite of burstiness, what would that look like? The opposite of burstiness is you are trying to work on something and make progress and you need input from someone else and you sent them an email and you don't get a response. So now you're kind of stuck, you can't move whatever it is you're working on, forward. So now you switch to something else, you do something else, then you get the response, but now the response is not helpful to you because you've already switched doing something else. So now at this point, the other person is maybe working on something, waiting for your response, but now you're not responding.

Chris Riedl:

And the whole thing is kind of gridlocked and super frustrating. And it seems that, especially in the context of the tasks that our teams were working on... on these difficult software development, algorithmic challenges... that really hurt their performance. And teams that were more bursty managed to communicate over shorter periods of times, that were then necessarily followed by these periods of silence, or non-communication where they did work on other projects or did their own work. And so burstiness is really not a function of communicating more, but communicating at different times.

Rob Parsons:

It really seems to lend itself to alignment too. We are communicating at the right times, we are aligned on the right tasks and we're helping each other perform better. I find that really interesting and I like, Chris, how you noted that that's the opposite of burstiness, this idea that, I'm waiting for an answer, I'm stalled. Now I switch, then they respond they're stalled, I can see how it really creates a real drag-on performance.

Chris Riedl:

That's exactly right. And again, the interesting finding from our study was that there were no managers, there was no imposed mechanisms that caused some teams to be more bursty than others, but some teams just did a better job of self-organizing in a way that allowed them to be more bursty. And those teams did better controlling for all kinds of other attributes like skill, time zone distribution, and other things that you might think could influence team performance.

Rob Parsons:

For sure. I also love another thing that I interpreted as the opposite of bursty communication was this concept of deep work. For my team of writers, that's something that's solely lacking. We're always being interrupted, emails come in anytime people are looking for answers at any time. And it's hard to block off those times to get worked on, get deep worked on, thoughtful work done. Can you speak to that a little bit?

Anita Williams Woolley:

Yeah. I think we actually see burstiness as potentially fostering deep work, in the sense that if I have collaborators on a paper and we establish a rhythm where we tend to exchange emails late in the morning, well, that means that actually I can shut my email off and I can just focus on what I'm doing until the time when I think we're going to have a little burst of checking with each other, "Hey, what do you think about this? What should we do with this problem, et cetera." And so I think in fact that fostering, and this is why some managers are starting to think about this, if you can foster these bursty patterns, you could probably make more opportunities for those deep work times.

Rob Parsons:

Another new concept, at least for me, was this idea of diversity of information. Can you elaborate on what that means?

Chris Riedl:

Yes. So, as I mentioned, in addition to the timing of when communication was sent, we also studied the content of those communications. And what we did was we applied sophisticated machine learning techniques to extract the topics of communication in these different messages that were sent. And then we looked at the distribution of topics within messages and across messages, and what we found... Teams that had sent what we call "information diverse messages" did better. And information diversity here means that it wasn't the diversity of the topics overall that mattered, but the diversity across messages, meaning that you want to send messages where each message is focused on a single topic or fewer topics, as opposed to writing longer emails, that span five different topics. And so if those messages were diverse in topics, that kind of seems that it allowed people to focus on one thing, get that done, and then focus on another topic and get that done, rather than be caught up in these multi-topic message chains that were really hard to parse and keep straight.

Rob Parsons:

I love that, a real level of specificity. I just know if I send a message to my daughters with more than two questions, I'm only going to get the answer to one. So I can see how that applies in the professional space as well. Something else I found very surprising was your findings around video conferencing versus audio-

only calls, because it actually runs contrary to what I thought worked best. Even today I asked for us to at least be able to see each other so we could react and it feels like that would be better, but you found something different, didn't you?

Anita Williams Woolley:
Yeah. So this was actually a different study from the one where Chris was describing the software teams, these were teams that we actually brought into our laboratory. And we were really interested in looking at physiological synchrony, because in our work on collective intelligence, we find that group collective intelligence develops pretty rapidly in a team's life. And so we've always been curious what the basis of that is. And so we were looking at the synchrony in a variety of different modes. So we got especially focused on facial expression synchrony and on synchrony in vocal cues, because these are things that people have shown really help people establish rapport when they are collaborating. And so we had an initial study where we used video conferencing, and what we found was that the collaborators varied in the degree to which they established facial expression synchrony, and the more they established synchrony, the more collectively intelligent they were.

Anita Williams Woolley:
But then we got curious about what would happen if we took video away. And so a couple of surprising things about that. One was there was no significant difference in the level of facial expression synchrony. Because facial expression synchrony is not only about looking at your face and mimicking your face, it's about having the same shared experience. So people could tune into each other just as much, if they couldn't see each other than they could with the video. But then on top of that, what we found was that the video actually degraded the vocal synchrony. Groups that were collaborating without video accomplished a higher level of vocal synchrony.

Anita Williams Woolley:
And here we're looking at rate of speech, pitch of speech and other qualities of voice, and the vocal synchrony was even more important to collective intelligence. So consequently, what we would say is that video may not be as important and could even be detrimental in some cases, because if video is, for example, making it harder to hear each other, then it's better to go without video. Because the most important thing is to be able to hear one another and to be able to synchronize in these ways so that you can really share information experience and use that to improve the work.

Rob Parsons:
Really interesting. We touched on it briefly earlier, but are there some technologies that HR leaders should be thinking about to help encourage this level of burstiness, this level of communication, this level of synchronization... Are there things that they should be considering and doing there?

Chris Riedl:
I think there are. What seems to be helpful are forms of communication that allow you to see when others might be available, to also be bursty on a certain topic. So while our research is not specifically around technologies and different technologies can be used in different ways, and you can form social norms around, when do we respond to emails. What our research seems to suggest that forms of technology that allow you to see when someone is online and available to communicate, that things like that can be helpful. So like the status indicators you would have on Slack or Zoom, sorry, on Skype, for example, that could be helpful, also similarly status indicators around work product. So if you think about Google Docs, for example, you see when someone else is editing a document, you see that they are currently active. That seems it's more helpful than if you work on offline work documents, I don't see what you're working on. And I can't be bursty with you because I don't know that you are currently trying to revise that section, that I had some ideas on.

Rob Parsons:
I see that firsthand, we, um, we'll use SharePoint for the Microsoft Office products and we'll see other people are in the same deck, in the same presentation, in the same piece of content. I didn't take it to that next step though, it's really interesting to take it to that next step. This is when we should be working together. This is the time we should be collaborating. This is the time we should be communicating.

Chris Riedl:
Yeah, exactly.

Anita Williams Woolley:
Yeah, absolutely. I think more and more we're using things like Google Docs and it frequently is the case that, "Oh, you notice someone else's editing too, why don't we just also get on Zoom and we can talk about the edits to this particular section, et cetera." We're also doing some research on something we're calling digital nudges and they can take the form of things like what I mentioned earlier, where it can prompt you about the fact that, "Oh, this other person is working," or importantly, if suddenly your team is trying to do a bunch of stuff at the same time, it can alert you to the fact that maybe there're some other people who would be available to help, or maybe multiple people are trying to do the same thing at the same time.

Anita Williams Woolley:
And so things that can be embedded in task environments that will just help the team coordinate more effectively, that could result in burstiness, but also other sorts of patterns around how you distribute work across different members of a team. And so I think that more and more, we can get more sophisticated in helping people decide when they're working on things, because if they can actually coordinate that timing, it can make the work a lot more efficient and effective.

Rob Parsons:
That's great. That's a great idea. So we're coming to the end of our time here, any parting thoughts or additional insights for our listeners around teamwork and communication?

Chris Riedl:
I think one new research stream that I've been thinking a lot about in the context of this extended COVID-related lockdown and work from home... One aspect, how this really seems to affect communication in organizations and in teams is that there's less opportunity for ad hoc interaction. Like, if we meet on Zoom, every meeting is pre-scheduled, and I might not reach out to my boss if I want to catch up for five minutes. But if I run into my boss at the water cooler, I might very well chat for five minutes. And so me and my lab, we've been thinking a lot about how we can use technology to facilitate ad hoc communication.

Chris Riedl:
And we've built a new tool, which we call Mingler, which allows people to be collectively present in a virtual space and then have ad hoc video conferencing calls with other people who are in the same space at the same time. You can think of that potentially also facilitating burstiness, but it's really kind of one way we were thinking of how we can bring back these ad hoc opportunities to interact with people, especially if there are power differences and gender differences. Some people you might not want to reach out to request a meeting. And if there is a technology support that allows you to just bump into them and have a five minute conversation, then that could really be helpful.

Anita Williams Woolley:
And I guess the other thought I would have, relating back to, I guess, earlier in the conversation, when we were talking about the experiment we were able to run and how that really allowed us to just get many more insights into what will help teams, insights that we can really be confident about is just, I know a lot of

your listeners are practitioners, Chris and I are researchers. We're always looking for organizations who are willing to partner on research to allow us to even do a field experiment where we would apply a treatment to one group and not another, and be able to see the outcomes. And so I would just say there's a lot we can say about what will help in a situation like a pandemic, but there's so much more we can say if we can get really good partnerships with organizations to do the research.

Rob Parsons:
Fantastic. And I would strongly encourage that. It's so great to hear this actual data. We make decisions based on actual data versus we think these are best practices, we think this is what we should be doing. That's really what struck me about the research you did, and I very much appreciate it. And I appreciate Chris, Anita, both of you joining me on the podcast today. This was great.

Chris Riedl:
Thanks my pleasure.

Anita Williams Woolley:
Thanks.

Rob Parsons:
I encourage everybody to visit hbr.org and read the full Harvard Business Review article, "Successful Remote Teams Communicate in Bursts." And you can also find out more about Anita and Chris with their links in that article. If you want to learn more about a robust virtual workspace, check out our ebook on how businesses are working remotely in a COVID-19 world: managing teams, employee motivation, and keeping up with technology. You can find this ebook linked in this episode's show summary. Thank you again for listening to this episode of the Paychex HR Leadership Series. You can listen and rate all of our episodes on your most preferred podcasting platform, including Apple Podcasts, Spotify and iHeartRadio.

Speaker 4:
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