TRANSCRIPT: *Stockholm Forum 2019 interview, Laura E. Bailey (WBG) with James Vaughn (Ndemic Creations)*

Laura Bailey
As we introduce ourselves, I should also come clean that, in spite of the fact that I work for the World Bank, I hated economics so much my first year of university that I dropped the class, ran away and swore I would never study it again. But here's the problem, 6 years later when I realized that the contribution to the world I wanted to be was in the area of development, I understood that I had to understand economics and reluctantly I went back to study it. James I've done a little digging and I understand that you might have been an economics graduate as well! Tell us a little about your background.

James Vaughan
I studied Economics at university and never touched it again basically! Only later would I realize that a lot of those ways of viewing the world are actually quite useful if you are making a game about complicated issues.

I was a strategy consultant for a while, got a bit bored of making Powerpoint slides and decided I was going to do something a bit different, as a hobby. In my spare time I made a game called Plague Inc., which isn't a very nice game. It simulates the spread of an infectious disease around the world and you are trying to kill everyone with it. It did very well - It's been at the top of the charts ever since, it's still in the top five on iPhone, with 120 million players.

That let me quit my job and it let me grow a proper gaming company which aims to make intelligent, sophisticated games about issues that people might not necessarily consider making a game about.

That's what got me onto making Rebel Inc. - the reason why I'm here today

Ages ago, before I made Plague Inc., I had this idea of showing the cat and mouse push and pull between insurgents and a large army trying to deal with those insurgents. That slowly grew into Rebel Inc., which aims to simulate the insurgency in a country like Afghanistan. But it's not a military game. It looks at a lot of the other issues as well.

I wanted to put people in the role of how do you fix a really complicated messed up situation like [the situation] in Afghanistan? What are all the different parts? People often think, "if we just send in more tanks they could sort it out". I wanted people to realize that it won't solve all these problems.

Equally though, people who thought "we just need to provide aid and development, security will sort out itself". I wanted them to realize that if you can't provide security it's all f**ked anyway, and you won't be able to do anything.

My aim was to create a game that shows that things aren't black and white. It's all a shitty shade of grey, there're lots of trade-offs and compromises that need to be made.

I'm aware, by the way, that I'm sitting here in a room full of [peacekeeping/stabilization] experts! I'm not saying that Rebel Inc. is the perfect simulation that properly encapsulates all the issues that are going on. It's an attempt to take some of the key themes and show them to people who might not have an understanding of what's going on there.

Four million people have played Rebel Inc., and [that number is] climbing every day. Most of these are people who would never say they are interested in what's going on in various places around the world. Rebel Inc. is making people think about these issues and that's what I'm proud of having achieved so far.

I want to come away from this [forum] with a big list of all the areas where I have failed miserably to capture the intricacies. I want to have more ideas of things to put in the game, more ways to use it for training, more ways to help people understand what's happening around the world.

LB
One of the points you touched on is the balancing act between making an engaging game that has some touchstones in reality but isn't so complex that people won't actually play it. You've also referred to the fact that you've got four million people playing this game. I'm going to guess that not all of those are peace builders, diplomats, or military. Some of them are people who simply like to play games. Tell us about the mix of people who play your game. Do you hear feedback from people?

JV
Rebel Inc. is a mobile game, and lots of people out there have phones so there's a real mix of players. We get people who are using it in university to re-enforce certain concepts, people with family members serving in the military, who have said they've played it and they can now better understand what their relatives are going through when they are serving in Afghanistan. We've got Swedish grandmothers sending us messages about their strategies to beat the game. We're building up a diverse group of people who do want to think about these kinds of things.

We get thousands of emails a day from players at the moment - a huge amount of feedback from people asking us to try to model certain things. People have asked about putting the Troubles from Northern Ireland in the game, for example.

Some of the really useful feedback we get is from people who are out in places like Afghanistan and saying that game really resonated with them. For me - all I've done is sat and read books, researched and spoken to some people - the people who are out there living through these things are what's real. And they are helping me add more to the game.

When I was developing Rebel Inc. I spoke to lots of different people and we added lots of these personal vignettes in. The Afghan ambassador to the UK took me through some of the experiences he had, and we were able to put those in as a 'decision'. This is where we give the player choices of how to engage with an unfolding situation in the game. He gave me the example of stop and searches in Afghanistan. There were female soldiers conducting searches of female villagers, but the villagers didn't realize they were female soldiers as they were wearing helmets and full uniform. The assumption that men had been conducting these searches caused a huge amount of friction among the local population until it was investigated.

We present that situation to people and it lets them see the kinds of real-life decisions that need to be made [in a peacekeeping scenario]. It's not all "just sort it out" - you've got to accept that it's not -

LB
That there is a human consequence

JV
Yes.

LB
We've talked about the fact that Afghanistan was a big pool of source material for you. You also looked at other examples and experiences and did a fair bit of your own research. How far afield did you go? How it might change the game if you wanted to add elements that came from quite different environments? For example, from the eastern part of the Congo, which is a very different nature of conflict than Afghanistan.

JV
When making this kind of simulation there are thousands of different algorithms all working in tandem. You're calculating corruption risk. You're assessing the impact of your policies and anti-corruption teams. And that's a tiny fraction of the overall simulation.

You have to tailor it towards a specific area, so that's why I picked Afghanistan. The core models will work wherever, though it might be that we need to add an extra module [to account for specific things]. For example, we might be not be capturing tribal dynamics at the moment, let's plug in a 'tribal dynamics' area. We might also tweak the variables. Corruption might not be as big of a deal, and inflation might be off the charts causing people to turn against your operation quicker. So we can tweak and plug various things in.

It's impossible to properly display everything, by the way. You have to simplify things in order to convey the core truth. People in this room will want to know everything about a situation - you know you have to give everyone everything. That will work if you are talking to a fellow expert, but if you are talking to the guy next to you at the bus stop... you can't shove all that information down their throat! We have to select the key things to tell people about.

It's very similar to when I was invited to the CDC. You've got an expert ready with a firehose of knowledge, if they turn it on they'll smash the person into the wall. You can't tell people everything, so you have to choose what's most important.

A key non-Afghanistan inspiration was peace negotiations in Columbia with FARC. Unfortunately we don't have a situation at the moment where there is a Taliban peace process that I can look at and follow through, so that was a great example of somewhere we can look elsewhere for inspiration.

The SIGAR quarterly reports are a wonderful way of seeing quite how some of the corruption stories out there unfolded. I could never really believe it and then when you see that nitty gritty details of them you realize that it really did happen.

LB
That's interesting because it reminds us that even for those of us who think we have a pretty good understanding of the geography of the wicked mass that is peacebuilding and stabilization, touching back on broad data, such as the actual on-the-ground incidents covered in the SIGAR reports, can be useful.

So let's think of some of the four million people who are neither military specialists nor peace building specialists but who might be just avid gamers. I was digging around in the depth of a

reddit thread about the game and I saw someone say this: "the game appeals to everybody," and here I'm quoting directly, "including girls who never play anything", now aside from the perennial challenge of gender power politics in the gaming world - let's not go there - let's talk about what you see and hear from the community who play this game of people who didn't have a prior interest in this area.

JV
I think the key thing that comes across in reviews and in people sending us messages is that it helps people understand how difficult it is. People see that it's a hard game! They sometimes initially call it unfair as well. A lot of players start by focusing too much on the insurgents, and the military side of things, and complain when they keep on moving into difficult terrain. They might say "It's not fair, it's not balanced!" I'm like: yeah!

Another common penny which drops is when players realize that the coalition soldiers are really good, but they have to go home after a certain amount of time. They ask how they can possibly win the game when the coalition soldiers go home after a while. They tell me that the National soldiers take ages to train, they're not as good, they're slower. "It's not fair! It's not balanced!" And yep. That's right!

That's on the military side of things, then you've got players who spend all their money on soldier stuff, only to realize that the local population hates them. They need to get population support, but they've spent all their money on military resources. Yep.

Or even they've spent all their money on development and now they have too much corruption. Again: yes..

One of my favorite stories was in testing. We had a tester playing the game for the first time who couldn't win and kept failing. Eventually he discovered that there were cheats in the game. He gave himself a load of money and spent it all thinking he couldn't lose now. He spent a load of money right at the start of the game, but inflation is modelled in there. Inflation went through the roof, and despite the infinite money he had he couldn't afford anything he lost the game in a new way.

I didn't plan that to happen, that was a consequence of modelling inflation in the game. That was… I was quite pleased with that. That's a sign that you've got a model that is rigorous - letting people learn something that I've not actually intended them to learn.

He didn't make that same mistake again, by the way. People generally know what inflation is but it's amazing how many people will confuse it with corruption, or just not know what it actually means for people dealing with it.

Rebel Inc. is a challenging way a way to test your understanding of these things. Because if you don't understand what inflation is, you are going to lose. A player might say to friends in the school yard "why does this cost so much for me and not you?". Well that's inflation, spread out your spending out a bit more!

LB
Let's think about another channel of feedback. There is a section of your audience who are interested in peacebuilding, have a military/peacebuilding background. What have they told you? Where have they fallen into traps or successes when playing the game?

JV
Many military people say it captures a lot of the essence of what they felt they were doing when they were serving in Iraq or Afghanistan. They talk about how hard it was to pin down insurgents and so I was really pleased to get that feedback.

We do see military people want to focus more on the tactics, In Rebel Inc. combat itself is very simplified. It's not a combat game. Some people want things like artillery. Well actually that's not what we're aiming to do at the moment. This is not a war game simulator.

You do need to consider positioning, airstrikes, collateral damage, and such things. I tried to keep the game as a macro view of things. You're top down looking at a map without really getting into the specific parts of it.

LB
Too much focus on those elements would maybe not help get at some of those bigger picture lessons, which it sounds like you wanted to drive at.

JV
Having fun is key. You see this a lot with educational games, or government training aids. You have a sponsor say "it's got to have this, it's got to have this and it can't not have this - put that in somehow." Before you know it you've got a thing that you need to force people at gunpoint to play, and they just want to get out of the room as quickly as they can.

Being a commercial company is a key driver for us. The game has to be fun. If people don't want to play it on their own, what's the point? I can't force people to play it.

I had my list of key themes that I wanted to get across - corruption, inflation, foreign powers moving away, the need to have local intelligence to work out what people on the ground actually want. [The challenge] was how to give the essence of it all without getting too bogged down in it.

LB
I'm going to invite the audience to start thinking about questions you'd like to ask. So yes, I think we've got a mic on hand. Let's start in the back.

Audience question 1
I have three questions. The first one is could you say a bit more about your team and budget, how does that work? The second is: do you have learning objectives for the game? The third part is about the story. Do you have a full storyline for the game, where it goes or is it more like it has accumulated over time as you add stuff?

JV
So, for the team and budget. There are six of us who made the game. I'm the game designer and I also do all the business side of things. I have my tech guys who build me the game engine and then I get into the code and create my own algorithms to tweak and balance over and over again. Direct access to the code is critical! The way I describe it to non technical people is I want to build a sand castle, but I need to have my tech guys build me a sandpit first.
We also have two artists on the team and we have a producer who helps keep things on track.

LB

And you had this team working and had attracted them during the building of Plague Inc.?

JV
No it's a different team. Plague Inc. cost $2,500 to make. Plague inc was the same kind of approach but this was much bigger. I accumulated this team in the seven years since Plague Inc came out. Rebel Inc.'s budget was bigger unfortunately!

LB
And just refresh everyone's memory about the question about the pedagogy, Rebel Inc. gets used for learning but you didn't design it as a learning game...

JV
I 100% didn't. I wanted to make a game that was realistic, that was based in realism. A natural consequence of a game that is realistic and based on realism is that it teaches people anyway. Plague Inc. and Rebel Inc. educate people by accident.

On the third point, the story line. Do I have full control? Absolutely not. This is where it is algorithmic. I put in the various algorithms, so I know the broad flow of the game. For example, at the end of a game I wanted a peace process to be a key way for people to win. I mean, we've tried to win in real life without peace processes and it hasn't really worked so well...

The broad picture I paint but then you also have all these events and decisions that you need to make. We plug in loads of these and so those are a bit more random. It could be that an archeological dig has found an ancient temple somewhere and it's close to where insurgents are - do you want to go and protect it? Use it for tourism? Sell the findings for money? All these things will shape the game in certain ways. We also have different maps which all have different areas and themes too. One I'm working on at the moment is based around a reservoir or a dam that needs to be built and maintained, so that will have a different feel to other maps.

Audience Question 2
I work with the Centre for Civilians in Conflict. One of the things that we're trying to do is influence the mindset and behavior of actors, both state and not state, or civilians. I'm curious about whether civilian safety concerns are factored into the game?

JV
That was a key thing that I was wanting to get across in the game - to make people think about these things more. Players can enable airstrikes, and then before they know it they are seeing reports of civilians being hurt by these airstrikes. And then those players have decisions to make. How are they going to respond? Are they going to apologize? Are they going to try to cover it up? All these things have got hidden consequences.

I wanted people to have a moral conflict. What I didn't want to do was make it a very black and white thing, where as soon as someone chooses to cover up airstrikes its 'bang!' game lost. I think it's much more effective to let people see the natural consequences.

I did have to be quite careful about not appearing to exploit very serious situations. The rule of thumb we took was that we never want to focus on an individual tale of suffering - it has to be at a broader level than that. When I was doing all the research... there's so much horrifically awful stuff that happens out there. The whole team were reading stuff and the atmosphere in the office would noticeably deflate as they were reading these articles so that balance of telling

people about it but not going into too much detail where it could turn people away from the game or it feels like you are exploiting a situation was quite a tricky one to be honest.

Audience Question 3
How much data do you retain about the players?

LB
A good question. Some of these people play this game constantly, so you will have far more than just the four million observations.

JV
We have anonymous, aggregated analytics on player decisions, so we can see how often people are likely to pick a certain decision. How often people will try to cover up an airstrike, for example. There's a lot of cool insight that can be taken from it, though we use it more for balancing reasons and to identify if something is broken.

There's a lot of data that we generate that could be used for other things. If say, you were interested to know what people would do in a specific situation... if we can get that situation fitting in the game in a certain way we can plug it in and run it by a couple of million people and see what kind of decisions they make. How useful that is in the real world… I mean, people are playing it as a game and they want to win the game, so I think you would need to be careful to separate out what would they do in real life. It's a useful data point, but you'd need to be careful.

Audience Question 4
Would it be possible to create a version of the game that was tailored to a specific conflict, using actual data?

JV
Specific tailoring to a conflict - yes, this is definitely something which can be done but there are sensitivities about including real world locations in the game.

Audience Question 5
How are local perspectives taken into account, how are you not just promoting the norms of international intervention?

JV
The point you raised was my biggest worry about making the game, and my team were also deeply concerned about it. We didn't want to promote a view that western people will come along and fix it all. The game is absolutely structured from the beginning as: you are *not* a western organization. You are a national governor and you can call on the coalition forces, but you are not a western organization. It was a tricky one. I tried to balance it by talking to people who were from Afghanistan rather than just lots of western journalists.

We do try to make people consider the national versus coalition stuff because most of the initiatives that you can get in the game are colored green to show that they are national ones, and you have a few blue 'foreign' ones to show that you've got charity, you can decide your charity policy, do you want to allow NGOs running around doing stuff, or do you want to have an element of control, or do you want to say no thank you just send us the money.

Did we achieve what we set out to do? People do have a tendency to project themselves onto what they're doing, but we do show pictures of the non-western governors and explicitly state that you are not western.

LB
One of the things I've been talking with James about offline is how interesting it would be to have multiple roles within the game - this is a game you play, and you are playing against yourself or against your aspirations in it - you can imagine having multiple roles and being able to really dig into this question.

JV
Have one person who's the coalition person and somebody else who is the national army and somebody else who's spending all the money on development stuff, you can imagine quite a fun play there between "oh no I need money spent on training" against "no it needs to be spent on this "and everyone's bickering...

Audience Question 6
Do you consider social aspects in the game, particularly the plight of women, in the places where the game takes place?

JV
Yes is the answer.

In the game there are specific decisions surrounding social issues. One asks about women's rights - do you want to go full throttle with new laws, action a slow roll out, or keep them as they are? Different options chosen there could affect your support in different ways in difference places, urban or rural zones, for example.

Based on the success of your Women's Rights policies you might later have an event say that the first female pilot has been trained as a result or you could see a backlash in some rural areas because the pace and expectations of social change is moving too fast. How will you deal with it? Do you want to force it through anyway? Pull back the new laws? Spend more money on education efforts?

There are a number of key social issues touched on - women's rights, refugee resettlement - these were a couple of key areas which we gave big decision chains to.

It's still a very simplistic way of dealing with very complicated issues, but it's better to do this and have people think about it at some level rather than not at all. We wanted to highlight those issues and that's how we put them in the game.

Audience Question 7
The way we've been talking about this so far is as if the main people playing the game are in North America, and Europe, so I was wondering if you had people downloading and playing the game in Asia, or Africa, and whether you had any analysis around those players. For me, working in East Nigeria, one of the biggest issues about the conflict is people outside of the region not understanding the conflict. We face problems of a lack of understanding which means we're not able to hold governments to account (in North East Nigeria). We can't get their fellow support for people living in the country.

And an additional question: have you had players from other national militaries [outside of the US] around the world?

JV
In terms of our audience, we localize the game into 11 languages. China is our biggest market for Rebel Inc. and then it's America, Europe, Japan and South Korea. The games we make are of interest to many people around the world so for us it's worth getting the game localized. We have 200,000 words in the game so it's not cheap to translate it into a new language! We want to get as many people as possible to play it.

We are currently working on getting it translated into Pashto and Dari, and the Afghan embassy in the UK has put us in touch with some translators. It's actually quite tricky to do from a technical point of view.

The major problem we have is that most people in countries that are impacted by these issues are going to be on low end Android devices. Our game is not a performance intensive game, but it would still cause problems. It would drain batteries, even downloading the app - it's around 100MB or so, and for a lot of people that can be a really big issue. More importantly - keeping a game of 100MB on their phone, that's a really big investment. I have a very low file size phone myself, it keeps me in the mindset where you've got to choose which apps you are going to delete. Those are two problems with getting the game to someone.

Perhaps even more problematic is the issue of carrier billing. For example, in Afghanistan the App Store isn't sufficiently supported by Apple. That's a big blocker for getting the game there. We are translating it for people in Afghanistan specifically, but I'm keen to do more than that. The problem we have is that we could spend a lot of time doing something and it could still not reach people very effectively.

And in terms of how many people we have playing it, developed economies are where we see the majority of players.

LB
I should say that one of the reasons I got the fun job of moderating this talk with James is that -

JV
You promised to be nice to me!

LB
I promised to be nice to him, and in a previous incarnation, in coordination with Gary Milante who's the director of programs of peace and development at SIPRI, Gary and I developed a multiplayer simulation game of post conflict stabilization, peacebuilding and recovery that is not based on your phone, it's based on human-to-human contact, it covered all of the dimensions and it was used in multi-sectoral training that The World Bank, the UN, bilateral agencies would play the game together, and the source material originally was a simulation that's run by the UN during the senior mission leaders course, which is almost entirely dominated by military. So we know that, at least from that very small sample size, whether you have a homogenous group (like a group of military), and you interject this very heterogeneous problem set …. Or you do the opposite, you take a group that has a heavy peacekeeping dimension, really interesting learning happens. I've never taken James' game and put a bunch of World Bank peace and

security type people in a room and said play it and learn something. But I find it a fascinating possibility.

JV
They might not learn something from the game itself, but they would from the discussions they have afterwards about it.

LB
And they might teach the game something

JV
Definitely

Audience Question 8
My question is about your sandbox, your game engine and development tools. I was wondering is there a possibility that your developer toolset could be adapted to enhance a community-based mapping process, so that the community could build a digital model that they could take to their community and say - hey play this - to help represent our community to the best of our ability.

JV
So in Plague Inc. we have a Scenario Creator, and we want to do something similar for Rebel Inc.. Whether that will let people develop whole new maps I'm unsure about. The art style of the game means that it's not something that anybody can do on their own. At the moment my expectation is that we will let people take the existing maps, and then change things to have a city here or change the support level here or have an event trigger here.

Audience Question 9
Hi I'm from SIPRI and I play games on the side, I have played a bit of Rebel Inc. Have you considered changing up the game's tactics further?

JV
I do want to add new maps which require different strategies. I've got one which is dam-building around a reservoir - that's something I'm aiming to do as one of the next updates. Making a game is a balance. You want players to feel a sense of mastery before you change things for them again. One question I'm asking myself at the moment is how much I focus on Afghanistan inspired areas and at what point do I move on and start looking at other areas. Moving to South America with a more drug orientated one would be interesting.

We still don't have the consequences of the opium trade and heroin poppies in the current version of Rebel Inc. In the future I want people to have to think about poppy eradication programs, for example.

A lot of these things were in the game at one point or another over the last few years, but a lot of things had to be pulled out of the core game, like poppies or tribal politics. It was simply too hard to get people to fully understand the whole picture at once.

LB

And people who work in this area know that there is a huge cluster of problems. Extractive industries for example...

JV
Yep - we had resources in the game, but I had to pull that one out.

LB
I want to leave you all with one thought. Whether it's Rebel Inc. or another game type environment - I think that there's incredible value in using this not just as a space to learn perspectives that you might be blind to but as something to drive discussion.

INTERVIEW ENDS