Learning in a Counterinsurgency Team

Session 1 Case Study[*]

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1 Rationale

The goal of this case study is to assess how learning occurs in human teams deployed in strategic environments. To understand how an autonomous agent, such as a self-driving supply vehicle, interacts with human stakeholders, we need to understand how the learning architectures of the agent and the humans align. Our first step is therefore to focus on learning in a human team, which allows us to explore features that can be applied, in a more technical fashion, to machine learning as well as understand potential differences between human and machine learning architectures that are important considerations when conceptualizing the strategic interaction of human teams and autonomous agents.

If you have questions, please contact capsseminar@gmail.com.

2 Tasks

We will discuss this case in the first class. To prepare, you have three tasks.

1. **Read the attached excerpts** from an interview with the two Army captains, Jason Emory and Mark Nutsch.

2. **Briefly characterize** how Emory and Nutsch describe their training in relation to being deployed in Afghanistan. The following questions can guide your response:

   - Were Emory and Nutsch trained for all the situations that they encountered during their deployment? If not, what are the exceptions and how were these mitigated (e.g., by developing new rules of behavior in an unexpected situation)?

   - To what extent does learning in the teams of Emory and Nutsch occur before and during their deployment?

   - What are the differences in how Emory and Nutsch learn during their training and during their deployment (e.g., are they learning from a supervising teacher in both environments)?

   - Are there discernible differences between Emory and Nutsch in terms of how they access and adapt their training during the deployment in Afghanistan?

3. **Categorize the demonstrated learning types.** London and Sessa (2007)[1] define three categories of learning in human teams: *adaptive learning*, *generative learning*, and *transformative learning*. Which of these three categories best describes how Emory and Nutsch learn? Why might the other categories lead to undesired outcomes if they were to constitute the learning architecture of a team deployed in a strategic environment? Briefly outline your thoughts.

   - *Adaptive learning* in teams involves changes in interaction processes triggered by environmental cues. These changes are relatively automatic in that the team selects different behavioural processes or strategies from a pre-existing repertoire.

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[1]London, M. and Sessa, V. 2007. The Development of Group Interaction Patterns: How Groups Become Adaptive, Generative and Transformative Learners. https://doi.org/10.1177/1534484307307549.

- *Generative learning* in teams involves the discovery or invention of new knowledge or skills as well as well as the application of this knowledge to their performance process. While adaptive learning is a selection between existing decision processes, generative learning is the creation of new decision processes.

- *Transformative learning* in teams is a process of reinvention or re-creation of the team. Members critically evaluate the purpose, goals, values, assumptions, beliefs, and structure of the team.

3 The Case

The following transcript is based on an interview with Army captains Jason Emory and Mark Nutsch conducted in an episode of the Modern War Institute podcast *The Spear*.[2]

Jason Emory: "The part that amazed me was that the cliché, train as you fight and everything, you know, you get out of these courses and sometimes you have instructors that take what they teach very seriously and other times you don't. When we were in Robin Sage [an unconventional warfare Army training exercise], a lot of the instructors would be telling us that you will never do it this way, we don't know why we're teaching it. But what I found was that every major lesson I have learned throughout my career, whether it was in the Q Course [Army Special Forces Qualification Course] or Ranger School, I mean, everything that I was taught in the school house, I applied over there. I didn't find myself in a situation, where I was saying, 'Yeah, well, in the school house they taught it this way, but it was totally unrealistic, I wish they hadn't taught me that.' It was the opposite. All the major muscle movements during the campaign we really had been taught, we've been taught them well, even by people who were less motivated at times to teach it to us. It really kind of floored me. To me, the system worked; the training pipeline and all of that worked. You had certain unique areas, when we talk about the Horse Soldiers [the first group of U.S. Special Forces in Afghanistan, traversing the mountainous terrain of the country on horse-back], Mark was *the* horse solder, he was *the* unique horse soldier. He was the perfect man for the perfect mission in the North with Dostum's cavalry [Abdul Rashid Dostum, Afghan general of the Northern Alliance, with whom the U.S. was fighting the Taliban]. I mean that was something you couldn't have foreseen and it really was an act of God that we had the right officer there who could teach his people how to ride and could do everything he did. But that was too me almost the exception, everything else what we were taught, we applied, and it really blew my mind how well we were prepared for it."

Mark Nutsch: "My sergeants, we had a very senior team at that time, by then I am talking our average age was 32. [...] Just a very mature, experienced team. But even in that new situation, the guys kept going, 'Hey, we have been here before, remember Special Forces training, remember Robin's Sage at this phase of insurgency, you know as that would progress, remember that.' [...] But the sergeants and I, coming back as we're talking about this, we did the things you do in training. Each day we would do lessons learned, an internal AAR [After Action Report], whether it was five minutes or fifteen minutes, sit down and go 'Damn, what nearly killed us today? How do we make sure that doesn't happen again? You know, how do we survive the next hour? And how do we win?' Because we believed that we could win, having that confidence in our training and resourcing and the people that were at our back. [...] You relied on that training that you had, the leadership lessons, people, mentors, that talked to you, every aspect of my career up to that point, to include character building events I had as a teenager through high school and college, all of that came to that focal point in my life on that battlefield, day after day. As it did with those sergeants. But that was a phrase that kept coming up, 'We did this in Robin's Sage guys, we have been here before, it was slightly different, how do we apply it to this model and think through the problem and get after it and solve it in a positive way with the means we had available.' ...

Mark Nutsch (continued): "I would have to say, even in our mission, we were the students. You know, even with the maturity and training and experience we've had and the deployments throughout the Middle East, we got in there and the militia elements we linked up with, these guys had been fighting guerilla warfare for upwards of one to two decades. And they are the survivors. They have been whittled down through hard attrition. And every day, for us, was a history lesson. [...] I felt like we

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[2]You can listen to the full episode on the website of the Modern War Institute: https://mwi.usma.edu/podcast-spear-first-special-forces-soldiers-afghanistan/. The transcribed section takes place around the 30-minute mark.

were the students and we had been remised to not listen to what they had to say, because it's their backyard. They couldn't read a map but they could describe to you passionately 'It's *this* village, don't you understand? It's *this* village right over here. It's *this* guy, he's the one we're after.' So even then in that role, I felt we were students."