TRANSFORMATIVE LEARNING FOR INTELLIGENCE AND INTELLIGENCE STUDIES

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Motto: *"Transformative learning processes result in significant and irreversible changes in the way a person experiences, conceptualizes and interacts with the world"*
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Abstract

Intelligence professionals work in a global environment that is complex and rapidly-changing. Intelligence analysis calls for individuals and organizations to adapt their thinking to emerging situations that may challenge existing mental frameworks. Changes to mental frameworks are considered transformations within transformative learning theories. Transformations occur when an individual person's beliefs, values and assumptions that filter incoming information undergo a shift or expansion (Mezirow, 1997). This paper applies the concepts of transformative learning theories to the development of intelligence professionals. The paper proposes that transformative learning among intelligence analysts is important for the performance of analysis and explores how organizations can intentionally foster transformative learning and development.

Keywords: *transformative learning, transformation, adult learning, intelligence analyst, development*.

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Introduction

The security environment of the 21st Century is composed of rapidly-changing threats that challenge the mental models of United States intelligence professionals and put national security at risk. Furthermore, technology is advancing faster than humans' ability to understand and manage the new capabilities (Danzig et al., 2018). This complicates an analyst's ability to anticipate what today events mean is, and what tomorrow's events might be. Making sense of all this requires adaptations in the way intelligence analysts think. Transformative learning theories may be able to make important contributions to intelligence analysis. Intelligence organizations that encourage transformational learning will enhance their development of analysts who can shift their mental approaches with changing situations. The theoretical framework of this paper is derived from complementary approaches found in the work of Jack Mezirow (1997, 2000) and Robert Kegan (2000). Mezirow's transformation theory addresses adult learning and development, with attention to ways mental frameworks can become more encompassing of divergent ideas and experiences. Kegan's constructive developmental theory looks at developmental changes to individuals' meaning-making structures.

The paper begins with the paradigm-shifting world in which intelligence work occurs. Relationships between people and within issues are ever-changing, calling for flexible analytic capabilities. The second section describes transformational learning theories, proposed here as a lens for considering analyst's adaptive growth. It begins with the foundational theory of Jack Mezirow and continues with Robert Kegan's constructive developmental approach to learning (Drago-Severson, 2004; Kegan, 2000). The third section explores transformative learning at the National Intelligence University. The final section offers suggestions for intelligence organizations to foster transformational development. Let's begin with a window into the challenges facing intelligence analysts and their organizations.

Intelligence Work Requires Adaptive Thinking

Human thinking is astoundingly capable, but we can be caught unprepared to grasp the meanings of dynamic conditions around us. Ongoing development is essential for analysts to keep up with the changing paradigms that drive global, regional, and local conditions. Human thinking has natural tendencies that shape our meaning-making and decisions (Heuer, 1999; Kahneman, 2011; Lowenthal, 2017). Intelligence scholars have pointed out the ways these tendencies limit objectivity, clarity, and criticality. But they can be stretched; humans grow and develop throughout the lifespan (Drago-Severson, 2004). Transformative learning opportunities can enhance analysts' abilities to be adaptive, critical thinkers. This paper offers transformative learning theory as a lens for considering analyst development. The following few paragraphs introduce the global and human context in which this proposal is made.

The World Is Complex

Intelligence analysis exists in a complex setting: human society. Conditions in which people live, and decisions they make, can change rapidly. Truth can be more relative than fixed in many situations. James Cockayne (2016) introduces new mental models in his global look at interactions between governance, power, and crime. He provides examples of the increasingly crossed paths between these topics from the past twenty years. Issues cannot easily be categorized as political or criminal, though people addressing them have been inclined to sort them in those ways. Cockayne points out how criminal groups with ties to other types of networks such as governance and licit business can shape their own strategic environments. Power and influence in the international arena seem to have become more difficult to understand. The book conveys a new mental model for thinking about transnational organized crime. It demonstrates the ongoing need for anyone addressing these interrelated issues of crime, governance, and power to adapt his or her thinking to see them in new ways. Cockayne's message is appropriate for intelligence professionals, whose work can touch on issues such as governance and transnational crime, as well as many others that are equally complex.

Intelligence Organizations and Analysts Need to Adapt

Josh Kerbel (2004) wrote about the tendency of intelligence professionals to expect human and organizational systems to behave in linear ways. The significant problem with this tendency is that human systems are too complex to be understood by linear thinking. Kerbel explains that components of a human system have ongoing interactions with each other, shaping new behaviours in non-linear ways. He believes intelligence addressing non-linear issues requires broad, big-picture perspectives, and mental processes using synthesis more than analysis (because analysis means to break something into parts).

Intelligence professionals can benefit from a capacity to reassess assumptions and shift perspectives. Mark Lowenthal (2017), a noted intelligence scholar, indicates objectivity and critical thinking are essential abilities for analysts. One common pitfall in analysis, identified by Lowenthal, is the tendency to expect others to behave as one's own self or culture would (mirror-imaging.) Another is failing to look closely at a phenomenon because of expecting it to act like other past events. Lowenthal explains that new types of situations can call for new ways of analysing. A relevant advantage of transformative development, as Mezirow (2000) explains, is that it stretches learners toward an ability to see an event through more than one mental model or perspective. Another is that it helps learners see that they have underlying assumptions, identify the origins of these beliefs, and assess their validity for today's situations. These abilities would be beneficial for critical and objective thinking.

Amy Zegart (2007) opined about the Intelligence Community's failures in adapting to changing terrorist threats prior to the 9/11 attacks. She stressed the importance of recognizing problems of bureaucratic organizations, which are guided by rational self-interest to not take on major reforms that were in the nation's best interests, but not the best interests of individual agencies. The autonomous thinking capacity Mezirow (2000) described in the following section offers a valuable way of understanding development toward adaptive, independent, and responsible thinking (Mezirow, 1997) that can encompass big-picture issues.

Shifting Perspectives through Transformation

Jack Mezirow is the primary foundational scholar of theory regarding perspective transformation (Hoggan, 2016). Mezirow (2000) referred to his own theory as transformation theory; other related approaches from varying scholarly disciplines spring from Mezirow's original work and are part of what Hoggan (2016) calls the metatheory of transformative learning. Hoggan defines transformative learning as "processes that result in significant and irreversible changes in the way a person experiences, conceptualizes, and interacts with the world" (p. 71). This paper will describe Mezirow's theorizing, as well as one of the other related approaches that also falls under the metatheory of transformative learning. The related approach is constructive developmental theory, largely based on the work of Robert Kegan (Drago-Severson, 2004; Kegan, 2000).

Mezirow's perspective transformation theory proposes that each adult has built a framework of beliefs, principles, biases and assumptions of how the world works, based on what the individuals' experiences have meant to him or her. This framework filters and shapes the meanings of the individual's incoming information and experiences (Mezirow, 1997). Ongoing or new experiences can challenge or contradict mental frameworks, causing what Mezirow called a disorienting dilemma (Hoggan, 2016, p. 61). A disorienting dilemma is a situation that does not make sense according to existing mental frameworks. An individual may pause to consider his or her expectations and the assumptions or beliefs that support them (Hoggan, 2016). This reflection has an important role in transformation (Mezirow, 1997). Reflection is triggered through engagement with new ideas or ways of seeing something; Mezirow characterizes this process as discourse.

Discourse is an important way that an individual can become aware of his or her own and others' interpretations and assumptions. Mezirow defines discourse as dialogue meant to help its participants assess an argument and its underlying point of view. Encounters with others' perspectives can trigger self-reflection, leading to awareness of one's own assumptions (Mezirow, 1997). Participants in discourse are exposed to the elements of others' arguments and can assess the

reasons supporting the beliefs in those arguments. This is part of a critical thinking process (Mezirow, 2000). Ultimately discourse enables its' participants to form their own understanding. A new understanding of an experience expands the mental framework, allowing the creation of more encompassing frameworks (Drago-Severson, 2004). According to Mezirow (1997, 2000), a transformation is when the framework changes or expands. Transformations tend to make frameworks more encompassing of divergent ideas and experiences. Mezirow further theorizes that transformations in thinking and learning enable individuals to become autonomous thinkers, reliant on their own values and meanings rather than on authorities or traditions. Kegan (2000) expresses transformational growth as coming to see where one's ideas come from and to think critically about them. In this author's words, an individual can gain the ability to step back from a framework, see it, consider its origins, and determine whether or how it can be applied. This ability is invaluable in intelligence and national security work, as analysts determine what might be going on in the world and what it means.

Transformative learning scholars distinguish between transformational and informational learning (Drago-Severson, 2004). Drago-Severson writes that informational learning is taking in new knowledge and skills, deepening resources within an existing way of knowing. Transformative learning is "a shift in how a person constructs reality" and how he or she makes sense of experience (p. 19). This paper argues that the difference between transformational and informational learning is important in the education of intelligence analysts. Informational learning is essential for analysts. However, the thinking needed for paradigm-changing threats requires analysts to critically question their assumptions. Deepening existing mental frameworks is not enough. The complexity of many issues calls for analysts to understand information in new ways. Intelligence professionals should have opportunities to transform their learning and thinking.

Three Ways of Knowing

Transformations in learning are changes to the ways a person knows or learns (Kegan, 2000). An individual's way of knowing can also

be called an epistemology (Drago-Severson, 2004; Kegan). Transformations in epistemology represent development that takes thinking from concrete forms to more abstract ways of knowing. This is quite different than learning that simply adds knowledge or changes behaviours, such as informational learning mentioned above (Drago-Severson, Kegan). Kegan argues that adults need both knowledge and abstract thinking to be successful in life. This is most certainly true for intelligence professionals.

Drago-Severson (2004) explains that transformational learning theories are based on a premise that learning and growth are lifelong, growth is often gradual, and it trends toward greater complexity. New experiences are processed according to the existing meaning-making system, causing it to gradually shift. The small changes accumulate into larger, more complex mental organizations.

A constructive developmental approach to transformational learning is one of several ways to consider adult development. This approach looks at developmental changes to individuals' meaning-making structures (Kegan, 2000). Kegan identifies three primary ways of knowing that are common for adults and represent developmental levels. Each person might use multiple ways of knowing but is likely to have one that is primary. Kegan's three ways of knowing are instrumental, socialized, and self-authoring. The instrumental way of knowing is the most concrete, and self-authoring is the most abstract.

The Instrumental Way of Knowing

Drago-Severson (2004) summarizes Kegan's adult ways of knowing. Instrumental knowing is concrete, rule-based; knowledge is accumulated and comes from authorities. Differences of opinion mean one is right and another is wrong. The instrumental knower does not hold multiple perspectives at the same time. Decisions are based on following steps or rules, and knowledge is seen as instrumental for achieving goals (Drago-Severson).

The authors expect the instrumental way of knowing in intelligence analysis to favour existing principles (when they are from valid sources) that are commonly applied to the issue. The methodical and verification aspect of structured methods might seem more

important than hypothesis generation. Analysis favouring an instrumental way of knowing might be prone to anchoring, to using a belief system that has worked before, and to making pragmatic decisions that would compromise exploration. This approach could also favour a definition of expertise that is rooted in accumulated information rather than flexible or adaptive understanding. Government organizations can be rule-based, authority-driven, compartmented and specialized. Developing or holding a perspective that is conceptually different from the mainstream can be difficult. The institutional setting itself might make instrumental knowing a likely default in many situations.

The Socialized Way of Knowing

The socialized way of knowing, also described by Drago-Severson (2004), is tied to the beliefs and expectations of others in the social setting. She explains that socialized knowers are better able to sympathize than instrumental knowers and look to others as part of their decision process. Kegan (2000) and Drago-Severson's descriptions indicate that thinking has moved beyond the more absolute, rule-bound approach of instrumental knowing, and can be abstract, generalized, and reflective. Socialized knowers make decisions based on what others expect of them, or what will look good according to social norms for their environment. Drago-Severson indicates conflict or disagreement is a threat to socialized knowers. In intelligence work, this could mean groupthink, following a party line, and being more conscious of existing standards in a field than creative new ways of understanding an issue.

The Self-Authoring Way of Knowing

The self-authoring knower relies on internalized values rather than external, authority-based sources of meaning. The self-authoring knower can integrate or co-exist with competing value systems, can step outside of him or her-self to look at ideas or relationships, and can see knowledge as context-dependent. Conflict, or differences between people, is natural parts of dialogue (Drago-Severson, 2004). Intelligence professionals who are self-authoring knowers might be able to assess the

assumptions underlying ideas or analysis. They might be readily able to consider alternative hypotheses and imagine various potentialities for future events. These are abilities needed for sound analysis according to the ODNI's analytic standards (Intelligence Community Directive 203). Richards Heuer (1999) explained the limitations of mental models that serve as lenses for analysis; the self-authoring knower appears able to consider the presence of a model for the self or others and step out of it or to consider elements of other models.

Adults can gradually shift from one primary level to another over time (Drago-Severson, 2004; Mezirow, 1997, 2000) as they continue to develop. Kegan (2000) expressed that individuals can pass from a condition in which their experience is essentially interpreted for them by principles in the social environment (when they are instrumental and socialized knowers), to an existence they author for themselves (the self-authoring way of knowing). Over time the ability to see frameworks can become the way a person learns, a way of knowing (Drago-Severson, 2004). The literature places these three ways of knowing in a developmental order that begins with instrumental, progresses to socialized, and can develop toward self-authoring. This paper suggests intelligence analysts can benefit by moving from concrete thinking (instrumental) toward more abstract ways of knowing (self-authoring), while still recognizing the importance of building relevant and timely concrete knowledge.

Ongoing Analyst Development

Adults' ability to shift and grow from one way of knowing toward another has implications for intelligence analysts and intelligence organizations. Transformations can move analysts toward increasingly sophisticated ways of knowing and help them imagine new ways to understand issues. We propose that developmental conditions can be created in which analyst growth is likely to occur. Intelligence work environments that support reflection and discourse have an edge over those that do not.

Individual analysts or intelligence managers who move toward more autonomous ways of knowing could be expected to increase their abilities to consider alternative hypotheses, see a situation through

someone else's eyes, and be more interested in collaboration. The US intelligence community's analytic tradecraft standards (Intelligence Community Directive 203) call for analysts to understand their own thinking processes and support their conclusions; these are strengths of self-authoring learners. Transformative opportunities enhance analysts' capacity to understand their own beliefs, and to see those of others. The following section explains some of the conditions that encourage ongoing development in the undergraduate program at the National Intelligence University.

Transformative Learning at the National Intelligence University

The National Intelligence University (NIU) is a federally-administered US educational institution offering bachelor's and master's degrees to mid-career intelligence professionals. NIU is admittedly in a more advantageous position to enhance learning than most work settings, and follows multiple practices that encourage transformative learning. The students are arranged in cohorts, taking numerous courses together. Courses offer content that contains new ideas and perspectives for the students' consideration, and many courses are based on discussion. This format gives students opportunity to engage in discourse with each other, while considering new ways of looking at an issue. They interact with the course content, apply ideas to their work experiences, and reflect individually and as a group on the meanings. These growth-enhancing practices can reasonably be applied to many workday intelligence environments, particularly where analysts are arranged in groups or teams. The upcoming section provides examples of learning that has occurred at NIU. The final section of this paper offers suggestions for creating developmental opportunities in day-to-day work settings.

The National Intelligence University offers students new perspectives on the world. Students are asked to reflect on the practice of intelligence as a profession, consider a wide range of theories, and share in discourse. Marrin (2011) characterized intelligence studies in higher education as "an academic experiment in progress" (p. 89). NIU programs are built with a goal of encouraging autonomous and

responsible thinking as students engage in national security activities. At the end of the academic year, the undergraduate students complete a Capstone project, and graduate students complete a thesis, informed by their coursework and directly tied to their concentration of study. The National Intelligence University prepares the classified Capstone project for the Intelligence Community to add to the body of knowledge on national intelligence priorities, and understanding of security issues.

Mezirow's (1997) guidance to educators is extremely relevant to NIU. The academic year begins with an expectation that each student (adult) prior to his or her arrival at the University, has built a framework of beliefs, principles, biases, and assumptions of how the world works, based on what the individuals' experiences have meant to him or her. In an academic setting like NIU, Mezirow's theory works in unison with Kegan's (2000) constructive developmental approach to learning. As mentioned earlier in the paper, Kegan's approach offers three ways of knowing: instrumental; socialized; and self-authoring. Kegan's three ways of learning can be found among the adult learners in the intelligence community and at NIU. Each learner has a primary way of knowing, but is likely to tap into other ways of knowing when stretched by participating in a cohort of other learners (Drago-Severson, 2004). NIU's undergraduate program supports each of the three ways of knowing, yet simultaneously offers support to students toward development into more abstract thinking.

Instrumental knowing is oftentimes described as tangible, prescriptive, authoritative, and rule-based. All the descriptions are elements found within the Intelligence Community. NIU uses the core curriculum to establish a foundation that embraces instrumental learning. This provides a starting point for understanding United States policy, strategy, capabilities and limitations, analytic confidence levels, and ethics. Analytic judgments that are passed to policy-makers are bound by important guidelines in these areas. The educational setting also offers opportunities for students to see the complexity of each of these areas, and to expand their mental frameworks. The core curriculum, coupled with classroom dialogue, results in healthy discourse between faculty and students that challenge and expand the students' mental frameworks.

The socialized way of knowing is linked to the social aspect of learning. This approach rests on the premise that the social context influences students' views. Using carefully constructed cohorts, NIU seeks to ensure cognitive diversity that enhances the social learning environment. This helps students understand how their classmates and their classmates' parent organizations approach problem sets, again stretching their mental frameworks. Understanding Mezirow's theoretical framework, faculty members in the role of facilitator can help bridge the gap between present understanding and newly acquired experiences that oftentimes lead to a disorienting dilemma, as mentioned earlier in the paper (Mezirow, 1997, 2000). This offers a wider perspective with which to enhance students' problem solving and critical thinking abilities.

The Capstone project and the thesis are the culminating academic experiences that allow each student to demonstrate critical thinking, innovation, and analytical problem solving in a cohort environment. The Capstone and thesis projects are geared towards the self-authoring way of knowing that is informed by reflections on core courses and electives, faculty and student discourse, and engagement with members of the Intelligence Community. Students in the self-authoring phase of the curriculum are now better equipped to step outside themselves and look at competing ideas or relationships. It is in this phase of the academic year that transformation becomes evident. Through a unique mix of instrumental, social, and self-authoring learning, NIU students reach higher stages of development.

Fostering Transformations in Intelligence Organizations

The Conditions of Transformation: Our scholars offer pointers for enhancing learners' development. Mezirow (1997, 2000) suggests guiding learners toward autonomy by helping them recognize biases and mental frames (their own and others'), helping them learn to redefine situations from a different point of view, and helping them be adept at discourse. Mezirow explains that growth begins with a disorienting dilemma, followed by reflection and discourse. These conditions help a learner become aware of his or her underlying beliefs (assumptions). This awareness can help the individual form a new

understanding, expanding his or her mental frameworks. Analytic work environments can be shaped to maximize the learning potential of the conditions already present. The below suggestions can be implemented in every-day workplaces.

Drago-Severson (2004) recommends educators should consider each learner's own way of knowing, challenging and supporting that learner in a developmentally-appropriate manner. She calls this simultaneous challenge and support a holding environment. Methods of creating a holding environment at the office could include the following four areas of suggestion.

One, establish conditions for asking questions and exploring how a phenomenon or issue works, for exploring its context, and for analysts to connect with collaborative partners. Expect analysts to make meaning of their experiences inside and outside of work. Pay attention to disorienting dilemmas; open up safe, constructive opportunities to talk about it (Drago-Severson, 2004). Encourage shared meaning-making in trusting settings. Two, establish a culture of support and helpfulness, in part by emphasizing collaborative practices and de-emphasizing competitive and individualistic metrics (Grant, 2013).

The third suggestion is a method of achieving the first two. Create a community of connection between learners (a cohort). Creating a cohort setting can be very effective; learners support each other and provide opportunities for sharing perspectives through discourse. This is a unique component in the undergraduate program at NIU; the students have become tightly connected to their cohort by the time they immerse themselves in the intense challenges of their Capstone project presentations. A cohort in a work setting would be a similarly tightly-knit group of people who develop familiarity and trust with each other. A practice that has been effective for organizations focused on employee development has included routine work-group discussion before, during or after projects or presentations. The attention would be on the purpose of the project, ways of moving ahead, and constructive assessment of how it went (Kegan and Lahey, 2016).

The fourth area can be difficult to justify when time or money are short, but is well worth the investment. Allow opportunity for analysts to travel or attend events that are related to their field, though

might not be directly part of today's work assignments, if they will offer expanded perspectives.

Analysts, like all adult learners, should be challenged and supported at the same time (Drago-Severson, 2004). Opportunities for growth can be provided in the every-day settings in which analysis is conducted, under certain conditions. We see this growth as essential for success in intelligence work; intelligence can only keep up with security threats if analysts can reframe their understandings while the world keeps spinning.

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