

Teaching Cases Presented as Fables to learn the Mentoring Process in Medical Training. Part two: Apprentice in the Period of Vitality. Summer

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Abstract:

Fables allow us to understand something unknown in terms of familiarity. Therefore, they are frequently used in all sciences that adopt common terms to name complex realities. The mentoring process in medical training, is one of these complex realities, explained here through a fable: that of the virtuous and thoughtful mentor, the slow and parsimonious tortoise called Dr. Golden-Headed, who “discovers” a certain number of Scientific Laws of medical training, and his apprentice, whose name changes throughout the training and development process. Based on these short stories, the stages that medical trainees go through in training will be described, from their hesitant beginnings of preclinical training where basic sciences are studied (Spring), through clinical training, which involves practice in hospitals and health centers (Summer), and rotating internship, where practical experience is acquired in various specialties (Autumn), to their independent practice and specialization, which allows the doctor to focus on a specific area of medicine (Winter), and some keys to what the tutoring work should be shown. In this second part (apprentice in the period of vitality. Summer) Dr. golden-Headed “discovers” several laws: the law of panoramic vision, the law of suspicion and doubt, the law of the scout, the law of rolling stones downslope, the law of the thermostat, and the law of the bicycle. These “laws” explain integrality, data triangulation, self-esteem, guided discovery learning, acquisition of procedures, contextualization, and reflective practice.

Keywords: medical education; tutoring; mentoring; teaching; medical intern

Introduction

Summer

Dr. Golden-Headed observes, with her usual twinkle in her eyes, the sun at its peak, its light and warmth reigning. In the apprentice's formation, it is a time of maturity. During the Summer, the tiny green shoot matures into an adult plant and begins to produce seeds. “Ah, the treasure of Summer!” sighs Dr. Golden-Headed.

“To achieve the treasure of Summer, the apprentice must accept and love themselves, above their mistakes and defects, for they are a mixture of shadow and light, like everyone else. They need to have no will to anger, so that things reach their fullness with beauty and that energy flows outward through perspiration, as if in love with the outside world. This is the way the master must nourish life in response to Summer,” says Dr. Golden-Headed sweetly, in a low voice, as if to herself.

The Law Of Panoramic Vision

Dr. Golden-Headed was with her apprentice, who was now a black cricket with powerful legs and well-developed wings. He kept chirping, moving its elytra at high speeds...

One day, Dr. Golden-Headed asked:

“I'm getting to know you little by little, and although we've already talked about which rotations you liked the most and which specialties you most enjoy, I'd like to know more, such as: Why did you choose Anthro-Medicine? What role do you see yourself taking on in the practice? What feelings do you have now about Anthro-Medicine? Which people have influenced you the most? What educational experience was the most rewarding? What future plans do you have?...”

“Hmm... I think internal medicine, pediatrics, endocrinology... or general anthromedicine...” Young Common Cricket began.

When they finished talking, Dr. Golden-Headed said:

“Wow, wow! We've discovered the very important LAW OF PANORAMIC VISION!”

“Are we going to publish it in the Journal of the International Society for Anthro-Medical Research?!” the apprentice asked excitedly.

“Well... maybe we need to think a little more about this law before publishing it,” Dr. Golden-Headed clarified. And he continued: “Surely you understand this LAW OF PANORAMIC VISION. By gathering more information about a situation—as we've done for you now—you gain a

broad, more complete picture of that fact [1]. We normally see data from a single perspective—our own. But there is a big picture. By seeking that big picture, we maintain the importance of our point of view, without ignoring or repressing it, but we realize that it's always possible to expand it by including the perspectives of others."

And he continued: "Gather evidence from various locations and with different methods. You can make the analogy of "mapmaking." Social space is more complex, with more dimensions that continually come together and separate" [2].

"I understand now, from a single perspective there are always parts of an object that are hidden or obscured," said Young Common Cricket.

"What do you think? The vision of a forest or the mind of a person needs panoramic views to better understand them and avoid the distortions and illusions inherent in a single perspective" [3].

"Of course, this panoramic view is necessary for reasoning in Anthropo-Medical clinical care" [4, 5], assured Young Common Cricket.

"Yes... But, in addition, the panoramic view is useful for human relationships" [6], corrected Dr. Golden-Headed.

"Is there anything that requires a better understanding of human contexts than the way we communicate and interact? Thus, w

"Is there anything that requires a better understanding of human contexts than the way we communicate and interact? Panoramic vision is like the process of opening doors and windows and seeing how the light illuminates contexts and relationships, clarifying the understanding of a situation or problem," Dr. Golden-Headed concluded.

And she began to meditate...:

"Teaching requires a broad vision, integrating theoretical knowledge with clinical practice, the development of professional skills, and constant adaptation to technological advances and social changes... Teach gradually according to the needs and abilities of the learner... Teach the general meaning, and the specific meaning," Dr. Golden-Headed thought.

And she wrote on her blackboard: "The moment we try to limit it, we make it narrow. When you leave things free, it is like the vast sky. It is like the limitless ocean."

The Law of Suspicion and Doubt

The apprentice, who now resembled a cuckoo, with his gray head and back, thin beak, pointed wings, and the resounding "coo-coo" that filled the small consulting room, was visiting an elderly patient accompanied by her middle-aged daughter, who complained: "my head is what drives me crazy, along with dizziness and forgetfulness." He then saw a diabetic patient with a respiratory infection who wanted a prescription for insulin. The next consultation was with an elderly patient with hypertension, severely deaf due to chronic cholesteatomatous otitis media. He wanted to hear well, as he had great difficulty hearing his wife at home. While his wife, who was accompanying him, showed no concern about her husband's deafness, and Young Cuckoo was concerned about his blood pressure control. Another patient came in to get a proper treatment for his cold and asked to be off work until he fully recovered. The next one had chronic liver disease, etc.

Young Cuckoo had tons of doubts about what to do, and tons of diagnostic suspicions, and questions...

Dr. Golden-Headed, with her usual perspicacity, realized the situation and said:

"What exactly is it you don't know?" asked Dr. Golden-Headed.

"Many things! Well, I don't know what diagnosis those signs and symptoms correspond to... and I don't understand the cause of the second patient's problem... and...I don't know how to approach the management of the third patient, I didn't understand anything about the fourth patient..." Young Cuckoo listed numerous doubts. And finally, she added: "Could you clarify them for me... give me the answer?"

"What do you think...? What should you do?"

"I suspect that in the first case, additional tests would be necessary..., but I have doubts..." Young Cuckoo muttered.

"Ok, Young Cuckoo, by observing you, I have discovered the transcendental LAW OF SUSPICION AND DOUBT! I am infinitely grateful for your help in making this key discovery in scientific development."

Young Cuckoo stopped his "cuckooing" because he was so surprised. "But... I don't know..." stammered Joven Cuco.

"Perfect!! Great! Wonderful! Brilliant! Transformative learning occurs in response to a 'perplexing dilemma' during which the student's frames of reference are challenged [7]. It is the reflective 'I don't know' [8-10]. It is the beginning of inquiry, of creation" Dr. Golden-Headed concluded.

"However, you ask questions, but you don't provide answers... At most, you give a hint..." complained Young Cuckoo.

"It's what pedagogy calls 'guided discovery learning.'" "It's not that there isn't any control, but that learners are less aware of it and more active. The student has to organize himself at his own pace... perhaps with interdisciplinary training input that requires collaborative classes and group work..." She continued: "For the learner in training, like a golfer who wants to achieve the best results, there are techniques that must be known, but to achieve the best scores, one must focus not on an 'external game' but on an internal game [11, 12], Dr. Golden-Headed clarified.

As sometimes happened to her, Dr. Golden-Headed remained thoughtful... meditating, her head in her shell:

"Use valid reasoning to avoid speaking incorrectly," thought Dr. Golden-Headed, and wrote it on her blackboard.

The Law of The Scout

The apprentice was now a turtledove, with its pinkish-gray coloration with orange feathers on its wings and black tail, and a black and white-striped patch on each side of its neck, occasionally emitting a characteristic soft "coo-coo" call.

The patient began to describe his problem. Immediately, the Young Rosy-Gray Dove interrupted the story and began the physical examination. She already a diagnostic hypothesis. She performed quickly additional tests—an electrocardiogram—found an electrical disturbance, and was already on her way to providing treatment...

"Another Law! I've discovered another fundamental Law!", interrupted Dr. Golden-Headed.

The Young Rosy-Gray Dove stopped its "coo-coo" call, waiting for developments.

"It's the very important Law of the SCOUT," said Dr. Golden-Headed proudly.

"Scouts? That explore nature..." asked Young Rosy-Gray Dove.

"Indeed. Many tunnels were needed during the construction of a high-speed rail line through the mountains north of Tokyo. In the tunnel through Mount Tanigawa, water began to gush out from a Spring. Engineers began making plans to drain this water, as it was creating major problems. But, in the tunnel, the construction crews began drinking the mountain spring water, and a maintenance worker came up with the idea, since the water tasted so thin, that it should be bottled and sold as mineral water instead of being drained. The idea was implemented, and the water appeared on the market under the Oshimizu brand. In a short time, this mineral water became very popular, due to its source, a snow-capped mountain, and the slow perchlorination process that occurred through the mountain," explained Dr. Golden-Headed. And she asked: "What does this mean?"

-“Hmm... The Japanese are very good at business?” replied Young Rosy-Gray Dove, imagining she was mistaken about this riddle from Dr. Golden-Headed.

-“It could be... but that's not the right answer. The answer is: always prepared for surprises, for the unexpected,” insisted Dr. Golden-Headed.

-“It's about exploring rather than making immediate decisions; collecting data... and finding surprises that offer great advantages. We generate diagnostic hypotheses quickly; thus, we learn to think immediately about the pathology rather than the person in their context. Our goal is not the name of a pathology, but to get the patient to unblock a situation as a result of our actions” [13, 14], explained Dr. Golden-Headed.

And she thought: “Small details are far more important than large ones. In the education of the apprentice, the principles can be applied step by step, or depending on the situation, apply only those that may be needed” [15, 16].

And she wrote on his blackboard: “Only by exploring our minds can we find, achieve, and express the beautiful and glorious nature.”

The Law of Rolling Stones Downslope

In that dry Summer day, with temperatures over 35 °C, the apprentice was already a pine forest in all its verdant growth on soil that was sometimes sandy, sometimes rocky, filled with leaf litter.

Pine Forest in All Its Verdant was trying to arrive at a diagnosis for a complicated patient...

Dr. Golden-Headed, after observing how the apprentice struggled with that diagnosis, told him: -“Pine Forest in All Its Verdant, when you're walking with a flashlight in your hand to illuminate the path so you know where to put your feet, from time to time, it's a good idea to point it sideways, so you know where not to put your feet.”

Dr. Golden-Headed explained gently: “Initially, it's impossible for a novice to rule out the secondary symptoms, which the patient emphasizes as primary, and to clearly perceive that one or two facts, barely hinted at during the clinical history, are in fact the core from which all the components of the case derive.”

And Dr. Golden-Headed, in a gentle, like a good turtle, continued: “It's about asking that question that all investigators face again and again: What am I missing?”

-“Okay... But how?” asked Pine Forest in All Its Verdant to the master.

-“Go back to where you started. Forget the gaps and vagueness. Start with what you know for sure. Look for connections even where you think there aren't any. Does the concatenation of facts have any meaning? What can't be seen? Where is the key that I've missed until now?”

-“Yes, but...” stammered Pine Forest in All Its Verdant.

-“Exercise your ability to see the invisible, to discover the anomalous in the apparently normal. The first impression is the important one. Illness is almost always the last link in a long and complicated chain of events. Many times these facts are right in front of us, but because of their very proximity, we are unable to see them. The connections are there. Everything is connected; the only one who doesn't see them is the one who gets too close” [17].

-“Yes, but... I will have to learn more to be able to see that which is invisible...” Pine Forest in All Its Verdant insisted, stammering.

-“Be patient,” my dear Pine Forest in All Its Verdant. The obsession with the search for the “secret or magic formula” borrowing it from others (from how other experts do it, including myself), is not advisable. There is no specific “secret,” and that good practice is achieved only with patience and humility, and by continually practicing “externally and internally” (18), replied Dr. Golden-Headed.

-“By the way, this is another of my magnificent and spectacular laws: THE LAW OF ROLLING STONES DOWNSLOPE,” Dr. Golden-Headed added jubilantly.

-“When the stones start rolling down the slope, it's important not to rush after them. You have to stop and watch them tumble down, see where they stop and settle.”

Dr. Golden-Headed reflects: “The resident has often learned to memorize the microscopic details of hundreds of diseases. The clinical method he have learned is to be “encyclopedic” in taking the history, exploring, and ordering investigations, but few have learned to think logically” [19].

And Dr. Golden-Headed thought, “Things are only interesting when they move forward and backward at the same time. To move forward, it is best to go backward. This is, quite often, an excellent method for arriving at the solution to a problem.” And she wrote on her blackboard: “Be aware of the risk involved in focusing on a single clue in the initial stages of a case study.”

The Law of The Thermostat

It was a tremendously hot Summer afternoon... Dr. Golden-Headed, after observing the apprentice caring for a difficult patient in a complex situation—A Midsummer Night's Starry Sky, the current apprentice —said to him:

-“I liked the way you did that. You were so patient. I like your sensitivity in handling these kinds of problems. In short, I admire how you resolved the situation. You made your opinion clear without hurting the other person.”

-“Thank you for your kindness, Dr. Golden-Headed. That makes me feel better,” A Midsummer Night's Starry Sky replied. He added, “I was eager to know how I do things.”

-“Hooray!” “We've discovered the LAW OF THE THERMOSTAT!” Dr. Golden-Headed shouted as she raised her flippers. “You know about the thermostat, right?” she asked A Midsummer Night's Starry Sky.

-“Of course, Master,” the apprentice replied. “That's what we'd need here in this stifling heat... An air conditioner with a good thermostat!”

-“Yes, perhaps... The truth is, a thermostat is a device that measures and regulates the set temperature, automatically turning the heating or air conditioning device or system on and off. We could call it ‘feedback’ that is defined in the field of training as ‘the provision of information from the Master observing the apprentice performing a task,’ explained Dr. Golden-Headed.

Dr. Golden-Headed was thinking:

“Feedback is the fuel that makes competence improve. Apprentices want to ask, ‘How do I do this?’ Masters need to give feedback to their apprentices. This basically means telling them what you think about their behavior, or informing them of the implications of their actions. Feedback is an effective and specific tool for empowering people because it allows them to understand their strengths and weaknesses and the areas they should change. It allows them to know the progress they are making toward their personal goals, and it indicates that the Master is taking an interest in what they are doing. Feedback is empowering because it contributes to a person's self-awareness... It may be the student's only clinical experience in which someone dedicates their time to helping them understand their strengths and weaknesses” [20-22].

And Dr. Golden-Headed wrote on her board: “The waves of feeling sent out into the consciousness around us return to us in the way we send them. The result of projecting love into one's environment is that the projected love returns to the sender, like an echo.”

The Law of The Bicycle

The apprentice was already a cumulonimbus cloud, a storm cloud associated with heavy rain, lightning, and thunder. The words came pouring out of her. For half an hour, she let out everything she had been suppressing for weeks:

the stress, the doubt, the feeling of not fitting in or not being worthy, of not being suitable.

-"I desired the power to help people, and I believed I could achieve that in the profession, plus the social standing and a certain economic status... And now that I'm almost at the end of my residency, all those abstract notions have abandoned me. I just pray to heaven that I never have to undergo surgery" [23].

Round and Fluffy Cotton Cloud expected some sort of judgment or disappointment from Dr. Golden-Headed.

Instead, Dr. Golden-Headed listened patiently and then, with the slowness of a tortoise, offered her a newly discovered law: THE LAW OF THE BICYCLE!

-"Don't forget this law: You are here to learn to ride a bicycle, not to invent a bicycle [24], Dr. Golden-Headed explained gently.

-"Wow! I think I understand... You put it very gently... but it opens something up for me... I've been presenting myself not as a ready-to-learn apprentice, but as a successful and accomplished professional, fully formed and self-sufficient. I've come to internalize this mindset. But in the actual practice of the past few weeks, I've been beset by wave after wave of academic challenges, not to mention the culture shock and financial stress of being a student... My peer group is full of productive professionals and apprentices who publish articles constantly, but I've stagnated... Suddenly, I felt like I was in an endless race that I'd started late, way behind everyone else. That I wasn't and wouldn't ever be up to the required level; up to very high expectations..." confessed Cumulonimbus cloud.

-"I advise you to stop comparing yourself to others, avoid all-or-nothing global assessments, and understand that simply being apprentice is a significant achievement" [25-27].

-"Yes... I understand... but the doubts keep coming back. I still feel like I'm falling short on fundamental aspects."

-"As an addition to the LAW OF THE BICYCLE, the reflection-action cycle can be applied: 1. Explore the current scenario; 2. Explore the desired scenario; 3. Work on strategies to move from 1 to 2" [28-31]."

-"When faced with new learning content that cannot be interpreted using existing knowledge in the cognitive structure, the student perceives an imbalance, overcoming which requires integrating the new content with the existing information, which will lead to reviewing and modifying it" [32, 33], proposed Dr. Golden-Headed.

-"I think I need to redefine my time as a trainee. I realize that my focus on productivity and conceiving new, elevated, and innovative projects was misguided. The competitive academic environment had distracted me from the true reason I was a trainee. This helps me realize that I can and should rely more on my mentor and experienced colleagues. I should start sharing my ideas with them and seeking their feedback from the beginning. This will help me progress. I will worry less about publication and productivity, and every project, every patient I see, etc., whether a failure or a success, should be transformed into a significant breakthrough and a worthwhile story," explained Cumulonimbus cloud.

-"Okay. You should know that I'm proud of you and of being my apprentice," said Dr. Golden-Headed.

Dr. Golden-Headed began to meditate... "The feedback process is like hearing a message through the fog and hearing the fog itself: you have to know and experience the message" [34, 35]. And Dr. Golden-Headed wrote on her blackboard: "The supposedly perpetual sequence of balance/imbalance/rebalance: the meaningful learning."

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