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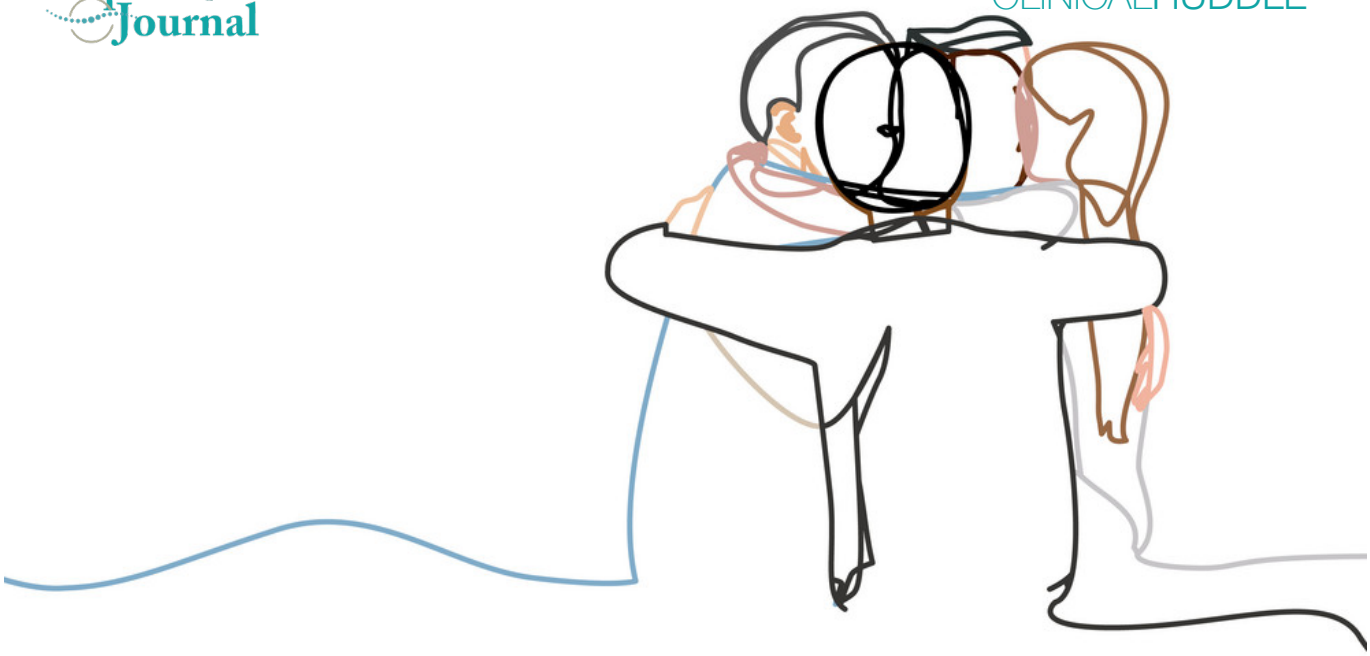

Chicken Sexing, Tacit Knowledge and Gonstead Chiropractic

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Abstract: There is a type of knowledge called tacit that encompasses '*knowing how*' but that doesn't mean that you fully understand what you know. An example pertinent to us as Gonstead chiropractors is regarding scoping: Knowing that a break can be small yet clinically powerful is a different thing than knowing how to find said break, knowing that a segment can subluxate in certain directions and knowing how to determine those directions from palpation.

Indexing Terms: chiropractic; Gonstead; tacit knowledge.

Introduction

Some time back I was introduced to the concept of chicken sexing. For those of you who have no idea where I'm going with this, it is quite simple in concept: determining the sex of chicks when they are newly hatched. The sooner the females can be identified as future egg layers, the greater the efficiency as they don't have to be fed for weeks as greater sexual dimorphism develops with maturation. The less feed consumed, the higher the profit margin.

It turns out, that one of the very highest paying jobs in the poultry industry for many decades has been the '*Chicken Sexer*'. This is the person who can sort the males from the females. This may sound simple, but it is not. The chick has no external sex organs, and thus no simple way exists to identify male from female. There is a way to determine the sex, possibly several, but the most common involves turning the chicken over, squeezing it and looking at the 'vent' or cloaca of the chicken. To you or me there is no

> *... the beauty of over 40 years of practice is having the ability to call it like it is. Here is a new landmark for you, the COB, or 'Crack of Butt'. Its relevance is that your Nervoscope scan must always include the sacrum, to the COB.'*

visible discernible difference . But a trained sexer can inspect 1,500 in an hour with 98% accuracy. That is about 3 seconds per chick. Here is an interesting article on it if you are interested in the details: https://psmag.com/magazine/the-lucrative-art-of-chicken-sexing

The key point is that a person can have a valuable skill and be skilled about the process of performing their ability, yet be unable to describe, explain or teach what they know. If you ask a chicken sexer: How do you know that this chick is a female? They can't say how they know, just that they know. This is the realm of Tacit Knowledge.

Tacit knowledge

The philosopher Gilbert Ryle divides knowledge into 2 forms:

- Procedural (Knowing how) i.e., How to tie a square knot
- Descriptive (Knowing that). i.e., James Madison was the 4th President

An example pertinent to us as Gonstead chiropractors is regarding scoping: Knowing that a break can be small yet clinically powerful is a different thing than knowing how to find said break, knowing that a segment can subluxate in certain directions and knowing how to determine those directions from palpation.

Some sources divide knowledge into 3 types:

- Explicit Knowledge: Knowledge that is easy to articulate, write down, and share.
- Implicit Knowledge: The application of explicit knowledge. Skills that we are tested on in school or at board exams.
- Tacit Knowledge: Knowledge gained from personal experience that is more difficult to express.

Other sources say that there are 4 types of knowing:

- Know-what (Facts),
- Know-how (Tacit) Also known as the art of practice
- Know-why (Science),
- Know-who (Interpersonal).

Either way, they both agree that there is a type of knowledge called tacit that encompasses '*knowing how*' but that doesn't mean that you fully understand what you know. Here it starts to get interesting and in a way that I feel is very relevant to us in Gonstead chiropractic practice.

Let me give you an example that may shine a light on this concept: about 8 years ago while moving, I came across the *Master Lock* rotary padlock from my college gym locker. This was about 20 years after I had last seen it. I did not write down the combination and instead of just pitching it, I decided to see if I could open it from memory. While I could not remember the numbers, I found the feel of the lock to be memorable, and I was able to unlock it on the first try just by the feel and the sound that the rotation of the rotating part made on the lock as I turned it. I was able to unlock it on the first attempt, just based on feel and sound. It was like hearing a song and recalling the melody and lyrics instantly. This experience stuck with me, and now I am beginning to understand what happened that day.

Some others have studied this tacit learning effect in the interests of computer security: To make a password that is 'rubber hose' proof, meaning that someone can interrogate you with a rubber hose and you can't tell them the passcode because you don't consciously know it. See https://arstechnica.com/information-technology/2012/07/guitar-hero-crypto-blunts-rubber-hose-attacks/

Tacit knowledge is knowledge that you possess, but can't describe, and can't teach (At least not easily and not completely), but none the less, you know it and use it daily. This is very descriptive of all of us who have been in practice for some time. You know something intuitively from experience and by feel, but you would be hard pressed to be able to describe it or write it down. I think this is also part of the process by which patients can tell that we have been to a seminar the past week-end, even if we don't tell them.

It turns out that the original developer of the skill of chicken sexing in Japan discovered a way to teach the skill to others. The challenge was substantial, but what finally worked was having a student observe the master and then try their hand at doing what the master did, but the master would give them instant feedback as to whether they were right or wrong. Although the master could not teach explicitly, by experiencing enough repetition and feedback, the student's ability to tell male from female chicks would increase. This process could take years, but eventually the skill would take, and the student would be able to accurately determine the sex of the chicks, but they were no more able than the master to describe 'how' they knew to do so.

How might we make use of this phenomena? It seems that we could apply this knowledge to seminars as well as one-on-one from skilled Gonstead doctors.

The key requirement

Getting immediate feedback from hands-on learning, not just declarative knowledge as seen on a screen from a power point presentation in seminars. The hands-on interactive part of Gonstead technique seminars may be more powerfully leveraged if we were to incorporate a more rapid feedback loop for the students, and especially for when they get it right. Reinforcement of the ability when demonstrated, even when the person learning doesn't really comprehend fully what they are feeling/doing/perceiving seems to be the key here. Their '*organism*' itself seems to be able to sense and respond to subtle cues that the conscious mind will only be aware of later. (The concept of sharing a '*Whirl of Organism*') from the article: '*Tacit knowledge as the unifying factor in evidence-based medicine and clinical judgement*' by Tim Thornton

This is sounding eerily like Innate Intelligence.

Also of note, there is a great deal of tacit knowledge within any skilled community, and more so as it increases in complexity. A simple recipe is not enough to prepare a dish successfully if you do not possess the hundreds of areas of tacit knowledge needed in order to operate a kitchen.

The same has also been found in areas of scientific research. An example from the engineering field demonstrates this phenomenon:

1. '[N]o scientist succeeded in building a laser by using only information found in published or other written sources. Thus every scientist who managed to copy the laser obtained a crucial component of the requisite knowledge from personal contact and discussion,
2. 'no scientist succeeded in building a TEA-laser where the informant was a 'middle man' who had not built a device himself,
3. 'that even where the informant had built a successful device, and where information flowed freely as far as could be seen, the learner would be unlikely to succeed without some extended period of contact with the inform- ant and, in some cases, would not succeed at all … '

His conclusion was that there was an intangible factor, basically a form of good judgement that came from direct experience with those who had successfully built the laser. This consisted of relevant (tacit) knowledge of which, of the thousands of possible variables, were worth paying attention to and which were to be ignored as irrelevant. This relates to the article itself which is about evidence-based medicine and tacit knowledge.

'at the heart of evidence-based medicine is good judgement.' Tim Thornton

In their book, '*Evidence-based Medicine: How to practice and teach EBM*', David Sackett, Sharon Straus, Scott Richardson, William Rosenberg, and Brian Haynes define it as follows: 'Evidence-based medicine is the integration of best research evidence with clinical expertise and patient values.' By contrast, clinical expertise is not codifiable. It depends instead on skilled judgement drawing on personal experience.

Conclusion

Regarding doctors whom we consider masters in the Gonstead method: Just observing them and getting quick immediate feedback when we are right may be the key. Contrary to the prevailing opinion, you apparently can learn by 'osmosis' to a degree just by being around masters. And I suspect this may also be part of what Dr. Troxell described in patients being able to tell that he had been to a seminar the prior weekend. And this final thought from the article earlier on perceptual learning says it best: '*They were exposed to high quantity, high quality examples of expertise*.'

To be continued ...

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