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| **Semeiotics in the clinical consultation: Donald E. Stanley****Abstract:**The Morse code is a semeiotic system par excellence, for in it every unit of content and every unit of expression are in regular one-to-one correspondence. The same applies to all the other semeiotic systems such as, for instance, notation in music, or chemical formulae, or mathematical signs.  Not for human intercourse. In clinical encounters misinterpretations, misunderstanding, miscommunication are risks both to the patient and physician. Below is an attempt to characterize clinical consultations using language based, in part, on the semeiotics of the American 19th century philosophy Charles Sanders Peirce. Peirce proffered that all thinking involved signs: “If we seek the light of external facts, the only cases of thought which we can find are of thought in signs.”[[1]](#endnote-1) Cardinal to the clinical consultation are signs and symptoms. This paper attempts to illustrate how language use during the clinical consultation reflects ambiguities and nuances between observer and patient. **Introduction to language use:**There exist explicit rules in games e.g. chess moves, poker, baseball, codes. And the endpoint, the goal, is to win the game or carry the message.But in understanding language there are no rules, this allows for drama, poetry, jokes, apothegms. Rules of grammar, exist, yes, but no rules for understanding. That is one strong reason why semeiotics in our lives is either poorly recognized, abstruse or wrongly assumed to be always and ever applied subconsciously. When we talk to one another we hope to communicate, explain, apologize, come to an agreement or disagreement. To be certain of these latter intentions I listen or watch for facial or body signs of success, or lack of. But there are few if any exceptionless rules to help us check our successes or failures. The only rule we might consider is the form of acknowledgement, the nod, the handshake, the sensory impression of having an agreement by tone of voice.Charles Sanders Peirce put the picture in this way: a sign or representamen is “something which stands to somebody for something in some respect or capacity.” The convolutions in this phrase are sorted out by our languages, our facial and body expressions in multifaceted combinations. Clinicians must learn how to talk to patients at all levels of education, from different cultures, patients bringing their own views on language use and comprehension. This is the purpose of th consultation: to gain insight into the diagnostic process.The following scenarios are idealized (lacking the vagueness, the malformations, the signs and symptoms obscured, of underdeveloped presentations, of medical conditions) as encountered in daily practice. The nature of each is preserved with the caveat that, as Goethe put it, in order to depict the underlying medical condition (pathophysiology) the physician must fix the empirically variable, (the sign) exclude the accidental, eliminate the impure (the misinterpreted sign,) unravel the tangled (referent,) discover the unknown; that is the basis of the patient-doctor interview and the use of signs and symptoms in diagnosing diseases; how both patient and physician are the interpretants ( of the same or similar signs.) Patients may complain of excess urination, thirst, lack of energy. Essentially these interpretations of signs and symptoms, was what Peirce was attempting to clarify in his development of semeiotics.[[2]](#endnote-2) To the physician with sufficient ‘funded experience” the sign of insulin lack may be interpreted in multiform ways but the commonest would be diabetes mellitus. The dynamics of high blood glucose might, to the less experienced physician, suggest an glucagonoma, MEN, latent autoimmune diabetes (LADA), maturity onset diabetes of the young (MODY) or even Wolfram syndrome. But the cardinal ranking of diagnoses, to paraphrase Aristotle must “be as complete as necessary without being too complete.”\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_The following are examples of problems during a medical consultation. **Scenario 1** Dr.:  "How can I be of help, Mr. Xiong?"Mr. ：(to himself) *Using “I” makes him seem egotistical.*Dr.: “How can we be of assistance?”Mr. ： (to himself) *Sounds like a corporate mind.*Mr. ： I have difficulty with my balance when walking over uneven ground.Dr.: When did you first notice this?Mr. ：About 5 years ago , when I was a middle-aged, but it is now worse.Dr.: (to herself*) He seems too anxious for this to be a chronic condition, but his facies and attitude are difficult for me to read.*Dr. Let us review your past medical history to try to figure this out.Pursues Q&A about previous illnesses, family history, medications, tobacco use, alcohol, etc.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Dr.: (at second appointment) Where were you born? Mr. Xiong you have had diabetes for how long ?Mr. ：(to himself) *Does she have reservations about Oriental patients hiding the truth?*Mr. ：About 10 years, after I came to this country my family doctor noted that I had a rising HbA1c (measure of cumulative glycosylated red cells) and referred me to a diabetologistDr. Where were you born and raised?Mr.：(to himself) *The doctor seems to question my complaint because my English is not fluent.* I was born in southern China, Dandong, but our family moved to Qiqihar when I was a young boy. (to himself) *Why does she want to know this to help me?*Comment: Cross-cultural misunderstandings are rife in clinical practice.[[3]](#endnote-3) Transcultural semeiotics may not be feasible when referents, or objects, are construed differently. Doctor is employing retroduction as she is aware that the incidence for diabetes under age 15 is positively correlated with latitude. Misunderstandings and suspicions are unraveled by the consideration of what facts would support the clinical diagnosis. The clinician must use the patient’s language as clues to the correct diagnosis thus: *It may be that the patient developed diabetes as a child (C may be the case) then his difficult gait might be secondary to neural degeneration* *And if the patient moved from southern China to northern China and he had diabetes for several years ( then A is true)**Type 1 diabetes probably developed after the move. Then the latitudinal difference might support the epidemiology of diabetes in this 45 y.o man*(C is true)The doctor reads signs and symptoms and must interpret and integrate them by using her skill at how the epidemiology of diseases, in this case diabetes, might account for patient’s complaint of unsteadiness. She uncovers the chronicity of the condition by asking questions leading to a correct interpretant. Some questions are about factual matters, some of exploratory.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**Scenario 2.**Attending Dr. enters Pt.’s. room, she is dozing, Family is sitting at bedside, and Dr. initially looks at the Pt.’s wristband before greeting her. *Good afternoon Mrs. Gautier*Family interprets this possibly formal gesture as lack of recognition of their Mother as his patient and lacking an initial courteous personal introduction. Sign of examining the wrist band is too mechanical Does doctor not recall who Mrs. Gautier is? Or he is not familiar with Mrs. Gautier even though he is the attending physician? Or, contrarily the family may conjecture that the doctor is a careful person who wishes to be certain of the patient’s identity by the objective measure of reading the wristband. This observation changes the interpretation of the sign: not rude, but careful.Comment: intentionality in the doctor-patient relationship is fraught with potential misunderstandings some of which depend on the degree of confidence and rapport, for example the signal gesture of reading the wrist band. The intentionality of the doctor was to greet the patient correctly. Peirce thought that thoughts, or intentions in this case, are signs. The gesture of reading the wrist band was intended to correctly identify the patient, not intended to be questionably objective, not to avoid personal greetings or signs of concern. But to understand the intentionality of the doctor reading the wrist bracelet reveals the interpretations by the family. [[4]](#endnote-4)the interpretant; in this case the intention was misconstrued**Scenario 3**Pt. recently moves to a new physician office practice. *Mother: What would you recommend for an immunization schedule for our 4-month-old girl?*Doctor the current recommendations include measles, mumps, diphtheria cell-free, pneumococcal, and Polio in addition to the Hepatitis B unless she has already received this.. This is a standard recommendation.Pt. But the vaccines contain mercury, and this may cause mental disorders. My sister-in-law has a 10-year-old son with autism, and she warned my husband and me about the MMR vaccine. Mercury is a known poison!Dr. (to himself) *how to explain the false information without embarrassing or angering my patient?*  At what age was your nephew diagnosed as autistic?Pt. He was diagnosed as autistic at 8 months of age including failure to thrive.Dr. Usually the first MMR vaccine is not given until later in life.Pt. But our nephew also is not able to eat most solid foods, his teacher told my sister that his intestine may have been damaged by the mercury. Isn’t mercury a strong poison.Dr. (to himself ) *reports of mercury toxicity have been widely disproven but rumors persist.* Current vaccines do not contain mercury.Pt. But there are so many vaccines recommended that my husband and I are worried about our daughter. I do not want to give her any poisons.Dr. to himself (*From potential mercury now confounded by vaccine recommendations)*But all substances are poisons depending on the dose.( Dr. *recalls his history of medicine club during residency: "Poison is in everything, and no thing is without poison. The dosage makes it either a poison or a remedy."[[5]](#endnote-5)* Pt. You cannot mean that doctor ?Dr. Even water can be a poison if ingested in large quantities.Pt. That is very hard to believe. *(Pt has misinterpreted the sign of water as an indication of potential poison, instead imputing the doctor’s credibility when he gives this explanation leading further to decreased trust.)* *Doctor to himself (I shall try one more explanation)*Each vaccine contains 1 part of mercury in 100,000 parts of diluent so only 25 micrograms in each dose. If you eat 3 ounces of canned tuna fish, you ingest the same amount of mercury.Pt. I do not eat tuna fish. I have been told how dangerous it is. Dr. Perhaps we should discuss this next month when you should decide to immunize your child?[[6]](#endnote-6)[[7]](#endnote-7)  |
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Peircean semeiotics were revised at least three times during his lifetime to account for the interpretation of signs, (Peirce denied Kant’s notion of unknowable or noumenal i.e. sign not constituted by thought is unknowable.) Peirce disagreed with Kant. The patient construes the mercury toxicity threat on hearsay evidence, and also transfers her evolving doubt to the doctor’s hyper-realistic ‘sign-answer’ when he inadvertently tries to express the notion of poison in quantitative and practical terms and by so doing alienates his patient. Who can imagine such a threat as water? [[8]](#endnote-8)explicitly she, the interpretant, misconstrues the object, misconstrues the sign.

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**Scenario 4**

Pt. I have been referred to you from my local doctor who has treated me for 6 months because of sinusitis on my right side.

Dr. Please tell me how this began? e.g. did you have pain, nasal discharge? A cold or the flu?

Pt. It began about 8 months ago with a feeling of fulness over my right cheek and a bit of stuffiness on both sides of my face. I did not have any nasal discharge, though I sneezed from time to time.

Dr. Did your local Dr. advise any testing?

Pt. After a course of antibiotics, the fullness did not seem to disappear, so I was sent to the ENT specialist who found a 6 mm polyp attached to the septal mucosa and removed it. That relieved my symptoms for a few days. But my doctor ordered an x-ray, the report was that the right maxillary sinus was somewhat opaque but no other remarks. So, I was given another course of different antibiotics over 6 weeks.

Dr. Did you notice any difference after the polypectomy and these 2 courses of antibiotics?

Pt. I still feel this stuffiness.

Dr. You said that you did not have any discharge from your nose earlier, is that still the case?

Pt. A few weeks ago when I blew my nose the mucus was pinkish or slightly red-pink. I thought it resulted from the polyp biopsy.

Dr. When you went to the radiology department for your x-ray do you recall what part of your face was examined?

Pt. Only the right side.

Dr. I would like to examine your neck?

Pt. Yes, of course,

Dr. Palpates face angle of jaw, neck and throat area.

Pt. You are now retired?

Pt. Yes, I worked for a company building passenger busses and specifically in the export division examining service contracts and follow-up on repairs.

Dr. Did you travel abroad?

Pt. Yes, I lived in Tucuman, Argentina, in Perth, Australia and in Bangkok, Thailand.

Dr. How long did you live in Thailand?

Pt. Three years.

Dr. Do you recall ever having ‘kissing fever” or mononucleosis?

Pt. I think that as a young man, while in university, I did have a long recovery from mono, as it was then called and spent almost a week in the infirmary because of fatigue.

Dr. Would you give me permission to have a surgical biopsy of the sinus cavity.’

Pt. Is that the next step? I think, maybe, my stuffiness is a little improved?

Dr. I will review the x-rays and see you next week.

Dr. nasal stuffiness, unilateral, history of Epstein Barr mononucleosis, residence in far East, questionable nasal discharge, short-term response to polypectomy, little or no response to two 6-week courses of different antibiotics, questionable blood tinged nasal mucous.

This patient requires sinus cavity biopsy to exclude malignant lymphoma of NK-T cell type.

Biopsy shows T cell lymphoma expressing CD2, CD56 and cytoplasmic CD3, no surface CD3.

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Peircean abduction is built on these strands of reasoning: [[9]](#endnote-9) Conjecturability is inherent in diagnosis, values and modes of reasoning associated with development of clinical knowledge. Among these practices is asserting, which needs to be distinguished from conjecturing. Here the physician wishes to capture the mood of *justifiably asserting* the (content of) conjectures, so that he can gain an explanation of how physicians are justified in conjecturing; this skill is learned, and I refer to it as ‘funded experience.’ as illustrated below. This is the same point as drawing a list of the differential diagnoses that is complete, but not too complete; an element of judicious elimination is mandatory else testing might proceed ad infinitum.

NK-T cell lymphoma is endemic in the far East, my patient resided there.

Epstein-Barr virus is the probable causative virus, my patient had exposure as a young man.

Sinusitis is common, polyps are common, but removal usually alleviates symptoms, and sinusitis usually resolves without antibiotic treatment, my patient’s complaint is long-standing, at least 4 months.

Most cases of NK-T cell lymphoma are stage 1, without nodal involvement, my patient has no palpable lymph node and radiology did not show ulceration or lymph node involvement.

The doctor adopts the hypothesis (the conjecture) to integrate and try to explain the historical, clinical and investigational findings. The reasoning here is similar to scenario #1 where the conjectured diagnosis is supported by the exposure and explained by the course of examination and treatment.

 Peirce, in his 1898 Cambridge lectures, and in his 1901-03 papers, said that retroduction is similar to Aristotle’s *apagog*e “probable reasoning in the second degree. [[10]](#endnote-10) and a new way of testing an hypothesis.

Therefore, my patient has malignant lymphoma of the right maxillary sinus and will be treated, after complete staging, with radiotherapy. This diagnosis is built on weaving together facts into a strong inferential chain, the more strands (signs) in the chain, the stronger the abductive inference. Some strands may not fit (polypectomy) and these red herrings need to be explained, interpolated or ‘fished out’ from strands of the woven chain. The hypothesis via Dewey is that the physician needs ‘funded experience to employ the diagnostic process. [[11]](#endnote-11)This is not intuition as claimed by some philosopher (e.g. Henry Frankfort) because intuition is unmediated, and the hypothesis is medicated in ‘medias res’ just as Johannes Kepler did not predict the orbits without the royal funded data of Tyco Brahe’s experience to consider.

**Scenario 5**

Pt. enters Dr.’s office slightly bent forward. (Age 25) He is wearing a leather jacket, red polo shirt and blue jeans; his head is shaven.

Dr. Is it your back that is bothering you? *(Observation)*

Pt. My lower back has been a problem for at least 2 weeks and does not seem to benefit from rest. I had to ask for time off from work.

Dr. Did you fall, or injure your back?

Pt. No I did not.

Dr. What type of work do you do?

Pt. I am an accountant, and this is a busy time in my office with tax returns and accounts to manage.

Dr. Will you put on this gown and let me examine you?

Pt. Anything you can do I would appreciate, and I have been taking over-the -counter pain medicine. But I think I need something stronger? *(anticipation)*

Dr. performs the routine examination for back pain including leg-raising, neurological examination, he pays especial attention to patient grimaces; these are frequent and perhaps unrelated to palpatory maneuvers.

Dr. I don’t find any neurologic signs suggestive of spinal stenosis, disc encroachment, and I wonder if you have any sense of tingling in your feet?

Pt. Oh yes, especially in the early morning my feet and toes are numb. Now and then there is pain along the back of both legs.

Dr. I would like you to see a physical therapist who can instruct you on stretching exercises and other modalities to decrease your back pain and foot problems.

Pt. Will you prescribe a pain-killer while I am here?

Dr. I would rather not use narcotics until I determine the cause of your discomfort.

Pt. I don’t think I can return to work without some stronger pain medication. *(emphatically)*

Dr. My practice is to try to determine the root of your complaint, rather than to treat the symptoms.

Pt. Will you let me have a trial of OxyCONTIN: 20 mg (*patient knows the brand name and dosage and realizes he has made an egregious mistake revealing his own dependency.))*

Dr. I am sorry, but I don’t use that drug upfront; (*Dr. is clued into the dependency by the request.)* Dr. requests patient to let us wait on follow-up with the physical therapist.

Pt. But I really am bothered even to walk!

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Peirce’s methodeutic [[12]](#endnote-12)outlines how one (Dr.) conducts an inquiry. Physical examination (signs) for back and leg pain is well outlined for most physicians resulting in wide experience with patients who complain of backpain: the most common complaint to physicians in general medicine

Abduction follows the examination routine to the extent the procedure is processional: i.e. a complete physical examination with focus on physiologic responses accounts for an initial evaluation (or conjecture) viz “searching the horizon for clues” “for As.” This is the background knowledge required to begin an abduction Θ.

The first heuristic is observing the patient entering the office: in this example patient. is experiencing discomfort; however, the patient’s grimace is rather too overt, and the doctor is aware, or ought to be aware of malingerers. The idea of malingering is suggested signs of body language, the history of sedimentary work, not e.g. construction or farm labor, the negative signs in the physical examination especially the response to neurologic testing e.g. the straight leg raising elicits a somewhat exaggerated groan. Suggestion of drug-seeking thus is displayed in the initial and in subsequent parts of the examination. The physician becomes aware that the signs, history and symptoms are not indicative of back pathology. Background knowledge Θ is the crucial requirement to choose the most fertile hypothesis to test: Peirce reminds us that we must test the hypothesis by induction. He uses physical therapy as the first step in the therapeutic process but encounters a contradiction from the patient. His initial surmise is most likely correct based on the body language: drug-seeking behavior.

Θ, A→ φ where Θ and A refer to the background knowledge and to the provisional ‘diagnosis’ of a drug seeking patient, and → to the inferential link identifying the likely hypothesis that would support the initial impression. For some physicians, especially those in the early years of practice, the motive is to give the patient the benefit of the doubt; while physicians practicing in some areas of the country have greater exposure and tend to make inferential judgments more often and quickly. This is the ampliative function of experience allowing for more rapid assessment; of course, the ampliative function is subject to criticism unless background knowledge is lacking or misapplied. This is referred to as ‘funded experience.’

But in this case the candidacy for drug seeking is further supported by the plea from the patient. [[13]](#endnote-13)the initial hypothesis is a first abduction followed by the sign- winnowing differential diagnosis employed by the physical examination and suggestion of a therapeutic trial to explore whether the discomfort is relieved. The inferences are based primarily on the prevalence of back pain complaints and the methodeutic of eliminating pathology and the strategy of test or treat. [[14]](#endnote-14)

**Scenario 6**

Pt. Dressed smartly in grey suit and carrying clutch-pure is shown into Dr’s office by assistant. Dr. is sitting at the head of a long table and rises to greet Pt.

Dr. Please take a chair here (pointing to opposite side of table.

Pt. Sits facing the Dr. across the table.

Dr. Turns to computer in front of him and asks her name and date of birth while typing information into computer.

Pt. Dr. Glazer referred me to you.

Dr. I am happy to try to help you; just let me review the record Dr. Glazer sent to me?

Pt. During the last 12-18 months I have felt especially tired, lacking my usual energy and I need your help to overcome this?

Dr. Typing as he speaks and looks at the Pt. to the side of the computer.

Pt. Dr. why are you typing while we are speaking, it is distracting for me?

Dr. Without a scribe I am obliged to entire our conversation verbatim as much as I can.

Pt. Why does not your assistant act as scribe. Has your office never heard of David Ricardo’s law of comparative advantage? You would do well in practice to bring this position of disadvantage to your office staff!

Dr. The practice of medicine has changed, and our office is reimbursed by the insurance companies based on the details we supply in our medical record.

Pt. Dr. I feel I would be better served in a usual medicine setting without the computer between us.

Dr (somewhat embarrassed). I agree with you Ms.Gilmour and I hope you can find such a practice.

Here the sign is the formal office setting with the implied priority to complete the computer medical record. The interpretant correctly reads the sign to mean that the transcription is more important than rapport. The object referred to is the insurance requirement.

**Scenario 7**

**Dr. (***seated at desk. Knock on door and assistant announces the next patient is to enter****.)***

Pt enters consulting room slowly looking left and right and is greeted by the doctor.

Dr. Please sit in this armchair and (*I will here opposite you over the low coffee table.)*

Pt. *Slowly* Thank you, Dr.

***Dr.*** Shall we begin by asking how you came to see me?

Pt. My primary care doctor referred me to you when the medications she prescribed to help me were not successful.

Dr. Tell me why you consulted her?

Pt. To begin my usual mood and deportment changed: insomnia, a change in appetite and I became agitated in the face of everyday tasks. My usual tasks were too much for my concentration,

Dr. to himself *(the patient has more insight into herself than she realizes and has diagnosed herself with unipolar depression. Cognitive behavioral therapy is my first therapeutic step.)* Rapid correct recognition of sign, object, interpretant.

Pt. It seemed to me to be a result of my family moving to another state; both my daughter and husband found suitable jobs and my husband is busy with his business-he travels extensively and is away several weeks each month.

Dr. Did you try to compensate by occupying yourself with new activities? Do you have close friends nearby?

**Signs** of depression are obvious to the Dr. and already to the patient. Patient is the correct interpretant of her signs and probably already realizes the object: depression. Psychiatry and psychology build the diagnostic process on signs. Even the entrance into a consultation room is sometimes sufficient for a tentative diagnosis. It has been rumored that skilled practitioners, whose office window overlooks the patient parking lot, can make reliable guesses about the anticipated patient status by watching their movements as they exit the car and walk towards the building entry.

Dr. I would like to know any of the following you have noted: a loss (e.g., family moving to another state, being alone at home) may include the feelings of sadness, rumination about the loss, insomnia, poor appetite, and weight loss?

DSM 5 criteria for depression illustrate the power of signs properly interpreted:

1. Severe recurrent *temper outbursts* manifested (e.g., verbal *rages*) or behaviorally (e.g., physical *aggression*toward people) that are out of proportion in intensity or duration to the situation or provocation.
2. The temper *outbursts* occur, on average, three or more times per week.
3. The mood between temper outbursts is persistently *irritable or angry* most daily and is *observable*by others (e.g., parents, teachers, peers).
4. By history or *observation*, the age at onset is before 10 years.
5. There has never been a period lasting more than 1 day during which the full symptom criteria for a *manic or hypomanic episode* have been met.
6. The symptoms are not attributable to the physiological effects of a substance or another medical or neurological condition. The episode is not attributable to the physiological effects of a substance or another medical condition. Here the Dr. must be at least at certain as he can that further testing, an additional consultation including imaging and blood chemistries would contribute. These steps strengthen the inference arrow.

For most, if not all clinical consultations the sign(s) must be evidence for a condition insofar as her observations (e) are evidence for depression

e is potential evidence that h exists (is the correct diagnosis)

h is consistent with the compilation of accompanying signs or symptoms.

There exists an explanatory nexus between e’s being correctly interpreted and h’s being the case.

Peirce, in 1868 introduced the notion of sign:

“Now a sign has, as such, three references: first it is a sign to some thought which interprets it; second, it is a sign for some object to which in that thought it is equivalent; third it is a sign, in some respect or quality, which brings it into connection with its object.”[[15]](#endnote-15)

In these clinical scenarios the signs are used both by patient and doctor based on the object pursued (diagnosis/remedy) but construed at different levels and identified with different objects or thoughts. These complications illustrate how language is used, abused, and confused. Later philosophers, e.g. J. L. Austin have characterized these as ‘speech acts’ i.e. locutions, and illolocutions e.g.

“The way a crow

shook down on me,

The dust of snow

from a hemlock tree’

Pointing to a bird’s methodology may be the first locution, uncomfortable, snow falling on one’s head. The reader might also consider what can this mean to the receiver, but Frost goes on to an illocutionary conclusion:

‘Has given my heart

A change of mood

And saved some part

Of a day I had rued.”

The illocution is surprising based on the locution for Frost’s mood was changed from sudden cold to peace and a mood of satisfaction.

When the patient or doctor says something there is that literal content of the word(s) (locution) uttered so that this is the content of the word; its literal meaning: the locution. What is the intent of the word(s)? As in scenario #1that which the patient or doctor intends to convey e.g. where were you born? Behind that question is a conjecture that moving from south China to the north increased the likelihood of diabetes. The illocution. Or the question did you have ‘kissing fever’ is meant to try to establish the past exposure to the Epstein Barr virus as a factor in the sinus case. Thus, the ‘illocutionary reason’ for asking these questions is not primarily literal, to complete a record, as in the scenario #6 but to unveil a possible contributory factor to the conjectured diagnosis. But even in this scenario, the physician may be expressing frustration as well i.e. to act as a scribe, not as a physician; as shown in Ricardo’s notion of comparative advantage. The illocution is additive; either it adds to the question as an assertion, or an expression of a question behind a question.

If the doctor asks the patient have you experienced any marital strife the patient may resent this seemingly peripheral question because the doctor is trying to elicit other factors to consider in a conjectured diagnosis. She was asking background questions, involving a risk, somewhat tangential to the patient’s complaint, but relevant in how answers might reflect a tacit factor in the patient’s history; these peripheral-sounding questions are meant to search the diagnostic space, to ravel, or unravel, to integrate what on the surface is not seen.

When the accountant asks for a prescription for OxyContin the doctor is suspicious of the literal meaning of the request because the interview and physical examination do not support using opiates. The patient was unveiling his drug-habit under the guise of pain, while the doctor interprets the request as an assurance of drug-seeking behavior. This is the illocutionary act .

Language is what we have in common. When we abstract, as in clinical trials, we abstract from the ‘remainder of things.’ These abstractions are not straightforwardly applicable to individual patients. The physician is dependent on the remainder of things: the patient’s language, understanding, preferences.

1. (CP 5.251 [↑](#endnote-ref-1)
2. (CP 8.343) [↑](#endnote-ref-2)
3. Fadiman, Anne. The spirit catches you and you fall down: A Hmong Child, Her American Doctors, and the Collision of Two Cultures.” New York Farrar. Straus and Giroux.1997 [↑](#endnote-ref-3)
4. (CP 8.332) [↑](#endnote-ref-4)
5. 2 *Philippus Aureolus Theophrastus Bombastus von Hohenheim* [The Hermetic and alchemical writings of Aureolus Philippus Theophrastus Bombast, of Hohenheim, called Paracelsus the Great](http://www.worldcat.org/oclc/5436422), 2002 [↑](#endnote-ref-5)
6. Broniatowksi DA, Jamison AM et al. Weaponized health communication: Twitter bots and Russian trolls amplify the vaccine debate. Am J Public Health. 2018;108 (10):1378-1384 [↑](#endnote-ref-6)
7. Wakefield AJ, Murch SH, Anthony A, Linnell J, Casson DM, Malik M, Berelowitz M, Dhillon AP, Thomson MA, Harvey P, Valentine A, Davies SE, Walker-Smith.  Lancet. 1998; 351(9103):637. (The original refuted and retracted expose!) [↑](#endnote-ref-7)
8. Peirce (EP 2,478) [↑](#endnote-ref-8)
9. (CP 5. 145) [↑](#endnote-ref-9)
10. (CP 6.525) [↑](#endnote-ref-10)
11. (CP 2.755). [↑](#endnote-ref-11)
12. (NEM 3:207) [↑](#endnote-ref-12)
13. (CP 6.469-473 and CP 7.202-219) [↑](#endnote-ref-13)
14. (Stanley & Nyrup. Strategies in Abduction: Generating and Selecting Diagnostic Hypotheses 2019 J. Phil and Med.(to be published.) [↑](#endnote-ref-14)
15. (CP 5.283) [↑](#endnote-ref-15)