Introspection as a Methodology in Linguistics

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1. introduction

1.1 structure of this presentation

1.1.1 faulting and justifying introspection

Introspection is the main methodology used in linguistics.

But objections to it are often raised on such grounds as:
    It is not "objective" or "empirical". / It is not faultable or repeatable.
    It is not accurate or consistent. / It cannot access ongoing interactive discourse.

The procedure here:
    First make linguistic introspection itself a TARGET of investigation,
        to determine its actual characteristics.
    With that as a basis, then find any justifications for using linguistic introspection
        as a MEANS for investigating other linguistic phenomena.

1.1.2 what is found

a. Linguistic introspection has a profile: it is better or worse at different aspects of language.
   Much objection to linguistic introspection results from blurring the distinctions
    between its better aspects and its worse aspects without discrimination.

  Certain other methodologies corroborate introspection where it is better,
        and complement it where it is worse.
 In fact, every methodology for investigating language has its own profile for what it
    is better or worse at.
  They all partly corroborate / complement each other.
  None is the gold standard for investigating language overall.

Methodologies for language investigation include the following:
1) introspection into the meaning and structure of linguistic forms and expressions
2) comparison of one's own introspections with those reported by others
3) analytic techniques in semantics, morphosyntax, and phonology within a language,
    such as comparing linguistic forms or expressions for their similarities and differences
     and for patterns therein
4) comparison of linguistic characteristics across typologically distinct languages
    as well as across modalities (e.g., spoken and signed language)
5) examination of how speech events interact with context,

e.g., the physical surroundings, the participants' background knowledge, the cultural pattern
6) audio- and videographic analysis of recorded speech events
7) (computer-aided) examination of collated corpora, often annotated
8) examination of cumulatively recorded observations of linguistic behavior,
    as of children acquiring language
9) experimental techniques of psycholinguistics
10) instrumental probes of the brain's linguistic functioning in neuroscience
11) simulations of human linguistic behavior in artificial intelligence

b. Introspection is an ordinary and necessary component of normal interactive discourse
    as well as of offline thought.

Linguists merely employ systematically a cognitive faculty that is already in place for
    everyday linguistic functioning.

1.2 basic structural characteristics of linguistic introspection

1.2.1 two levels of consciousness

a. broadly:
Linguistic introspection = conscious attention volitionally directed by a language user
    to particular aspects of language as they manifest in his cognition.

b. specifically:
Certain aspects of language can appear
     -- whether through perception of speech, by internal evocation, or spontaneously,
    in a language user's consciousness = "first-level consciousness".

A second level of consciousness can also occur in the same individual at the same time
    that has as its object (part of) the contents of the first level of consciousness.

This "second-level consciousness" can be volitionally generated and directed at
    a selected linguistic target on the first level.

Such second-level consciousness then = linguistic introspection.

1.2.2 accessibility to introspection

The accessibility of an aspect of language to introspection has two main components.
a. "readiness":
The numerous distinct aspects of language range in their readiness to appear in
    first-level consciousness, from appearing there readily to
    never appearing there (= permanently unconscious aspects)

b. "amenability":
If present in first-level consciousness, such aspects of language
   differ in their amenability to attention directed at them from second-level consciousness.

An aspect of language is more amenable
   if it has greater strength and clarity in first-level consciousness
   and can remain more stably present there while attention is directed at it.

It is less amenable if it is fainter, vaguer, or more elusive under such attempted scrutiny.

c. The "accessibility" of an aspect of language to consciousness / attention / introspection
 = an inclusive term for its readiness + its amenability.

1.3 immediate examples of linguistic introspection at work

1.3.1 in a linguist using the "offline excerptive" condition of attending

A linguist might internally generate the expression *I dragged away the boxes from the door.*, and
   direct second-level attention to her experience of the expression in first-level consciousness
   to observe if the expression sounds grammatical, or "right".
She might then internally generate another expression *I dragged the boxes away from the door.*,
   to observe how grammatical or right IT sounds.
She might then compare this observation with the preceding one
      -- directing her attention to these two impressions in working memory --
   to determine which one sounds more grammatical, or better.

1.3.2 in language users using the "online" condition of attending during discourse

Consider a hearer who interrupts a speaker to say: *I don't understand*.

The hearer, in his processes for constructing a conceptual complex to correspond to the speaker's
   utterances, may have been monitoring his own experience of its degree of coherence,
   and now finds it to be low.
Such monitoring = second-level attention introspectively directed at a first-level
   linguistic experience.

In turn, the speaker must now first review
   both the conceptual complex she was trying to convey and how it had been represented,
   and then seek an alternative representation of the same conceptual complex to utter next.
Such a review and search = second-level attention introspectively directed at
   first-level linguistic experience.

1.4 parameters of the attention system of language: partial list of the major distinctions

a. conscious vs. unconscious: whether occurrent activity in a particular neural ensemble
   currently is or is not in consciousness
b. consciousness vs. its content (which includes: attention vs. its object)
  NB: an "obtent" (my only coined term) = a current or potential content of consciousness
   -- "potential" because a particular neural ensemble would yield this content
      if it were active and its activity were in consciousness
c. involuntary vs. voluntary: whether an attentional process
   occurs spontaneously or is involuntarily triggered in an individual
   vs. the individual consciously and intentionally directs the process
d. strength: the degree of a current obtent's salience in consciousness
   or the degree of an unconscious obtent's tendency to enter consciousness (= its "potentiation")
  NB: consciousness is found to be a gradient phenomenon in language
   -- not, as held by some, to be a discrete all-or-none phenomenon.
e. quantity: the amount of content currently in consciousness
f. selection: which one of several candidate obtents is in or enters consciousness
g. steady-state vs. changing; and if changing:
h. positive vs. negative directionality of change -- e.g.,
   increase vs. decrease in strength
   an obtent's entering vs. leaving consciousness
      (or attention extending to vs. retracting from an obtent)
i. force dynamics: the action of cognitive processes to
   (positively) sustain or activate an obtent, or (negatively) attenuate or inhibit an obtent

1.5 terminology for these concepts

1.5.1 the word "attention" has two main everyday senses

a. "attention" as a gradient, essentially equivalent to "consciousness"
Everyday expressions based on this sense:
     The music took up little | some | more | most of my attention / consciousness.

b. "attention" as volitionally directed focus = the type present in introspection
Everyday expressions based on this sense:
   I turned my attention away from the book I was reading to the music playing on the radio.

Attention in this sense is simply consciousness with certain choices of parameter values:
   (1.4c) voluntary: the individual intentionally orchestrates her consciousness
   (1.4f) selection: the individual volitionally chooses which one of several candidate obtents
      is in or enters consciousness
   (1.4i) force dynamics: obtents not already in consciousness
      are blocked from entering consciousness, so that:
   (1.4e) quantity: a lesser amount of content is maintained in consciousness

1.5.2 the English words "attention" and "consciousness" together cover
     the actual full range of consciousness

The word "attention" in its `focused' sense can be used where the word "consciousness" cannot
     to represent the same phenomenon of consciousness under certain parameter values.

a. voluntary vs. involuntary and directed vs. undirected
"Attention" can be treated as voluntary and directed or as involuntary, and undirected,
     but "consciousness" can be treated only as involuntary and undirected:
          The idea entered my attention / consciousness.
          I turned my attention to it. / *I turned my consciousness to it.

b. focused vs. unfocused (involving parameters 1.4 b, c, d)
"Attention" can be focused or unfocused, but "consciousness" only unfocused:
          The music took up a bit of my attention / consciousness.
          My attention / *consciousness was focused on the music.

c. Figure vs. Ground
"Attention" can be treated as Figure or Ground, but "consciousness" only as Ground:
          The music is in my attention / consciousness.
          My attention is on the music. / *My consciousness is on the music.

1.5.3 the assignment of Figure vs. Ground status to consciousness vs. obtent

This parameter may not represent one of the major distinctions in the cognitive consciousness
     system, but it does capture two models that we use to envisage certain consciousness events
     and that are represented in everyday expressions.
As just seen, when consciousness is the Figure, the word "attention" can be used in English,
     but the word "consciousness" cannot.

a. an obtent as Figure enters, is in, or leaves attention, itself a stationary Ground
everyday expressions based on this model:
     Figure = subject: The new tune was in my attention. / The new tune soon came to my attention.
     Figure = object: I put that thought out of my mind.

b. attention as Figure extends to, is connected with, or retracts from an obtent as Ground
     or, if pictured as a beam, swings over to, is on, or swings away from an obtent as Ground
everyday expressions based on this model:
     Figure = subject: My attention was on the music. / My attention wandered away from the music.
     Figure = object: The music attracted my attention. / I turned my attention to the music.

1.5.4 correspondence of terms:

a. for one's experiencing:

Y's consciousness of X =/includes Y's attention on X = salience of X for Y

b. for what is experienced:
a content of consciousness =/includes the object of attention = what is salient

c. for gradience
X more central / peripheral in consciousness = X more / less salient
= X higher / lower in attention = X more foregrounded / backgrounded in attention

2. four factors that affect the accessibility of an aspect of language to introspection
-- i.e., to attention directed at them from a second level of consciousness

These need to be distinguished first, to help organize the assessment of introspection's profile next.

2.1 cognitive organization in common across individuals

Certain cognitive patterns seemingly common across individuals -- whether because they
are innate or the result of some pervasive developmental conditions -- apparently tend to privilege
certain aspects of language over others along the gradient of accessibility to introspection.

E.g., the meaning of a sentence is generally more accessible than its syntactic structure, as in:
My dog likes your cat more than she likes him back.

Thus, there may tend to be a quite general ranking of accessibility to consciousness
among many aspects of language, such as among:
meaning of a discourse / meaning of a sentence / meaning of a word / meaning of an affix /
sentence structure /   morphological structure / grammatical regularities /
the sound of a word or phrase / intonation pattern / vocal dynamics / phonological structure

2.2 particulars of an individual's cognition due to individual variation

Due to individual cognitive differences --
whether innate in the individual or the result of training/practice --
some aspects of language can be above or below average in accessibility to introspection,
in a particular language user, diverging within limits from their usual ranking.
= individual variation across a populace

E.g., of two speakers of Atsugewi, a polysynthetic American Indian language that I worked with,
one but not the other had meta-cognition of the Cause prefixes within the multi-affixal verb.

2.3 an individual's current concerns / circumstances

Introspective access to various aspects of language can vary
even within a single individual at different times

due to the individual's current concerns / circumstances.

e.g., typically greater in a hearer's attention:
    the exact wording of the speaker when listening to one's lawyer
    the tonality of the speaker when listening to an inntimate

2.4 an individual's conditions of attending

Different "conditions of attending" manifested by an individual can affect the
    accessibility of various aspects of language to introspection.

2.4.1 the "online" condition of attending
    = attention on an aspect of an ongoing discourse that the attender is participating in

This condition includes three subconditions:

A. concurrent
includes, e.g., the speaker or hearer attending to the meaning of an utterance
    in the process of its being produced

B. preview
  1) for the speaker, includes, e.g.,:
    attending to what one will say next and to how to say it
  2) for the hearer, includes, e.g.,:
    attending to one's projection of what the speaker will be saying next

C. review
  1) for the speaker, includes, e.g.,:
    attending to what one has already said to determine what else,
      out of one's current whole ideational complex, one still needs to express
  2) for the hearer, includes, e.g.,:
    attending to what the speaker has just said, so as to derive further significance from it,
      or to resolve unclear aspects of it in the light of his present utterance, etc.

2.4.2 the "offline" condition of attending
    = attention on an aspect of language occurring in the attender's thought
        apart from any ongoing external discourse

This condition includes two subconditions:

A. discursive
attending to portions of or the whole of relatively well-formed linguistic expressions
    that come to mind in the course of thought outside any ongoing conversation, including:
  1) in concurrence as one thinks along about a topic

2) in preview as one imagines a conversation one might have in the future
3) in review as one recalls a conversation one has had in the past

B. excerptive / autonomous
attention on an aspect, item, or portion of language or of discourse
    that is considered by itself, in isolation from any larger amount of discourse

2.4.3 gradients between conditions of attending

Though the various conditions of attending were just presented as discrete,
    continuities can exist between many of them.

A. online <-> offline
    a speaker in the heat of an active verbal exchange
    <-> a speaker in a quiet interim between exchanges with interlocutors still co-present
    <-> an individual in a vividly imagined or recalled exchange

B. online review <-> offline review
    a speaker reviewing her last utterance to guide where to go with her immediate next utterance
    <-> a speaker reviewing her last turn during a pause in the exchange
    <-> a speaker reviewing her contributions to a conversation right after it has ended

3. what linguistic introspection is better / worse at
 = the aspects of language to which introspection has greater / lesser access
    under the different conditions of attending
 = a profile of introspection's higher / lower capacities

Non-introspective methodologies can serve to:
    corroborate introspection where it has high accessibility.
    supplement introspection where it has medium to low accessibility.
    compensate for introspection where it has no accessibility.

3.1 under the offline excerptive condition of attending
    (i.e., attending to a form or aspect of language in isolation)

If one considers it internally or is asked for it, one might come up with the following
    1) readily, 2) with a certain effort, 3) with difficulty, 4) not at all

3.1.1 aspects of language with high accessibility to introspection

a. the meaning of a linguistic form = the conceptual content associated with the form, e.g., --
    1. of a single whole expression, e.g,: *My father built a log cabin.*
    2. of a single open-class morpheme / word, e.g., N: *bucket* / V: *plummet* / A: *happy*
    3. of an idiom (as distinguished from a compositional reading) e.g.: *kick the bucket*

4. of a figure of speech (as distinguished from a literal reading) e.g.:
I'm staggering through my homework assignment. (metaphor)
b. the register of a linguistic form
= speaker's attitude or social context associated with it apart from its basic direct reference
e.g., formal: stomach / informal: belly / child-oriented: tummy
c. the colloquiality or privilege of occurrence of a linguistic form
e.g., the sense that *buy* exceeds *purchase* in colloquiality / privilege of occurrence in a sentence
in referring to roughly the same concept
NB: the unconscious cognitive registration of a form's statistical frequency yields
a consciously accessible weighting associated with the form, its privilege of occurrence
d. the appropriateness / good fit of a linguistic form's meaning/register in a particular context
e.g., what a writer introspects on in a word for its potential inclusion in a sentence
e. the grammaticality of a phrase / sentence
= its degree of conformity to the standard patterns of syntax / morphology in one's language
(may vary across individuals especially as a consequence of training)
e.g., one's awareness that the starred forms sound wrong in:
*Last year you go there? / Last year you went there?
Last year did you go there? / *Last year did you went there?
NB: Generative syntax rests on an assumption of the reliability of such grammaticality judgments.
f. some of the distinct senses of a polysemous morpheme
e.g., for *stock*, perhaps: `soup base' / `a store's supply' / `financial share in a company'
g. some words or expressions that could express roughly the same concept (approximate synonyms)
e.g., for `annoy', perhaps: *bother / irritate / disturb / irk*
h. some words for the members of a category
e.g., for `tool', perhaps: *hammer / pliers / screwdriver*
i. a word expressing a certain conjunction of concepts
e.g., for `young', `female', and `cow', perhaps: *heifer*
or for `dry hot sandy region', perhaps: *desert*
j. a word for the opposite of a quality named by another word
e.g., for *deep*: *shallow*
k. some fixed expressions that a particular word occurs in
e.g., for *road*, perhaps: *on the road / hit the road / road rage / roadshow*
l. some words with certain phonological characteristics
e.g., words that begin with "p" / words that rhyme with *bent*
m. the word for a concept indicated by a gesture
e.g., if someone points to a stork and says *What's that?*
n. the word for a concept indicated by a word in another language
e.g., an Atsugewi speaker saying *ph?la?q'i?s*
when a questioner asks for the Atsugewi word for *stork*
NB: This introspective capacity enables much of
inter-language elicitation, interpreting, translation

3.1.2 aspects of language with medium accessibility to introspection

a. the meaning of a closed-class morpheme
    1. of a free morpheme, e.g.: *with*
    2. of a bound morpheme (affix / clitic), e.g., those in: *unretestable*,
      the *un-* `negative', *re-* `iterated', *-able* `passive potential'
b. the lexical category of a word, e.g., noun, verb, adjective, preposition
      (varies by individual endowment and training)
    e.g., for *shallow*, perhaps: adjective
c. the salience of a linguistic form or of a component / aspect of a form
  = introspective second-level attention on the strength of a form in first-level consciousness
    e.g., noting that the concept expressed by the adjective in *their scurrilous behavior*
      is more salient than that of the adjective in *their everyday behavior*
    or noting that the concept of `futurity' is more salient in *on his upcoming arrival*
      and less salient in *When he arrives*
    NB: This capacity enables the study of attention in language
      using the standard linguistic methodology of introspection

3.1.3 aspects of language with low accessibility to introspection

a. semantic components within a morpheme's meaning e.g., those within `pry' or `across'
    as in: *There was a board across the road*
    as against: *There was a board along / on / in / above / beside the road.*
    NB: the methodology of comparative semantic analysis supplements this
b. ALL the senses of a polysemous morpheme
      (low in introspective access even though they are all represented in cognition)
    e.g., the full set of (not just several of) the senses of *stock* as a noun
      a. `soup base' b. `stored supply' c. `rifle butt' d. `line of descendants',
      e. `farm animals' f. `financial company shares' g. `personal reputation' h. `plant species'
    comparably: all/most of the synonyms of a word, e.g., of *annoy*
      all the words that rhyme with a target word, e.g., with *bent*
    NB: the methodology of corpus analysis supplements this
      (dictionaries / thesauruses / rhyming lists result from corpus work)
c. syntactic principles and patterns
    e.g., given the 2 sentences: a) Whose dog did our cat bite? / b) Whose dog bit our cat?
    a hearer has little introspective access to why
      (a) includes the word *did*, while (b) lacks the word *did*
      (a) has the verb *bite* in the present tense, while (b) has *bit* in the past
      (a) has the verb at sentence end, while (b) has the verb within the sentence
    NB: the methodology of syntactic analysis supplements this
d. forms or constructions that strike one as incorrect or ungrammatical
      and that one is sure one would not use in speaking
      but that in fact regularly occur in one's own fluent colloquial speech
    common example: resumptive pronouns, e.g., overheard:
      It has a theater that they can hold Broadway productions in it.
    NB: this type illustrates the case of low amenability of an object in first-level consciousness

to scrutiny from second-level attention (see introduction):
it is less stably present there, more elusive, must observationally be caught "on the fly"
(this phenomenon might be an early phase in a form's becoming a solid part of one's grammar,
later consciously accessible as such)
NB: the methodology of audio- and videographic analysis of speech events supplements this
e. some words with certain phonological characteristics other than the earlier high-access ones
e.g., words with [r] as their third sound

3.1.4 aspects of language with no accessibility to introspection

a. the sequencing and duration at the sub-second time scale of cognitive processes,
even conscious processes
e.g., on hearing *I'm staggering through my homework assignment*, one can perhaps monitor that:
a literal interpretation was attempted and found unviable
the meaning of *stagger* was manipulated to accommodate it to the remaining conception
and a novel overall (metaphoric) meaning was constructed for the expression
but one cannot attend to the relative timing and duration of these processes
NB: The instrumental techniques of experimental psycholinguistics may compensate for this lack.
b. the cognitive processing that places a content in consciousness, that yields a linguistic form, etc.
e.g., we can attend to the fact that we get a sense of the meaning of *bucket* on hearing it
but cannot attend to the mental processing that led to that meaning coming to mind
or, we can attend to the word *heifer*'s coming to mind when thinking of the concepts
`young', `female', and `cow', but cannot attend to the mental processing
that led to that word coming to mind
NB: Neuroscientific instrumental probes of the brain may compensate for this lack.

3.2 under the online condition of attending (i.e., attending to discourse while in progress)

3.2.1 aspects of language with high accessibility to introspection

a. the overall topic or subject matter of some portion of discourse
e.g., knowing that breakdowns and repair of one's car is being talked about
b. some sense for the degree of thematic and logical coherence present in the discourse
e.g., thinking that one's colocutor is wanderingoff the topic or is not making sense
c. for a hearer: the specific conceptual content being expressed by a speaker while speaking
e.g., understanding the specific content of the current utterance, say,
So they towed my car to the body shop.
d. for a speaker: some sense of the conceptual content one has in mind to express as one speaks
e.g., focusing on the idea of one's car getting towed to a body shop as one expresses it
e. for a speaker: portions of the intended content not yet expressed to cue up for expression next
e.g., thinking ahead to how the auto mechanics botched the repair job for one's upcoming utterance
f. for a hearer about to be speaker: the conceptual content one cues up for one's next turn at speaking
e.g., thinking of a bad experience with auto repair of one's own to match that of the speaker
g. for a hearer: speaker deviations from well-formedness that exceed their "grace allowance"

e.g., excessive uhs and ohs or long pauses or false starts in the speaker's utterances
or the speaker's using a wholly incorrect word or calling the hearer by the wrong name

3.2.2 aspects of language with medium to low accessibility to introspection

a. paralanguage-- perhaps more accessible to hearer than to speaker; in possible descending order:
  vocal dynamics (pitch, loudness, speed, precision, etc.)
  gestures (both their forms and timing relative to the utterance)
  facial expressions, body language
b. for a hearer: speaker's deviations from well-formedness *within* their "grace allowance"
  e.g., modest degrees of: uhs and ohs; pauses; false starts; self-corrections;
    nonoptimal choice of words/constructions; incomplete constructions;
    grammatical/referential conflict across a sentence;
    interruptions by other speakers; overlaps with other speakers
  NB: the relatively low level of our attention to such disfluencies during discourse
    may explain the surprise many feel on first seeing a close transcription of actual discourse

3.2.3 aspects of language with no accessibility to introspection

a. cognitive operations and processes going on that yield the production or comprehension of speech.

3.3 under the offline immediate-review condition of attending
      (i.e., to a memory trace of recent discourse)
 = attention on an aspect of discourse remaining in short-term memory
    right after its original occurrence and before fading away

3.3.1 aspects of language with high accessibility to introspection

a. the thematic topic and conceptual content of a just-prior discourse
  e.g., knowing that one had just chatted about car problems and repair

3.3.2 aspects of language with medium to low accessibility to introspection

a. the exact wording and phrasing that had just been used to represent such conceptual content
  e.g., even right after hearing it, a hearer might well remember the idea
  but not which of these or other wordings were used:
    a) My sister called and said she was very sick this morning.
    b) My sister called this morning to tell me that she was feeling really sick.
    c) Judy said she was very ill when she called today.

3.3.3 aspects of language with no accessibility to introspection

a. processes by which certain aspects of a just-prior discourse were or were not retained in memory

4. examples and situations of high-access linguistic introspection at work
-- demonstrating that introspection is a natural and necessary part of normal language use

4.1 examples of online introspection at work

4.1.1 review type

a. If a speaker refers to two entities and subsequently says something like
    the first one / the former followed later by *the second one / the latter*
  then the hearer must review his memory trace of what the speaker had recently said
  --and the speaker had to do so when using those terms--
    to identify which referent came first and which second.
This is attention volitionally directed from consciousness at one level
  to the contents of consciousness at another level -- contents in working memory --
  in an ongoing discourse that the attender is participating in

b. overheard on the street, a woman said to a man:
    You said "nevermind". Did you mean to say something else?
apparently: A wife was here objecting to her husband that he had previously said that
  her doing a certain task was not important, but that he was now contradictorily
  complaining that she hadn't done the task.
Here, both the speaker and the hearer must review and contrast the content and
  exact wording of a certain prior discourse with the content of some
  just-preceding utterance.

4.1.2 concurrent type

a. If a speaker lifts a certain tool and says: *This is a mattock*,
  the hearer may then "make a mental note", linking the unfamiliar object and word
    with the intention of adding the morpheme to his vocabulary.

b. If a speaker says: *My father and my son-in-law met for the first time, and he told him
    how young he looked* then, due to pronoun ambiguity, the hearer might
    try to puzzle out who spoke to whom.
This involves directing second-level attention to a first-level experience
    of a sentence's form and meaning.

c. heard on radio: The speaker cited below was inferrably aiming -- and failing --
  to retrieve a certain expression from her lexicon (*overtaken by events*).
Through both her overtly produced clauses, she found other ways to convey roughly the same idea.
  Haven't those negotiations [pause] sort of passed by events, [pause] -- aren't they outdated?
    Inferrable target: *Haven't those negotiations been overtaken by events?*
This is a speaker who, while speaking, introspectively directs attention to her lexicon
  to search for a certain form with a certain meaning that she knows is there.

d. conjecture: A speaker must meta-cognitively attend to his current conceptual complex
    to keep it stable / unshifting during the period needed
    to proceed through his utterance expressing that complex.

proposal: Some forms of schizophrenia might involve an impairment in this capacity.
E.g., an apparently schizophrenic man on the street was heard talking aloud in
    seemingly disconnected phrases.
    He then turned his head and saw a man with a white cane approaching.
    He then incorporated the word *blind* in his next phrase.
Such behavior might indicate this cognitive impairment:
   Whatever random thought or perception that now occurs in the speaker's cognition
      determines the topic of the current fragment of speech.

This impairment then puts in relief what is presumably occurring cognitively in normal speech:
A speaker attends to maintaining a single conception in place through its expression,
    and otherwise monitors its production for linguistic and communicative adequacy.

e. A language-imparting adult as a speaker and a language-acquiring child as a hearer
    may both employ the capacity to attend meta-cognitively to individual words.
Such high-access introspection to individual words may have been a part of language evolution
    in part because it facilitates aspects of language acquisition, especially vocabulary acquisition.

4.1.3 preview type

a. heard at party of people in their 50's and 60's:
    The host introduces a newcomer, who was never an intimate, to another guest, saying:
      He's my last high school ... friend.
The speaker probably paused to look for an ending to his sentence that seemed appropriate;
    "friend" may have seemed too close and "acquaintance" may have seemed too distant.
    Maybe further thought would have yielded "classmate", or a reformulation:
      He's the last person I knew in high school that I still know.
This is the speaker's second-level introspection examining his first-level conception
    of the factual situation to find the right words to use to capture that.

b. reported by a Danish linguist:
    In the 1960s when she became a graduate student, hence of intermediate status,
    she and her advisor, in talking together, both avoided use of 2nd person pronouns,
      with their obligatory formal/informal distinction
    since the one felt too intimate and the other too distant.
They thus had to plan their expressions before uttering them so as to exclude such pronouns,
    e.g., by reformulating "Do you have a class to go to now?" as: "Is there a class to go to now?"

c. the Introduction's example of a hearer interrupting a speaker to say: *I don't understand.*

4.2 examples of offline introspection at work

4.2.1 discursive review type

a. E.g. a person who had just been through a job interview might afterwards
    go over in his mind what had been said in it:
      what the interviewer could have intended by certain questions,
      what the likely effects of one's own remarks were,
      how one could have answered differently.

4.2.2 discursive preview type

a. E.g., a person might rehearse different ways to break some sad news to someone.

4.2.3 excerptive concurrent type

a. A language-acquiring child can play "word games" by herself / himself,
  perhaps as an innate form of play evolved to facilitate language acquisition and improvement.

b. A poet or other writer can consider alternative ways of phrasing a concept.

5. arguments against and for introspection as a methodology in linguistics

5.1 "contextualism" vs. introspection

5.1.1 contextualist arguments against linguistic introspection

A view that can be called "contextualism" holds that:

a. Linguistic meaning exists truly or at all only in the midst of an ongoing discourse.

b. Any introspection directed at meaning --
    whether during a discourse or offline, where it is "decontextualized" --
  is not reliable, because either it distorts true meaning or it confabulates new meaning.

Challenged in particular is offline excerptive introspection
  especially the sentences made up by some linguists to demonstrate syntactic or semantic points.

5.1.2 introspectivist arguments against contextualism

a. Linguistic introspection is natural, necessary, and functionally adapted

As counterarguments, the earlier evidence shows that linguistic introspection is:
1) a natural part of language cognition, occurring densely during discourse as well as offline.

2) an indispensible part of language cognition, performing certain necessary functions--
   normal discourse and perhaps language acquisition would not be possible without it.
3) in approximate correspondence with these functions that it performs.
   This correspondence appears in its specific profile of better and worse capacities.
This introspectional profile itself may have coevolved as language evolved,
   becoming suited to speaker and hearer cognitive processing needs.

b. Offline linguistic introspection in particular is necessary.

Offline linguistic introspection is not a curiosity to be avoided
      in the study of "true" online discourse.
Rather, it is an available cognitive capacity, evolved as such, at least because
   it performs necessary functions, e.g.,
  1) the discursive type:
      a) rehearsing discourse in preview
      b) evaluating discourse in review
      c) abetting ongoing thought

  2) the excerptive type:
      a) adult language-imparting and child language-acquisition
      b) child language-improvement through a child's own private word play
      c) adult solving specific language problems -- see next:

c. elaboration of the cognitive capacity for offline linguistic introspection

Language specialists use the same offline introspective capacity as in normal use,
      though sometimes extended and refined, e.g.,
         artistically by poets and other writers
         with systematicity and rigor by linguists
Perhaps analogous: any skilled or creative elaboration of a natural capacity
   e.g., from natural motor control: skilled labor and dance

5.2 "empiricism" vs. introspection

5.2.1 a point-by-point empiricist challenge and introspectionist justification

matchup between 1) reasons often cited for not relying on introspection as a scientific methodology
   and 2) corresponding reasons supporting linguistic introspection as a methodology

a. the existence of consciousness

1) It is not clear that consciousness as a cognitive phenomenon exists.
   Since introspection is here understood to involve consciousness -- in fact, at two levels --
      it may have no actual cognitive basis.

2) The existence of consciousness, much debated elsewhere, is not appropriate for debate here,
    since that issue is more fundamental than the present one.
Accepting the existence of consciousness, as done here, licenses more than the specific
   investigation of introspection, while denying it forecloses much more than just introspection.

However, findings about the properties of introspection might in turn be adduced
    for arguments for the existence of consciousness.

b. consistency within an individual

1) Introspective reports are poor because they are inconsistent
   across different reports about the same phenomenon made by the same person at different times.

2) Consistency across the same individual's introspective reports is actually higher or lower
   depending on where the linguistic aspect in question ranks on the profile.
Thus, in the offline excerptive condition of attending, an individual is highly consistent
   in judgments about the meaning of an open-class form, e.g., *bucket*
   or the well-formedness of a sentence, e.g., of *I didn't go there. / *I didn't went there.*

c. consistency across individuals

1) Introspective reports are poor because they are inconsistent
   across reports about the same phenomenon made by different individuals

2) Consistency across different individuals' introspective reports is actually higher or lower
   depending on where the linguistic aspect in question ranks on the profile.
Thus, in the offline excerptive condition of attending, different individuals are highly consistent
   again in judgments about the meaning of an open-class form or the well-formedness of a sentence.

NB: There is a comparable agreement across introspective reports of different individuals
   as to what they perceive on viewing optical illusions.

NB: relevant to both b. and c.: introspection vs. report of introspection
Experiencing the result of introspection in consciousness and reporting that experience
   involve different cognitive processes and capacities.
   An individual can have large facility in one and not in the other (innately or from practice).
   Analogy: perceiving what is in a visual scene vs. describing what one perceives.
Introspection is best used as a scientific methodology by individuals with both facilities.

d. relation to neural infrastructure

1) If the existence of consciousness is granted, the content appearing in consciousness
    -- and hence, in introspection --
   may actually be independent of or not regularly correspond to

the unconscious cognitive processing assumed to underlie it --
i.e., the organization and functioning of the neural infrastructure assumed to underpin it.

2) As just seen, the conscious content yielded by introspection is:
    a) largely consistent in an individual through time for higher-access aspects of language
    b) largely consistent across individuals for higher-access aspects of language.
Further, it appears to be:
    c) largely coherent within any act of introspection
    d) extensive in quantity within many acts of introspection.
Accordingly, it likely relates in a principled lawful way to unconscious neural infrastructure

If not so, a theorist must conclude -- and then the burden is on her to explain why it is -- that:
    a) introspective and other conscious content, in all its extensiveness, is fully
        confabulated, random, or otherwise decoupled from the neural substrate
    b) the consistency and coherence of introspective content are independent emergents.

Since this seems barely tenable, the conclusion here is that a principled relationship does exist.
In turn, given such a lawful relation, introspective or other conscious content should
    be usable to propose properties of unconscious neural organization.

e. correlation with other methodologies

1) Introspective reports disagree with the properties of language
    ascertained through other, more empirical methodologies.

2) Actually, findings from the higher-access aspects of the introspection profile
        seemingly do correlate well with findings from other methodologies.
    E.g., one's introspection on the meaning of an open-class morpheme might correlate well with
        one's responses as a subject in a psycholinguistic experimental procedure on semantics.
    Or, one's introspection on some of the distinct senses of a polysemous morpheme
        might correlate well with some of the senses found through a corpus search.

It is lower-access aspects of the introspection profile --
        e.g., to syntactic principles and patterns, or to sub-second time processes --
    that may tend to disagree with findings from other methodologies.

Thus, the familiar field worker's adage "Never trust a native speaker" typically refers only to
        asking a speaker questions like where and why a certain syntactic pattern occurs.
    But this is an introspectiively low-access aspect of language
        readily outdone by the methodology of comparitive syntactic analysis.
The adage certainly does not refer to asking, say, about the meaning and well-formedness of a form,
    for which in fact the field worker depends on the native speaker's judgments,
    and which is an introspectiively high-access aspect of language --
        one that may correspond well with findings from other methodologies.

f. faultability and repeatability

1) Reports of introspective findings are not faultable or experimentally repeatable.

2) On the contrary, introspective reports ARE indeed--
a) faultable, e.g.,
   a native speaker's characterization of some grammatical point faulted by syntactic analysis
b) repeatable, e.g.,
   in asking a native speaker at different times for the meaning of the same open-class morpheme
      and getting the same response
Both results again rest on introspection's profile of better and worse capabilities--
   here, a low-access aspect and a high-access aspect, respectively.

g. utility

1) Even if introspection exists as a cognitive phenomenon, it is unnecessary as a methodology
   because objective methodologies do the job better.

2) On the contrary, linguistic introspection may be the only direct means for accessing
   certain aspects of language, such as the meaning and connotation of forms and expressions.

Even if, say, neuroscientific brain imaging some day purports to detect the neural activity
      that correlates with a word having a certain meaning for a hearer,
   the hearer's report of experiencing that meaning would still be indispensible
      to determine if what the imaging has picked up is indeed word meaning, not something else.

In any science, a researcher must go to where the relevant data under study are to be found.
   E.g., a geologist must go examine the earth = physical travel to terrestrial sites.
Likewise, a semanticist must go to where meaning is located, namely, in consciousness experience.
   Here, "going to" = introspection.

h. subjectivity vs. objectivity

1) Introspection is a purely subjective process and cannot be checked by external probes.
   The other methodologies are objective and do not exhibit this drawback.

2) True, introspection, like consciousness in general, is subjective --
   a first-person experience that cannot be probed by third-person means.
But all so-called "objective" methodologies necessarily also have such a subjective component.
   Thus, ultimately, any reservation held with regard to introspection on account of subjectivity
   must also be held with regard to the so-called objective methodologies.

Specifically, introspective processes used in observing language -- whether as a user
   or as an analyst -- are of a piece with the cognitive processes used by

"objective" scientists assessing their empirical findings.
The latter are the cognitive processes involved in:
deciding where and how to collect data, observing and assessing the data,
weighing results, making generalizations, forming theories, etc.

Since introspection is an integral part of such cognitive processes in "objective" investigation,
accepting it there should mean accepting it as well in the cognitive processes used
in investigating language.

6. conclusions

a. The rejection of linguistic introspection as a methodology may in part stem from an
insufficient analysis of its better and worse capacities that allows its drawbacks
to be overgeneralized to the whole.
Such drawbacks are here seen only as the troughs in its overall profile.

b. Each methodology has a different profile of what it is better or worse at.
Some are uniquely capable in some regard.
Introspection, in fact, has unique access to meaning.

c. Introspection is normal and necessary to discourse, as well as to offline linguistic cognition.
Its profile of better and worse capacities may well have selectively evolved as such
in accommodation to these functions.

d. In any case, any rejection of linguistic introspection as a METHOD of scientific investigation
must not translate into a disregard of introspection as an OBJECT of scientific investigation.
Introspection does exist as a cognitive capacity,
and investigation must account for its specific profile of properties.

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