

Tampereen yliopiston suomen kielen ja yleisen kielitieteen laitoksen julkaisuja 16
FOLIA FENNICISTICA & LINGUISTICA
19. Kielitieteen päivät Tampereella 8.-9. toukokuuta 1992
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263-282

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EPISTEMIC MODALITY OR THE AUTHOR'S COMMENT IN ACADEMIC WRITING¹

1. INTRODUCTION

This study was inspired by the needs of teaching translation for academic purposes. The paper discusses epistemic modality and its linguistic manifestations in English and Finnish academic texts. The focus will be on epistemic modality and its rhetorical functions in academic writing rather than the description of epistemic modality as a linguistic category. In order to study epistemic modality contrastively, I have suggested a tripartite classification of epistemically modalized expressions.

By academic texts, I shall in this paper, refer only to texts whose originator and recipient are both members of the academic community. I shall furthermore restrict my discussion to texts in the humanities and the behavioural sciences. Popularized scientific articles and textbooks or other language for specific purposes (LSP) text forms will be excluded from this discussion.

Academic texts are by no means mono-functional even if their primary function is to convey information. The additional functions are at least the following. The scholar claims primary ownership to the scientific innovation or research result or finding, which s/he reports. In addition, the scholar's foremost aim is to achieve acknowledgement in the academic community, particularly if s/he is at the beginning of his/her career, or maintain the already achieved status (for further discussion of this topic (see Ard 1985: 5; Valle 1986: 168). These points are not necessarily language- or culture-bound, and one might assume like Widdowson (1979: 51-52) that scientific discourse is a universal way of communicating in a certain special field. According to him, in science, a universal style and a secondary culture system dominate. However, as has been convincingly argued by Galtung (1979 and 1983) and Clyne (1981 and 1987), this view can no longer be upheld. Rather, we should say that there are both universal and culture- and language-bound features in academic discourse. Different cultures share the communicative functions, but the linguistic and rhetorical means expressing these functions are language- and culture-bound. A Finnish academic are confronted with a cultural conflict when they write in English because they have to address simultaneously Finnish and international readerships. As the conventions are different, hence the expectations of these two groups are different.

Each scholar is, as a writer, influenced by the socialization process of a certain culture and community irrespective of his/her awareness of this process. Secondly, s/he is influenced by the paradigm, discipline and field of study s/he represents, and thirdly, s/he is a creative personality with his/her own personal way of expression, idiolect. All these have an effect on

¹ This paper is a truncated and modified version of an article entitled "Episteemisestä modaliteetista tieteellisessä tekstissä" published in *Virittäjä* 4/1992 in Finnish by the same author. The Finnish publication contains the full list of the primary sources. Available at <https://journal.fi/virittaja/article/view/38534>

the writing process and the expectations and interpretation of the reader's own culture. (cf. also Korhonen & Kusch 1986; Schröder 1986)

2. EPISTEMIC MODALITY

An academic article is interactive in nature. The most representative advocate for the interactive view of texts is Widdowson (see e.g. 1979, 176). A research article is the means and end of academic communication. It does not contain solely assertions, but also the writer's commitment to these assertions. The writer employs linguistic devices to modify his/her message and his/her attitude to the contents of the message and his/her attitude towards the interlocutors. Moreover, the writer of an academic article has to protect him/herself since the ordinary communicative aims are a threat to the successfulness of communication (Brown and Levinson 1978). The writer may have a need to soften his/her expression in fear of losing his/her face and neither does s/he want to threaten the face of the reader.

2.1. Defining epistemic modality

Although modality is a universally inherent characteristic of natural languages, defining it is by no means unproblematic since it does not form a clear grammatical category. This is probably the reason why researchers of modality, more often than not, have limited their investigations to modal verbs and verb-related matters, such as modes and tenses, for instance, in English Palmer (1979, 1986) and Coates (1983). A major problem in the study of modality is presented by the tendency of natural languages to employ the same linguistic means for several communicative purposes of which modality is only one.

As von Wright (1951) set up his modes alethic, epistemic, deontic and existential modality for the purposes of investigating their formal structure in terms of truth value, his aim differed from that of a linguist. Of von Wright's modes alethic modality (modes of truth: necessary, possible, contingent, impossible) comprises the ontological world, epistemic modality (modes of knowledge: verified, undecided, falsified) again the world of knowledge. In ordinary language, even epistemic modality is most often, if not always, subjective in that it relates to an inference by the speaker and it is not simply concerned with objective verifiability of the proposition (Lyons 1977, 799).

I include in epistemic modality von Wright's categories alethic and epistemic in accordance with Coates (1983) and Lyons, but unlike Cristea (1982) who takes these to form two separate categories. I do not, however, include deontic modality in this category thus disagreeing with Kerbrat-Orecchioni (1980).

According to Lyons (1977: 797), any utterance in which the speaker explicitly qualifies his commitment to the truth of the proposition expressed by the sentence he utters, and this qualification may be made explicit in various components, is an epistemically modal or modalized utterance. Furthermore, Lyons makes a distinction **epistemic** and **deontic modalities**, in other words, between expressions of knowledge and belief and expressions of obligation and permission. Semantically this distinction is reasonably clear. However, the linguistic and grammatical manifestations of these two can be identical and this might be the reason why in some studies epistemic and deontic are combined.

In addition, Lyons (1977, 797 ff.) draws a distinction between objective and subjective epistemic modalities. The latter encloses the author's attitude to the propositional content of

his/her utterance whereas the former contains generally accepted or scientifically proved knowledge. Lyons, however, admits that making this distinction between subjective and objective modalities is uncertain, to say the least. It is, however, relevant if we study the language use in exact sciences, which often deal with generally accepted facts or empirically proved knowledge (for more on this discussion see Meyer 1989, 127).

In one of the footnotes of his book *An Essay in Modal Logic* (1951: 28) von Wright mentions **dynamic modality**. By this modality, he seems to mean utterances that express ability or capacity. Kangasniemi (1992) has employed in his doctoral thesis on modality in Finnish the three-fold categorization: dynamic, deontic and epistemic. Again drawing the distinction between deontic and epistemic modalities is semantically easy but formally difficult. For instance, *can* in an academic article usually expresses the ability or capacity of a method, but often the meaning is simply ‘sometimes’ or ‘in some cases’. Palmer (1979) distinguishes dynamic and deontic from epistemic modality by asserting that deontic and dynamic are “modalities of events” whereas epistemic is “the modality of propositions”.

3. LINGUISTIC MANIFESTATIONS OF EPISTEMIC MODALITY

I will not give quantitative figures of different ways of expressing epistemic modality in English and Finnish. My purpose is, at this point, to map out and suggest a classification of the linguistic means Finnish and English scholars use when writing in their mother tongue. For this purpose, I have studied 10 English and 10 Finnish research articles. So far, I have not studied translated texts or English texts written by Finns in English. Even if I do believe that different cultural conventions in expressing modality are the reason why many translated texts, although grammatically correct, fall short of their communicative purpose. The two languages have formally but not pragmatically equivalent expressions. Modality is one of the last things we learn in language, if we learn it at all (cf. Holmes 1982).

3.1. Classification of epistemically modalized utterances

I suggest a tripartite classification of epistemically modalized utterances (to some extent in accordance with Smith 1984). The first category, **verbal elements of modality**, comprises modal auxiliaries, modes and independent verbs expressing modality such as the performative verbs *claim* or *suggest* which can also be hedged by a modal or semi-modals. In such cases we can talk about “hedged performatives” (cf. Fraser 1975). Category 2. **lexical elements of modality**, includes modalized nouns (*hypothesis vs speculation*), adjectives, their forms expressing comparison and adverbs (*admittedly, insufficiently, probably*). Naming this category lexical elements of modality may seem controversial or inconsistent since verbs of course are part of the lexis too. However, I wanted to avoid the much used dichotomy verbs/nonverbs since quantitatively the category of nonverbs is rather large and diverse in academic text in particular. Category 3. contains other markers of epistemic modality: clitics, pronouns, the use of the first person vs. the passive voice. The use of passive voice could have been included in category 1. as well, but when the scholar chooses to use the passive construction s/he simultaneously makes a negative choice, in other words chooses not to use the more subjective form of expression, the first person and active voice, I have included the use of passive in category 3.

The incidence of expressions included in category 3. vary most from one another and thus are more subject to the writer's personality and position. It is also in this category that there is a strong element of pragmatism involved.

Within these categories, epistemic modality can be depicted as a scale or continuum. At one end, there is the maximal certainty that the proposition is true at the other the minimal certainty that the proposition is true (cf. Holmes op.cit.). Leech (1971) talks about the "scale of intensity". However, such as in the case of many other phenomena of natural languages, the exact point where each expression should be placed on this scale is difficult if not impossible to indicate, which of course, adds to the translators' and non-native speakers' difficulties. At the two ends of the scale the task is easier, but where exactly 'certain' ends and 'probable' starts and gives way to 'possible', is difficult to say.

Hedging belongs to the minimal end of the scale of certainty. Hedges are rather common in Finnish academic discourse (see e.g. Markkanen & Schröder 1987, 1989). Prince et al. (1982) have classified different linguistic means used for hedging in English. It is the other end of the scale, maximal certainty, which has not been discussed to the same extent. It is true that saving one's face requires hedging rather than emphasis, but using hedges to the same extent while writing in English as one would do writing in Finnish, can be disastrous for the credibility of the writer and his/her research results. However, the frequency of hedges seems to depend on how established an academic the writer is as well as the writer's personality in general.

In section 3.3.3. I shall briefly explicate the grounds by which each group of linguistic phenomena has been classified into a certain category and try to point out its meaning in respect of epistemic modality.

3.1.1. Verbal elements of modality

a. Modal auxiliaries

In English academic texts, the most commonly used modal auxiliaries are, *can* and *may*. To explicate this observation, Meyer (1989: 128) has suggested that in declarative sentences such as *The railways may be improved.* and *The railways can be improved.* the former deals with "the possibility of the fact" (factual) and the latter "the possibility of the idea" (theoretical), and that *can* is weaker and the meaning of it is 'sometimes'. However, *can* may express capacity or ability, in other word, **dynamic modality**, and we should keep these two apart. Banks (1989) again has remarked that the use of *may* takes the emphasis away from the factual so as not excluding other possibilities as in "... *the null hypothesis ... may be accepted ...*".

The auxiliary *will* expresses, besides future tense, volition and emphasizes the writer's views. Both *will* and *would* also refer to the repetitiveness of a certain process or procedure. *Neutron fission of U235 will produce two given fragments of nearly equal mass.* This kind of use is not common in the humanities apparently for the reason that the phenomena studied are seldom repetitive or regular.

Must is used epistemically in scientific writing in the meaning of 'presumably' or 'probably'. It makes the writer's commitment to the factuality of the proposition explicitly dependent on the limitations of his/her knowledge. We should be aware of the difference of the difference between the epistemic and deontic uses of *must*. The deontic use would refer "obligation" or "objective necessity".

Should often appears in academic writing in almost phrase-like expressions such as *It should be noted that ...* (Huomattakoon, että...). This could be called a hedged imperative. The writer expresses subjective necessity. According to Meyer (1989:132) these utterances refer to logical and ethical principles which can be seen as some kind of objective authority.

b. Independent modal verbs

The choice of the reporting verb expresses modality. For instance, *appears, suggests; vaikuttaa, tuntuu*. Evidentials are often employed for expressing modality. Leech (1971: 95) has pointed out that even in verbs there can be found chains in which the intensity or the degrees of certainty decreases from left to right in such chains as *proves / demonstrates / suggests / implies*. also pre- and post-modifiers in verb phrases increase epistemic modality *a long way from proving, is said to predispose, osoittaa vakuuttavasti, että ...* we should also add here the negations of independent verbs ... *ei näytä ... , ... ei pysty osoittamaan pitävästi ...* (does not seem, ... cannot prove convincingly ...).

c. Mode

Modes can also be employed for expressing modality. Indicative is used for expressing certainty. Potential and conditional both in Finnish and in English express uncertainty and function as hedges as in examples 1.a. *johtunee* (probably depends on) and 1.e. *olisikin* (would be).

3.1.2. Lexical elements of modality

a. Adverbs and adjectives

Adverbs are self-evidently an important group for expressing modality. In academic writing, we often find adverbs such as *possibly, misleadingly, mahdollisesti, harhaanjohtavasti* and so on, which reveal the author's attitude. In example 7.a. (Smith 1984) *admittedly* shows that it is only with some reluctance the writer concedes to the content of the proposition. An interesting adverb is the Finnish *varmasti* (certainly) because it can be used for too opposing purposes: for emphasizing certainty or for hedging.

Adjectives, evaluative adjectives in particular, and their comparative forms express epistemic modality in scientific writing. It seems to be possible to employ the comparative form for both hedging and emphasis as in 1.e. *tärkeämpää* and *tärkeämpi* (more important) as well as in 2.c. *more autonomous*. The superlative appears only at the maximal certainty end of the scale. Evaluative adjectives such as *major* and *minor* or in Finnish *suuri, merkittävä, mitätön, vähäinen* (major, important, meaningless, minor) or in ex. 4.e. *räikeä* (flagrant, glaring) indicate the author's attitude.

b. Nouns

The choice of the reporting noun expresses the writer's attitude. It is not insignificant whether the author uses the relatively neutral noun *hypothesis* or contrastively *speculation*, which reveals the writer's skepticism. One group of nouns in particular should be mentioned here, namely the emotive nouns, for instance, *disparity* (yhteiskunnallinen eriarvoisuus), *räikeä*

tietämättömyys (glaring ignorance) or **sankariaikoja** (heroic times) in example 4.c. The noun modifiers and qualifiers, for instance, *ample justification*, *general agreement* or **kohtalainen teoreettinen selkeys** (a fair theoretical clarity) modalise the noun phrase even further. These qualifiers are, of course, included in the above group a.

Some cases such as the partitive in Finnish function as a hedge, for instance, in titles and subtitles. In English the equivalent would be a prepositional phrase, for instance, *On the use of ...* .

3.1.3. Other markers of epistemic modality

The epistemically modalized utterances in this group often belong to the so called periphrastic linguistic phenomena and therefore this group is more heterogenic and fuzzy at its edges than the above mentioned two.

a. 1st person vs passive voice

The indefinite in Finnish (cf. Shore 1986) does not equal the passive voice in English even formally let alone pragmatically. In Finnish, passive forms are used in academic writing more frequently than in English. Passive in Finnish is in a way more “active” since it always requires an actor and includes the writer as well as the reader in the activity in question.² In English generic expressions and active voice are used for this purpose even if the agentless passive is not entirely impersonal as it can refer to people in general or a certain group of people such as a certain school of researchers (cf. Siewierska 1984: 237 ff). One problem is presented by semantically weak verbs, for instance, *found* and *made*. They should not be positioned sentence finally (as they necessarily will be in a passive construction) since they then gain too much weight and corrode the information flow (cf. Perttunen 1977: 39).

But there are also similarities, for instance, in text organizing metatext the passive voice is used in both languages ex. **Seuraavassa tarkastelun kohteena on ensin työn arvostus ... Sen jälkeen keskustellaan ...** or First it will be argued that. Both languages refer to the investigation at hand in the passive *It was suggested in 2.4.3. ...* , **Kuten edellä todettiin**. In both cases, it was the author who suggested. However, these are not epistemically modalized uses of the passive voice. It is only when the writer does not use the first person at all but hides behind impersonal forms that we are dealing with hedging (see also Lachowitz 1981 and Swales 1990: 114) or when the first person singular is used emphatically, for instance, in Finnish using both the pronoun and the personal ending ex. b. **Kun minä osoitan, että ...** (When I show that ...). **Käsitykseni mukaan ...** *I think that ...* . The writer is saying that s/he is not claiming that the contents of the proposition are generally accepted.

Korhonen and Kusch (1986) have studied how philosophers use first person and passive forms. In their study the background variables were age, paradigm, language and position. They concluded that younger writers who were still at the beginning of their careers used passive constructions more frequently than older writers who had already established their positions in the academic community.

b. The use of metaphor, simile, antithesis and analogy

² e.g. in English, *the roof was blown away* literally translated as *katto puhallettiin pois** is ungrammatical in Finnish and needs a subject *tuuli puhalsi katon pois* = *the wind blew the roof away*.

The choice of metaphor expresses the author's attitude. Examples 7.a. ... *one more skeleton in an area littered with bones of insufficiently tested hypotheses* (jälleen yksi luuranko tälle tutkimusalueelle, jolle jo ennestäänkin on kylvetty liian monen riittämättömästi testatun hypoteesin luut) and **on vastustettava postmodernistien 'lyödä kaikki läskiksi' mentaliteettia** (... to give one hoot to everything ...) illustrate the use of metaphor in this sense. Example 4.c. contains thesis and antithesis, repetition and opposition **totuus/valhe** (truth/lie) which in this case express strong commitment to the propositional content.

c. Clitics **-han/-hän, -kin**

In the Finnish language the clitic particles **-han/-hän** and **-kin** can express epistemic modality. I shall not discuss the syntax of clitics here even if it does have an important role in the interpretation of clitics. For a detailed discussion on the syntax of clitics I refer to the studies by Auli Hakulinen (1979) and Jan-Ola Östman (1977).

Clitics are used as reminders and to show that the writer knows that the readers share the same knowledge. Hakulinen (1976: 21) points out that using reminders is an essential part of argumentation and that if one deletes particles the text becomes difficult for the reader to process, and also the meaning of the text may change. In English, it is often the Wh-clefts and It-clefts that are employed for the same purposes (cf. Kuno 1976: 425; Prince 1978: 883; Collins 1991: 100). The clitic **-han** also functions for seeking agreement "Would you not agree that ...". Another conversational implicature connected with the use of **-han** is the above-mentioned face-saving effect. In other words, the writer marks, to be on the safe side, those declarative sentences with the particle **-han** which s/he presupposes to be known to the audience but cannot be absolutely certain. Thus, s/he will not embarrass the reader by offering presupposed knowledge as a fact and, on the other hand, s/he avoids the difficulty arising from the possibility that the fact mentioned would never have occurred to the reader. Hakulinen (1976: 22) comments that the writer may, however, use this same device to show his/her own superiority by stating as self-evident, something which is not ex. 8.a.

The clitic particle **-kin** in Finnish, whose primary meaning is 'also' (see Östman 1977 for a more detailed discussion) marks the proposition to be the writer's own opinion and not shared knowledge, unlike **-han**. In examples 1.b., 1.d. and 1.e., näyttää**kin** siltä, olis**ikin** (it would seem) **-kin** has this function. The clitic is semantically redundant, and it could be omitted without otherwise changing the meaning of the proposition.

d. Discourse structure

Even the discourse structure can express epistemic modality. There can be sequences in argumentation such as the following: *the first impression is ... but studies show ... and in the absence of an ... the most likely explanation is ...* (Smith 1984), which show the relations between propositions and the writer's attitude to them. Conjunctions or connectors which express contrast, concessivity, or adversativity, can be epistemically modalized *since ... although ... furthermore ...*. There is partial overlapping with 3.1.2. b. here because thesis and antithesis are often marked by the above mentioned conjunctions. They naturally also function intratextually as cohesive devices. English texts seem to require more of these than the Finnish where linearity alone is often sufficient.

The use of quotation marks should be added here. Quotation marks can express attitude as example 2.g. a list of the ‘greats’ referred to is a list of well-known political scientists – all men. Weizman (1991) has studied the pragmatic use of quotation marks in journalistic writing and her finding in that genre are similar to mine.

3.2. Clustering of epistemically modalized expressions

As the example text extracts show, epistemically modalized expressions seldom appear alone. In a synthetic language such as Finnish, in particular, even epistemic elements can appear in clusters. In example 1.e., we find 5 different hedges in the same sentence: the conditional, the clitic **-kin**, adverb **ehkä** (perhaps), evaluative adjective tärkeä (important) hedged by the comparative. The writer’s motive for using these is probably explained by conversational implicature. This phenomenon is not rare in English research articles either as can be seen in 2.a. *It seems obvious, however, ...* where the evidential *seems* and the conjunction *however* hedge the adjective *obvious*. To transfer all the clusters from Finnish into English would hardly convince the English readers.

4. CONCLUSIONS

To interpret and express epistemic modality in a foreign language in particular is not easy. The greatest difficulty is presented by the fact that languages can express several pragmatic and semantic functions by the one and same linguistic element and on the other hand the same pragmatic and semantic functions can be expressed by many different means. Another problem even in academic writing is the culture-boundedness. The communicative functions may be universal but their linguistic manifestations are different. Finnish academic conventions seem to require more hedges than the English do. If we use hedges, including the passive voice, to the same extent in English as we do in Finnish the text hardly convinces the reader of the author’s expertise.

Examples

1.a. Miehillä työn arvostus on prosenttiyksikköinä ilmaistuna laskenut naisia enemmän. Tämä johtuneekin lähes pelkästään erilaisesta lähtötasosta.

1.b. Kaiken kaikkiaan näyttääkin siltä, että työn järkkymistä kuvaavat erilaiset indikaattorit eivät ilmennä mitään työn arvostuksen laskuun viittaavia piirteitä.

1.c. On mahdollista ajatella, että voimakas sitoutuminen työhön voi toimia vastarintapotentialina työelämän arkipäiväisessä ”pelissä”, jossa ”pärjääminen” tai ”hommista selviäminen” on tärkeää (vrt. Buravoy 1979).

1.d. Näyttääkin siltä, että huolet työn järkkymisestä tai kriisiytymisestä ovat vähintään liioiteltuja.

1.e. Työn arvostuksen laskun sijasta olisikin ehkä tärkeämpää arvioida muutoksia toiselta kannalta.

1.f. Kysymyksen ajankohtaisuutta lisää varmasti se, että palkkatyötä ei näytä riittävän kaikille.

(Ylöstalo, P. Työn arvostuksen muuttuminen ja palkkatyöhön sitoutuminen. *Sosiologia* 2/1986 99-105)

2.a. It seems obvious, however, that political theory also stands to gain from being interpreted from this additional perspective. Indeed to the extent that a whole dimension, which major thinkers from Plato to J.S. Mill saw as crucial to their political thought, has been given cursory or separate treatment, it actually corrects a distortion in conventional scholarship.

2.b. It seems reasonable to anticipate that the further a reading move in this direction, the less it will be integrated with other readings in political thought and the more it will make a more autonomous contribution in the field of women's studies and feminist theory. It should also be evident that women's interest in traditional political thought is motivated by practical concerns in the present.

2.c. While women may disappear from arguments and patriarchal assumptions might conflict with liberal claims, it is also the case that attention to themes dealing with women and their role in the family can often shed light on an entire theory.

2.d. What I find unclear in Lloyd's book is ...

2.e. The implication must be that ...

2.f. This article has suggested that ...

2.g. History of political thought courses that look at the canon tend to focus on a similar list of 'greats'.

(Coole, D. Rereading political Theory from a Woman's Perspective. *Political Studies* 1986, XXXIV 129-148)

3.a. Counseling can help families anticipate the difficulties and uncertainties they may face and assess how changing family circumstances and changing patient needs may affect each other.

(Burden D. Caring for the caregiver. *Psychology Today* July/August 1989.

4.a. 'Kielitieteen historia' –projektini yhteydessä olen joutunut käymään läpi saman aineiston kuin Foucault edellä mainitussa kirjassaan, ja voin osoittaa, että käytännöllisesti katsoen yksikään hänen kieltä tai kielitiedettä koskeva tulkintansa ei pidä paikkaansa (Itkonen 1988 a). Eniten hämmästyttää räikeä tietämättömyys miehessä, joka on luonut maineensa ennen kaikkea historian tuntijana. Seuraavaksi eniten hämmästyttää se, ettei näköjään kukaan ole vaivautunut tarkistamaan hänen tulkintojensa paikkaansa pitävyyttä ...

4.b. Niinpä, kun minä osoitan, että ...

4.c. Kehotan tiedemiehiä kuitenkin huolellisesti miettimään, mitä seuraamuksia on käsityksellä, jonka mukaan valhe (ja nimenomaan valhe, joka tiedetään valheeksi) on tärkeämpi kuin totuus. Mielestäni tällä hetkellä on siis ilman muuta vastustettava postmodernistien 'lyödä kaikki läskiksi' mentaliteettia. Mutta saattaa olla, että sitten kun tämä mentaliteetti kuuluu historiaan, tulen arkisen aherruksen keskellä kaipaamaan näitä sankariaikoja, jolloin tarvittiin kielitieteilijää pelastamaan totuuden käsite ja sen mukana koko länsimainen ja itämainen sivistys. ...

(Itkonen, E. (1988) Postmodernismi ja kielitiede. Suomen kielitieteen yhdistyksen julkaisuja.)

5.a. In a recent paper in the *Philosophical Review*, Mr. A.C. MacIntyre criticizes what he takes to be the current interpretation of a celebrated passage in Hume's *Treatise* and suggests an alternative for which he claims the important merit that it makes Hume's ethical views self-consistent. The main point that I wish to make in this discussion is the general one that MacIntyre's treatment of the question whether Hume did or did not affirm the 'autonomy of morality' is vitiated by failure to make clear what he understands by that phrase; but I shall also contend more particularly that MacIntyre's arguments against the reviewed interpretation are less than conclusive, and suggest that even on MacIntyre's interpretation Hume's views are by no means wholly consistent with themselves.

(Atkinson, R.F. (1973) Hume on 'is' and 'ought'. A reply to Mr MacIntyre, Hudson, W.P. (ed.) *The Is – Ought Question*, Oxford)

6.a. The easiest and most uncontroversial way of defining political philosophy is ...

(Quinton, A. (ed) *Political Philosophy* 1967, Oxford)

7.a. Admittedly Burns and Gibbens recognise the need for family studies, but in their absence we are left with one more skeleton in an area littered with the bones of too many insufficiently tested hypotheses. To show by a classroom example that disturbances of the sex ratio may be brought about by an X-linked gene in the genotype of the mother or fetus or both is a long way from proving that such a mechanism is indeed at work in spina bifida and anencephaly.

7.b. This speculation does not deserve to be taken seriously, however, until the necessary pedigree or experimental data have emerged.

(Spina Bifida and Sex Ratio. *British Medical Journal* 280, 6222: 1998. Eg. Smith)

9.a. Tämä on selvästikin sidoksissa tietokäsitykseemme. Onhan nimittäin yksi kaikkein tärkeimmistä paradigmaattisista säännöistä se, minkälaisina pidämme käyttämiämme käsitteitä.

(Nurminen, M. (1986) *Kolme näkökulmaa tietotekniikkaan*. Helsinki)

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