

pœia was not formally ratified by the sixth International Pharmaceutical Congress, nor at any later meeting. Nevertheless, a study of this document gives the most complete knowledge of any single source on the state of pharmacy and the medicines used throughout the world fifty years ago.

The writer believes that every teacher of pharmacy and pharmaceutical history should bring this topic to the attention of his students. Teachers of Pharmaceutical Latin may find many valuable exercises by using extracts from this complete Latin work. As reference for those interested, the *Chemist and Druggist* for 1885 gives a good account of the Brussels Congress and prints the Latin pharmacopœia complete. The *Druggists Circular* for 1885 describes the meeting of the Congress and gives an English translation of the International Pharmacopœia.

MEANING——?*

BY WILBUR L. SCOVILLE.

In writing or speaking it is easier to mean what we say than to say what we mean. As Wilson Follett puts it "the use of a wrong word most often denotes a broken link in one's acquired information" and "its meaning is that which our hearers supply for themselves."

A school boy is credited with defining a synonym as "the word you use when you don't know how to spell the word you should use." In many cases it might be defined as the word we use when we neglect to discriminate as to its meaning.

In legal matters the choice of words is highly important and legal documents are filled with seemingly superfluous synonymous phrases which are used to forestall technical or ambiguous interpretations.

Teachers who mark examination papers are painfully aware of the need to interpret, kindly it is hoped, phrases by the writers who may or may not mean what they say but do not say what they mean. Such faults are not confined to students. Are any of us wholly guiltless? How often are we saved from explanations by our comprehending audiences who correctly interpret our ambiguous phrases, particularly in scientific discussions? We may think that we have stated a subject clearly but our hearers may have understood because they are sufficiently familiar with the subject to grasp our meaning in spite of faulty statements.

Herein is the difficulty of writing popular articles on technical and scientific subjects. We need for this to be careful not only to mean just what we say but to say it in words which the reader will understand. The wise speaker or writer does not assume too much technical knowledge on the part of his audience.

Even such meticulous works as the Pharmacopœia and the National Formulary may slip in some of their phrases.

For instance, both books describe certain and several acids as having "an acid taste" or "an acidulous taste." To the chemist, who knows that many acids are sour in taste, in moderate dilutions, the meaning is plain. But not all acids are sour in taste. Barbituric and picric acids are bitter; benzoic acid is pungent and biting; boric acid is not sour; salicylic acid is first sweetish, then acrid; tannic acid

* Section on Education and Legislation, A. PH. A., New York meeting, 1937.

is astringent; oleic and stearic acids are bland; so in this group the term "acid taste" is without meaning.

Furthermore the strength of solution may make a difference in taste. Professor Kahlenberg found that hydrochloric, nitric, sulfuric and acetic acids in high dilutions—($N/400$ solutions) are astringent, while in stronger solutions ($N/200$ and stronger) they are sour.

So when an acid is described as having an acid taste it means what it says but doesn't say what it means.

The newer conception of acidity and alkalinity as expressed by hydrogen-ion concentration has brought some new phrases into use, and until the significance of these has become more settled some confusion in their use may be expected.

The logarithmic expression p_H 5.0 means a definite and understandable degree of acidity; likewise the expression p_H 8.0 means a definite degree of alkalinity. In themselves the expressions have definite meanings. But the expressions are mathematical and when they are qualified there is danger of confusion.

As an instance, under AQUA DESTILLATA is given a test or limitation of acidity, and the test is stated as "indication a p_H of not less than 5.8." To what do the words "not less than" refer? Do they refer to the degree of acidity? or to the mathematical expression?

If we regard them as referring to the amount of acid which should be present, then they mean that there should be not *less* acid present than is represented by a p_H of 5.8. Under this interpretation the water may contain more acid but not less. On the other hand, if the words "not less than" refer to the mathematical expression 5.8, then, since acidity increases with a decrease of p_H numbers, they mean that there must not be *more* than the amount of acid present which is represented by a p_H of 5.8. So less is more or more is less, according to how the phrase is interpreted.

In this case the test itself shows which is intended, but the phrase requires a chemist to properly interpret it.

To a layman the expression is ambiguous, a case of meaning what we say but not saying what we mean.

We cannot always be meticulous in our conversations and it may not be desirable at all times in our writings. I live in "a glass house" in this regard and have no right to be critical of others.

I have noted that errors are frequently long-lived, unless somebody labels them as such, then they die. I hope that I have said what I mean.

Edward Kremers speaking on "State Pharmaceutical History" before the New York meeting of the Section on Historical Pharmacy said:

"Unfortunately, not a few enthusiasts are of the opinion that they can write history without making adequate preliminary studies. In the *Badger Pharmacist* we have an illustration of how one student of the history of our pharmaceutical past has endeavored and is still endeavoring to bring together material for the future historian." No paper was presented for publication, but the speaker acquainted the Section with his preliminary studies so far as they are laid down in the *Badger Pharmacist*, copies of which were shown to the members with brief comments on each.
