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Logic, truth and language in concepts of pain

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Logic and language influence our ideas about the truth of pain, and can alter our understanding of it. Physicians should not tell their patients that there is nothing wrong with them if all their test results are negative, as this denies their patients' experiences of pain. Popular methods of conceptualizing pain may be erroneous. Diagrams of pain or disability are misleading and unhelpful—it is not usually possible to distinguish their components in practice. Giving patients a high or low score for pain behaviour, depression or for health locus of control can influence our views on aetiology in a seriously misleading way. Anyway, aetiological attributions are not always possible from analyses of the experience of pain. The problems of logic and language inherent in assigning pain to emotional causes, in using behavioural approaches, and in defining idiopathic pain and somatization are discussed. The IASP definition of pain is important and useful, provided that it is used appropriately. The recommended version is now 'an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.'

Key words: Behavioural approaches to pain, definition of pain, idiopathic pain, language, logic, somatization, truth.

Logic and language influence our idea of 'truth' about pain. Logic is often ignored in the clinical management of pain and in the effort to appreciate social influences. Consider a conversation in the clinic between a patient who has attended with a complaint of pain and has been submitted to examination and investigation.

Patient: 'Doctor, what have you found out from your tests on my pain?'
Doctor: 'We have done all the tests and I am pleased to tell you there is nothing wrong'.

It may seem surprising but many patients in this situation will say 'I'm so glad'. They do so, not because they no longer have a pain, but because they recognize that the physician is trying to say, rather clumsily, that his patient does not have an illness which is going to get worse. It may be unpleasant as it is, but additional complications such as cancer or heart disease have apparently been ruled out.

A number of patients do not respond like this however. Some ask for more to be done. It is then suggested that they should see a psychiatrist or psychologist, who it is said, will help them to tolerate the pain better. Many of those who appear for such a consultation formulate their problem as follows. 'Dr X said I should see you, but I still have the pain. You don't think I'm imagining it, do you?'. An uneasy reply may follow, something like: 'Well . . . yes, but not deliberately'.

In this instance, the key error of logic is to say, without qualification that there is nothing wrong. Assuming that the pain is not due to malingering, this amounts to a denial of the patient's experience. After all, his senses tell him that something definitely is wrong and he can feel it. Of course we all know that it would be more accurate to say 'We can *find* nothing wrong'. Then it would be wise to add 'Tests cannot detect everything that is physically wrong, and sometimes also people have the experience of pain when something is bothering their feelings. We need to talk about these different possibilities'.

That sounds a little awkward, and there may still have to be a delicate discussion about these alternative explanations, but it is unlikely to be as heated as the one which will arise from the simple invalid assertion that there is nothing wrong.

A second example comes from a fairly popular method of attempting to conceptualize pain. Figure 1 shows a false diagram which is intended to be a partial travesty of the concepts held by some respected authors; in other words, it is a deliberate distortion in order to make a point. Sometimes this diagram refers to pain and sometimes to disability.

Pain and illness behaviour are usually thought to be related in some way, and so are pain and the other components of Figure 1. However, these components are not distinguishable in subjective experience. They are not a layer-cake or a series of geological strata or a set of levels. We cannot use the diagram as a map. If we have pain ourselves, or if a patient has pain, it does not lay out the quantities or even the directions of the relationships. Further, we cannot analyse the

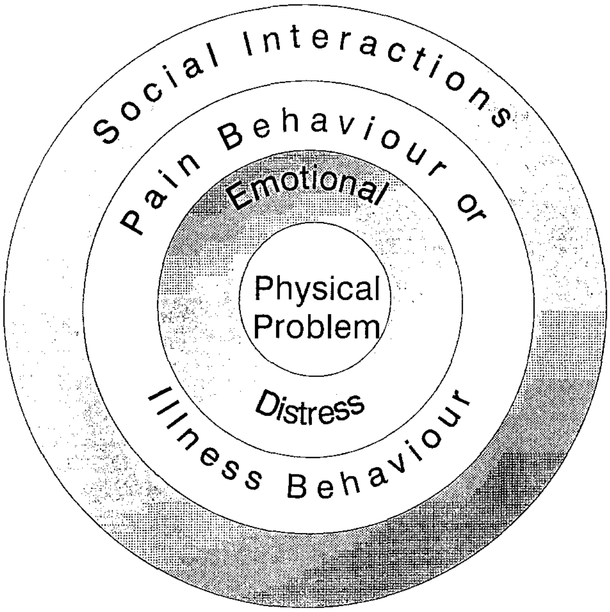

Figure 1. A false diagram of pain.

actual subjective experiences of ourselves or other people in accordance with these schemes. The description of pain may be sensory, affective or evaluative, but usually it is primarily sensory. To the best of my knowledge the most widely used method of ascertaining its descriptors, the McGill Pain Questionnaire (MPQ), has only been used to distinguish the aetiologies of pain in one or two limited instances. Sometimes phenomenology works, at least to the extent of distinguishing syndromes such as trigeminal neuralgia or chronic paroxysmal hemicrania from others, for example, migraine. Most of the time aetiological attributions are not possible from analysis of the experience of chronic pain. Hence, any diagram which purports to describe pain as having compartments is misleading. It lacks logic and distorts reality. We need to recognize that we are usually not in a position to discriminate the causes of pain adequately by reference to its phenomenology. This still allows us to measure or estimate the contribution to pain from any source. We should not, however, put that into a diagram and think that we have portrayed pain.

When the diagram refers not to pain but to disability, it may lead us to think that a physical problem, emotional distress and some aspects of behaviour all contribute in varying degrees to the production of disability. They will differ in importance from one patient to another, and all seem to add their share, but what if, the emotional state follows from the physical state and behaviour follows from either or both? Human responses which are entirely appropriate to a primary physical cause will be wrongly taken to be an additional factor in promoting disability. This aspect is frequently neglected or overlooked in the literature. Many authors who present data on disability and its associated psychological phenomena fail to comment on the possibility that the psychological phenomena are directly proportional to the severity of the disability as a natural response, and do not necessarily increase the disability. This is particularly true for pain.

Severe pain attracts more descriptive words than mild pain,[1] and we can expect that the degree of depression will increase with increases in the severity of pain. Anxiety and depression also appear when pain is more troublesome. It is not logical in such cases to assume that depression or anxiety is the cause of the pain, nor that they necessarily augment pain. The problem can also be seen with locus of control scales. It is quite common to find that patients with more intractable pain place the locus of control outside their own power. If not, they would have removed the pain. If they think they can do something about it they will be more cheerful and more optimistic. If they think they cannot do anything about it they will be less cheerful and less optimistic, and more depressed. The logic of this situation is not that studies of health locus of control tell us who is most liable to be causing his or her own problem, but rather they may tell us who recognizes best the external or internal nature of his or her difficulties. A psychological test result, which is often taken to be evidence of emotional disability, may be doing no more than providing a mirror for the patient's recognition of his actual disability. We may see this soon enough with a patient with paraplegia, but less quickly with a man with a painful stiff back and no other physical signs.

At this point we do not have any problem with the logic. We can begin to recognize, however, that the language of the situation alters our understanding of it. Thus, saying that someone has a high or low score for pain behaviour or for depression, or for health locus of control, begins to influence our views on aetiology, even though the influence may be seriously misleading.

Much of the difficulty centres around the meaning of what is called 'pain behaviour'. It is important to note that the model of pain behaviour is primarily derived from ideas concerning physical illness. Pain behaviour is what we do when we have a physical injury or some other physical cause for distress. Not surprisingly, it has been found that 'pain behaviours' may be correlated with estimates of pathology and vary according to the part involved,[2] grimacing being the most common pain behaviour in patients with

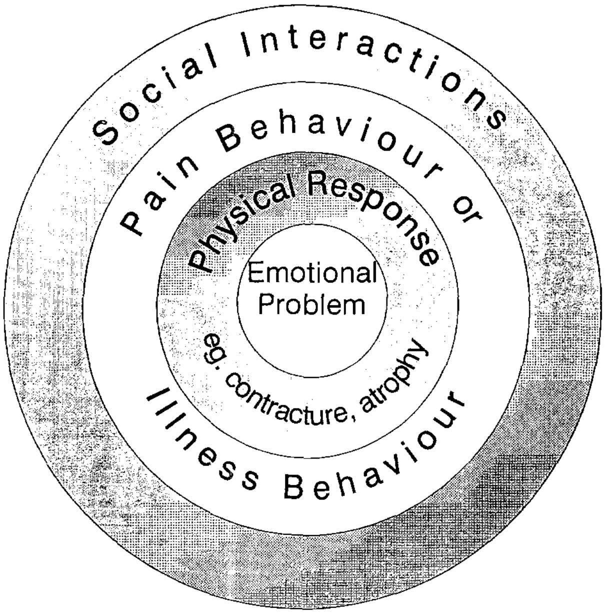

Figure 2. Another false diagram of certain types of pain.

cancer pain in the neck and head, while guarded movement and limping are most common in patients with back pain. Both Keefe and Block[2] and Anderson *et al.*[3] showed a strong association between pain behaviour and physical illness, the former with back pain and neck and face pain, the latter with rheumatoid arthritis.

Starting from the mind

Another perspective is obtained if we think of pain as being due to emotional causes.[4] This point of view has long been advocated and was reviewed in depth by a number of authors, including Merskey and Spear[5] and Sternbach.[6] I now think that the frequency with which pain is primarily due to psychiatric illness is much lower than originally thought, but nevertheless it does occur. Figure 2 illustrates some of the implications involved in trying to assess disability or pain from this perspective. In this case, we start with an emotional problem which we think is the first cause of the disability, and we may discover a physical response consequent upon the emotional problem (for example, a reduction of activity which is associated with tiredness and leads to a loss of physical condition or some overall decline in muscle strength). Perhaps, if the pain is particularly related to a limb, a contracture might even develop (although this is actually rare). This in turn would give rise to a physically painful state for the patient, in addition to the pain caused by the emotional problem. Pain in this context means the same whether it refers to physical or psychological origins. We have a situation in which the psychiatric illness is primary: pain behaviour may ultimately be a secondary effect of psychiatric illness, as well as mediated by physical illness. Pain behaviour is not necessarily different according to its cause, but it could be. Thus, the behaviour that appears in patients who have primary psychiatric illness might be different from that seen in patients who have a primary physical illness with pain. It appears that this issue has not been studied. The questionable feature of the diagram is that again we cannot dissect the patient's experience in accordance with what we take to be its causes.

Behavioural approaches

People with chronic pain, psychological complications and limited physical evidence of disease present a difficult problem. One response is to adopt a behavioural approach, which is open to some criticisms. The extent to which it can be applied to patients with pain can also be questioned, although I am not rejecting behavioural approaches altogether, but rather attempting to characterize the logical problems which arise in some situations with strict operant theory and to recognize both the advantages and the limitations of behavioural methods.

Fordyce *et al.*[7] described the treatment of chronic pain by measures of activation and what they took to be operant conditioning to produce a reduction of 'pain behaviour'. Subsequent papers by Fordyce have reinforced the message that there is a group of patients whose complaints of pain can be improved by physical activation and negative reinforcement. Much pain is made worse temporarily by activity, but then improves as a result: the best model for this is that of pain in normal individuals who increase their exercise.

It appears that the essence of the behaviourist position was developed in relation to patients with very chronic and intractable pain who presented in the Seattle Clinic, where Fordyce did his work. It was there too that Bonica expressed reservations about the excessive application of behavioural theories to unsuitable cases. He said, "The recent emphasis on 'operant mechanisms' . . . is long overdue, but there is a recent trend to believe that most, if not all, patients with persistent pain develop 'chronic pain behaviour' exclusively as a result of such environmental reinforcers." This does an injustice to patients with arthritis, cancer, chronic visceral disease or oral facial pain, causalgia, reflex sympathetic dystrophy and a host of other chronic pain syndromes in which the persistent pain is *not* due to learning, but rather due to persistent dysfunction of the nociceptive system'.[8] Fordyce himself is strict in his selection of cases, and his categories of 'respondent' pain cover exactly the problems about which Bonica wrote. However, the operant conditioning approach is often applied to such cases, despite the caution of its founder.

The operant conditioning approach has not been established as a pure method of treatment. Sternbach[9] recognized that in clinical situations, it is nearly impossible to prove that operant measures can work on their own. Linton and Götestam[10] demonstrated a pure effect in a limited context from a controlled trial of behavioural treatment, but the great majority of work assessing operant programmes and others suggests that most comprehensive efforts at treatment using both behavioural shaping, medication and changes in medication, and psychological interventions of other types, lead to similar results.[11] It is posssible that these findings explain the widespread preference to talk of cognitive behavioural changes rather than cognitive changes. Practitioners are unwilling to give up the approach to cognitive understanding which can only be achieved by thinking in terms of patients' experience of pain.

Fordyce on page 103 of his book has said that the experience of patients is not his concern if the behaviour changes, while less treatment is required and the benefits appear to persist. Others can then worry about whether there has been any beneficial change in the pain.[12] He has done impressive work despite leaving that question for others to answer, but nevertheless many still find it necessary to evaluate the patients' reports of pain. Moreover, if the validity of this concept depends upon apparent long-term successes in treatment, it faces a problem in the lack of specific successes discussed above.

There remains a very simple contradiction in the behaviourist approach. If the description of pain is indeed a behaviour, why is it necessary to ignore the notion that there is an experience which produces the description? Although it may never be exactly verifiable, it always makes sense to suppose that patients have experiences, whether or not they are communicating them. It is not acceptable to act as if there is no such thing as an experience of pain. Certainly it is subjective, it is not shared, and each of us only has our own experience of our own pain and cannot directly tap the experience of another person. However, it is not logical to say that pain is no more than the words used to report the experience. That would mean that without words there would be no pain. I recognize that this may provide an intriguing theme for the solipsist philosopher, but it is of no relevance to practising clinicians. We treat people on the assumption that they have experiences of one sort or another, that they have organs of sense which function well or badly, as the case may be, and that those experiences depend upon the functions of the central nervous system. Subjective experiences are always psychological events and they determine a large part of our ordinary lives and of the practice of medicine. Heat, cold, blindness and deafness are not only words or physical happenings, whether externally or internally; they are also states of sensation or feeling which we have to assume exist, whether anyone bothers to report them or not. The fortification figures of migraine are recognizable to each person who experiences them whether or not they are reported. If someone has true or false sensations, in terms of their existing external stimulation, they still have subjective experiences and psychological events which are often of great importance. What we look for in pain, as in other subjective conditions, is the common phenomena which seem to be the same from person to person or case to case. These may not be determinable by external objective measures, but will still show regularities and variation in special circumstances which we make it our business to try and understand.

Others have also emphasized both the utility and limitations of the pain behaviour construct.[13] It is possible to go beyond that and raise questions of conflict of interest with regard to the application of behaviour therapy in certain health care systems. The most notable country in which the treatment of pain behaviour has been developed is the United States, where a large proportion of health care funding depends upon insurance companies who have to agree to pay for the treatment being offered. It is easy to suppose that if a clinician reports to the claims manager of an insurance company that the patient can be treated for chronic pain and will get some benefit, the company may be sympathetic but not very enthusiastic. It might even deny more than a modicum of treatment, and this has certainly happened in Canada in marginal instances where some benefits such as physiotherapy are under consideration, are not always provided by our health care system and it falls to insurers to provide them.

It is very likely, on the other hand, that there will be a different response to the clinician who says something like: 'Your client has now reached a stage where his illness has stabilized. His pain will not improve notably, but exercise will not harm him. I propose to teach him to ignore pain, or not to talk about it and only to speak about activity and getting back to work.' A much more friendly approach seems likely from the insurer.

I should point out that the aims of rehabilitation, despite the occurrence of pain, are highly desirable.

However, making treatment contingent upon not talking about pain, not reporting it, and even on not seeking relief may well lead to denial of appropriate treatment. Patients who have severe pain ought to have the opportunity to test remedies and to persist with remedies which are helpful to them. There are also patients whose pain is definitely made worse by exercise, without subsequent gains, so that persistence with exercise programmes intended to restore them to competitive employment is unpleasant, unjustified, unreasonable and even cruel. Certainly it is easier to take this sympathetic and more accepting approach in Canada than it would be in the United States, but this does not alter the reality of my remarks on treating patients only in terms of pain behaviour.

We have to recognize that there is both some utility and much limitation to the pain behaviour construct. We must not throw out the baby with the bath-water, and constructive rehabilitation is important to all clinicians working with chronic pain.

Idiopathic pain

Idiopathic pain presents less controversy. Von Knorring undertook a series of studies on this topic and also encouraged others to investigate those interesting patients who seem to have pain without a physical basis, but perhaps with some hidden link to depression.[14–16] In his work, Almay used the diagnostic criteria for idiopathic pain disorders which had been offered by Williams and Spitzer.[17] The inclusion criteria were: (1) preoccupation with severe pain of at least six months' duration is a predominant disturbance; and (2) pain presented as a symptom that is inconsistent with the anatomic distribution of the nervous system; after extensive evaluation no organic pathology or pathophysiological mechanism can be found to account for the pain; or when there is some related organic pathology, the complaint is grossly in excess of what would be expected from the physical findings. The exclusion criteria comprised other psychiatric conditions including somatization disorders. This definition or diagnosis was intended to exclude hysterical pain.

Using a variety of techniques and subjecting the results to discriminant function analysis, Almay and his colleagues found that it was possible to establish a complete separation between healthy volunteers and patients with chronic pain symptoms, as well as a complete separation between patients with idiopathic and neurogenic pain syndromes when the variables included were depressive symptomatology, personality traits, CSF levels of 5-hydroxyindole acetic acid and homovanillic acid, monoamine oxidase in platelets, serum cortisol and urinary melatonin were included as variables. The results of their findings supported the hypothesis that idiopathic pain syndromes and depressive syndromes may share some common pathogenetic mechanisms. Magni[18] reviewed evidence which supports this finding including the work of himself and his colleagues, which demonstrated reduced binding of [^{3}H]imipramine in patients with an 'indeterminate pain syndrome.'[19]

These are important findings and show that the manifestations of depressive illness are sometimes subtle. However, depressive symptoms may be part of the characteristics of this idiopathic syndrome, and therefore one might think that we are mainly looking at another aspect of the relationship between pain and depression.

Somatization

The term somatization was adopted by Lipowski[20] to cover the production of bodily symptoms from psychological causes. He defined this as the 'tendency to experience, conceptualize, and/or communicate psychological states or contents as bodily sensations, functional changes, or somatic metaphors'. The category somatization disorder was developed in DSM-III[21] as a revised version of what Guze *et al.*[22] had called the Briquet syndrome, and, as is well known, covers patients with multiple symptoms not related to detectable physical causes. Figures for its incidence vary: even if it is not common, individual cases present a lot of work for medical practitioners. Somatization, which is considered to be the presentation of physical symptoms where the causes are psychological, probably affects much larger numbers. Dworkin and his colleagues[23,24] have established significant information on the epidemiology. I have considerable reservations about the use of somatization as a term because, while it may be helpful in giving us broad overall figures, the implications of these figures are not well appreciated from the simple term somatization. Lipowski specified that the term was to include several categories of symptoms. For example, in clinical practice patients may have physical symptoms because of anxiety which produces physiological changes, because the symptom is being used to solve a conflict as in classical conversion hysteria, because they have somatization disorder, or because they are hypochondriacal. In the case of hypochondriasis, the mechanism by which the symptoms develop may vary. It may be related to the presence of a major psychosis, such as schizophrenia or severe depressive illness, or it may be rather pure hypochondriasis in which the patient is fearful of having a symptom and convinced that he has it.[25] It may also reflect the presence of a minor physical symptom to which increased attention is given because of a variety of psychological problems, and which resolves with the treatment of the psychological problems. All these different meanings may be included under the word somatization. Like hysteria, it has many subdivisions of meaning. Somatization is a classic example of a situation where a single word in our language impairs logic in practice, and leads to mistaken apprehensions of the facts. For example, as happens in the literature and in speech, patients are described as 'somatizers'. This code-word lacks essential information, perhaps misreads what is done for patients, and confounds the reasoning that we may have to develop for them.

The definition of pain

In 1979, the Subcommittee on taxonomy of the IASP published the following definition of pain, together with definitions for a number of other pain terms:[26] 'An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage'. A note added that pain is always subjective, that each individual learns the application of the word through experiences related to injury in early life, and that pain is always unpleasant. It was observed that many people might report pain in the absence of tissue damage or any likely pathophysiological cause, but that there was no way to distinguish their experience from that due to tissue damage in terms of the subjective report. Activity induced in the nociceptor and nociceptive pathways by a noxious stimulus is not pain, which is always a psychological state, even though we may well appreciate that pain most often has an approximate physical cause.

This definition and the discussion was based on one developed in 1964 by Merskey[27] to put to rest problems about the nature of pain which troubled investigators. Beecher[28] had indicated that a satisfactory definition had not been achieved, and he identified another seven distinguished investigators who felt unable to define pain.[29-33] Bishop[34] commented: 'Pain is what the subject says hurts, you can't get behind that. It consists, however, of two phenomena. A: Pain is a subjective experience, reported as a sensation referred specifically to some part of the body and sufficiently unpleasant to be designated as painful by the subject. ... this unpleasant sensation will ... vary with emotional state, anxiety, anticipation of a disaster, etc. ... It has ... a large component of what is referred to as reaction to sensation. It may be due to activation of any modality of sense, and I suspect, to none. I know of people who can throw a sick headache ... and I can't say they don't have one. B: Pain as a physiological process, with a subjective evaluation in addition to perception, is a result of stimuli to sensory findings or pathways of two types of fibre; certain small myelinated fibres causing pricking pain on adequate stimulation and unmyelinated fibres causing burning pain. Both pass up the lateral columns of the cord after synapse in the substantia gelatinosa. If you ever get a good psychologist to tell you what pain is, please let me know. I haven't had any luck'.

This suggested that the problem for Bishop lay in trying to recognize two types of intermingled events, one, something which started with damage to tissue or stimuli to the nervous system, and the other something which arose in response to psychological influences, and yet mimicked, or was identical with, the first. This latter phenomenon appears to be a complaint which emerges from a context of emotional distress.

The solution to this particular conundrum of two totally different mechanisms apparently causing pain became apparent as soon as it was appreciated that we have to define pain *only* as a psychological event. This was a point of view which was not particularly original. Walters[36] had the following to say: 'The first psychological aspect of bodily pain to be firmly grasped is the fact the physical pain is a psychic event and not a physical event. The physical side is the physiological mechanism of impulses and signalling—the sense data. The pain is not these sense data but the perceptual experience of discomfort in a spot in the body. This is a private subjective experience. ... Without ... brain action for consciousness and perception, we can have the sense data coming up afferent channels but we get no pain, e.g. sleep, anaesthesia and coma. This fact is often ignored. Time and time again you will hear yourself or your colleagues say that 'Pain travels up the spinothalamic tracts' or that 'The end organs pick up pain and transmit it up the pain pathways'. This is coarse talk, quite inaccurate and represents the remnants of older theories ... All we really have on the physiological side are neural impulses set up within temporal and spatial limits ... But these impulses centrally bent to excite further mechanisms in the thalamocortical and reticulocortical systems, are no more the pain than the visual impulses from the retina are the perceptual fields of colour and pattern that present to us when our eyes are open'.

The literature concerning pain was well reviewed by Behan[37] who noted that the two ideas of a disagreeable sensation and a physical disturbance were both commonly found. Merskey[38] also observed that psychiatric patients used very similar terms to describe pain, as did others. Their common words included the following: throbbing, aching, burning, building up, sore, radiating, bruised, like a toothache, stabbing, bursting, cramps, pressing, heavy, pulling, dragging, neyging or nagging, needles, as if it clutches, prodding, tightening and heavy, knotting, cutting, like electricity, draining, tantalizing, jumping, crunching, dithering, striking like a knife, wasting, digging, or due to blows.

It was evident that patients with psychological distress had experiences of pain in the body which resembled our experiences with physical illness, and both types of experience had to be regarded as pain, despite the lack of a physical cause for some of the former. The first solution I attempted was as follows: 'An unpleasant experience which we primarily associate with tissue damage and/or describe in terms of such damage'. This version was never published because my friend and colleague Mr Peter Clarke, suggested that the following would be more attractive in terms of style: 'An unpleasant experience which we primarily associate with tissue damage or describe in terms of such damage or both'.[27] Stengel cited this definition in a Maudsley Lecture.[39] The editor of the Journal, Dr Eliot Slater questioned our meaning[40] and invited Stengel to respond.[41] Soon after, the definition was published with a discussion[4,5] and gradually spread and proved acceptable to increasing numbers of colleagues from different disciplines. Von Knorring[14] used this version to separate patients with pain from those who did not have pain.

When the Committee on taxonomy considered the definition, they only sought minor changes. They wished to include the words 'sensory or emotional' experience and they wished to specify 'actual' or 'potential' tissue damage, and they did not think it necessary to keep the final two words. Thus, the version which is now recommended is: 'An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage'.[26]

Strictly speaking, the additions to the definition are not needed. A definition should state what it includes and if necessary what it excludes. It is not meant to be a complete description and so those additions are not absolutely required, but they do not have any ill effects, and they do provide some extra information. The removal of the words 'or both' also does not spoil the definition. In fact, it fits well with the view that a definition should be as concise as possible. The definition still means that we can have pain from any cause including psychological causes, and that this pain will resemble that which we first learn about from physical experiences *but that it need not depend upon them.*

There have been efforts, some inadvertent and some deliberate, to improve the definition, and it has not always been understood as I would have wished (what creator ever thought his work was fully appreciated?). Sometimes the last clause has been omitted so that we are only given the statement 'an unpleasant sensory and emotional experience associated with actual or potential tissue damage'. This misses the point that was specially designed to cover the psychological aspect.

The word 'primarily' was also dropped in the IASP definition. Perhaps it would have been better to have kept it, in order to indicate that we sometimes do associate the idea of pain with other matters than tissue damage, but the form we now have remains acceptable.

On another occasion, earlier this year, I heard a respected speaker make the following statement 'The IASP as you all know describes pain as 'An unpleasant sensory and emotional experience associated with actual or potential tissue damage'. The speaker stopped there in his quotation and went on to say 'This focus on tissue damage firmly links pain with underlying organic pathology. It emphasizes, I think, a narrow focus in thinking about pain, its causes and treatments. Such a focus is very distant from the experience of people in pain'. If we had said what the speaker thought, I would have agreed with him. It is quite noteworthy that two capable colleagues made this mistake of leaving off the final clause which contained the most original element in the definition. Another colleague, in a recent book on the social aspects of pain, said the following: 'When the International Association for the Study of Pain promulgated its definition of pain beginning with the words "Pain is a sensory and emotional experience . . ." it was a giant step forward for the study and management of pain, since it established the essential meaningless of the question "Is this pain physical or psychological?". Free from the constraints of this perspective on pain, clinicians and researchers were able to explore the issue of pain in every possible aspect: biological, psychological, and social.' I can make a case for this statement, especially the first sentence, but need to emphasize that it is incomplete. It is only the experience of pain which is largely indistinguishable by cause. It remains important to look for different physical, psychological and social contributions to the production of pain.

On occasion, I have also seen it suggested that behaviour should be included in the definition of pain. However, pain behaviour—even including the description of pain—is not a necessary accompaniment of pain, and the definition is right to focus on the characteristics of the experience, whether or not it is reported and whether or not it is associated with any additional actions.

You might ask what I suppose to be the contribution of the definition of pain logic, truth and language. I think, in brief, that it is a contribution by language to establishing a logical way of thinking about pain. The definition tells us the truth about the word pain, and other truths may follow if the definition is used appropriately.

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