ASCAP NEWSLETTER

Across-Species Comparisons And Psychiatry Newsletter
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"From the human appendix to life's common genetic code (not to mention the panda's thumb), history's indelible mark is ubiquitous." Losos[1]

(c/o Russell Gardner, 1.200 Graves Building (D29), University of Texas Medical Branch, Gatveston, TX 77550)[2]

For the philosophy guiding this newsletter, predicated upon combinations of top-down and bottom-up analyses, see footnote on p13[3]

Newsletter aims; 1. A free exchange of letters, notes, articles, essays or ideas in whatever brief format.
2. Elaboration of others' ideas.
3. Keeping up with productions, events, and other news.
4. Proposals for new initiatives, joint research endeavors, etc.

Features: This issue features ASCAP as it was meant to be: vigorous public idea exchange!

Note the letters, featuring again I Zhdanova (Leningrad) & T McKenzie (Minneapolis) and the advent of M Waller (Harpenden, UK).

J Goethe (Hartford, Conn). p4
and VP Samohvalov & VI Egorov (Simferopol, Crimea). p6
respond to Price's July essay. Then J Price amplifies feedback ideas .p7

Comment: Although T McKenzie takes us to task for using added terms, some of us at UTMB (RG, E Smith, B Holmes) have been struck with the power of a concept long used in phylogenetic discussions but not yet in ASCAP: "cladogram." Clades are branches: a cladogram outlines how branches may have evolved in historical lineages. Cladograms order historical data.

Two examples of cladograms are: 1) The thyroglobulin molecule may have originated from ancient esterase enzymes. A cladogram constructed from similarities in amino acid sequences from widely diverse species provides inferences about how these molecules evolved and branched out[4]. 2) In anthropology, Tolstoy listed >540 variable features of making/using paper from bark in Asian, Mesoamerican and Pacific cultures and made a cladogram that illustrated branchings from common practices[5].

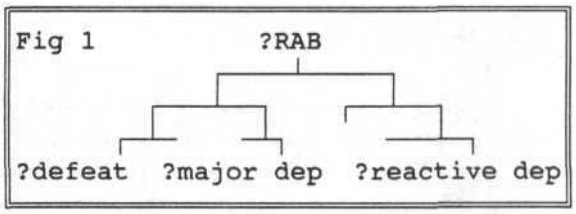
Genomic macromolecules (DNA) represent historical documents in that some components stem from the most ancient times and have been modified over billions of years but are now still active second by second in each of our cells. Our, and our patients', behaviors result from that history and these actions. Even voluntary acts involve molecules. How might we estimate branchings of macromolecules that got differently constituted and now act diversely in behavior?

I suggest the following: select a domain parallel to a protein superfamily or primitive manufacturing processes; list the variable features and note congruencies; estimate hypothetical branchings as a result of similarities vs dissimilarities. Candidate domains include autism, depression, mania, paranoia and their normal counterparts. Variable characteristics may include symptoms, behaviors, genetic codings, environmental qualities, treatment responses.

Each domain has many examples: B Herman speaks of "many autisms"[6]; J Goethe notes below that there are many depressions. We need to list characteristics from humans and animals--defeat, feigned death, "learned helplessness"--and then form hypothetical branchings from similarities and dissimilarities. We anticipate that molecular biologists

working on the genomic Rosetta Stone will be our check eventually to see if the hypothesized branchings bear out, and if not, how we went wrong (eg, did similar traits converge rather than exhibit homology).

I believe cladograms could figure in helping the basic plan group with its Sussex discussions upcoming soon. Basic plans and parts represent conserved molecules. How did less basic components get modified from more basic ones? In Fig 1, note a schematic for a possible cladogram of three terminal branchings of a ritual agonistic behavior (RAB) trunk. Did the DNA codes with vulnerability to different depressions branch from a same basic plan?



Letters; *April 18, 1991*

I have just received March issue of ASCAP together with the previous four issues; our post works strangely...

In the March issue, you have published my answers. Were they enough to clear confusions about the data?

X have sent you my response to Dr Price's very interesting essay. I am afraid it will come late to you. I had no chance to send it with the help of someone who is going abroad as I usually do, because the official post works unpredictably. Dr Viktor Dennenberg who is our guest now was very kind to propose to take our correspondence to the USA, so this letter will come to you soon.

Now I work with groups of adolescent peer-housed Rhesus monkeys who go through several tests. Tests include 5 day social separation, every day 15 min social separation, food competition in the group and in the isolated pairs, learning abilities in isolation and in the group, place preference with the social stimulation and at the end the choice between social and individual motivations when the partner is either the member of the home group or the stranger. In analysing monkey behavior I try to understand what kind of social strategy correlates with the probability of depressive-like symptoms of socially separated young monkeys. ...

J Zhdanova, Leningrad, USSR

We are enthusiastic about a USA visit and hope that something can be worked out for an extension to Texas! Your work continues to look exciting.

Letters; (cont) *April 5, 1991*

I am delighted that you will be writing a chapter on Sociobiology.... I am happy to provide thoughts on how the project might be approached.

Above all the chapter should be accessible without relying on technical concepts and terminology which reduce the intuitive appeal of the subject matter as a foundation for integration of neuro and cognitive sciences. Using terms such as hedonic, agonic, anathetic, and catathetic often confuses me. Aren't there plainer terms that can be used in an introduction of the subject. If the chapter relies on jargon it will seem esoteric and pseudoscientific. Particularly overwhelming are the eight "psalic's."

I would introduce the subject as a way of understanding evolutionary forces, an applied science of evolutionary theory if you will, and not offer it as a therapeutic construct. The latter approach seems to encourage people to ask, "how will this make me a better cobbler?" My view on this is that a sociobiological perspective tends to remove blame as a theme in constructing psychological causality. "Choices" and "sacrifices" have great value in working with

people to understand their future behavior, but tend to be unhelpful if applied retrospectively.

I see sociobiology as a chance to introduce the landmarks of evolution and to talk about the origins of modern humans. However, inclusion of these topics might dilute a chapter and make it seem scattered.

The latent interest that sociobiology holds for many is its dispute of the idea that men and women are somehow the same. I think it is important that reproductive differences and the effects these have have on behavior should be carefully delineated. ...

I look forward to seeing your chapter in print and congratulate you for the efforts that made it a reality.

TB McKenzie, U Minn, Minneapolis

Letters; (cont) *April 30, 1991*

Feel free to publish the letter I sent (or this one) regarding the terminology debate. "Conspecific" is one of the worse offenders. One can almost always be more specific about the identity of another member of the same species, such as father, mother, rival, ally, stranger, competitor, sibling, peer, subordinate, compatriot, etc. If one refers to general principles meant to have broad application, then "member of the same species" is not too unwieldy for stating a general truth. Otherwise, in most cases context makes obvious that you're talking about the same species and use of "conspecific" seems pedantic & psuedoscientific...

I am working on identifying cues which predict the occurrence of episodic behaviors such as OCD, trichotillomania, and bulimia.

TB McKenzie, U Minn, Minneapolis

I doubt that ASCAP writers/readers can claim credit for "conspecific" — this seems to have been around in biology for a long time[7]. Conspecific is a common denominator, like 1/2 *vs* 219/438 or 36/72. For across-species comparisons we need simplifications. New terms, once understood and found useful, are not pseudoscientific displays of nonexistant knowledge but are rather helpful aids.

J Kerbeshian just sent something on familial trichotillomania[8].

Letters; (cont) *11 May 1991*

Please find attached copies of self-explanatory correspondence between Dr John S Price and myself. ...

I have also enclosed a version of my paper... substantially the same document as I sent to him, but I have now taken the liberty of specifically tying my work back to his...with one or two additional points...

I make bold claims for the importance and originality of my work. I ... would appreciate comments.

Finally, I should make clear that I am still very anxious to have my ideas published and, in case my paper is too long for consideration in the context of ASCAP, I have also enclosed a shorter exposition. ...

MJC Waller, Harpenden, Herts, Engl

Thank you for your letter and proposed contributions to ASCAP.

I think that the issues that you discuss are of central importance.

As your two essays are not identical although they address a central point, why not publish both, the shorter one first as an appetizer?

Welcome to the ASCAP readership/writership. I hope to view again your vigorous colorful style.

Letters: (cont) *1 June 1991*

...a note to let you know that an earlier, and substantially different, version of the shorter paper I sent you on 11 May, has just been published in Nature [23 May 1991/351:264]

I did not mention it when I first wrote because, having submitted it in Feb, I thought that they had decided not to publish. ...

For my part, if it does not present a problem and you are prepared to publish, I would be more than happy.

Mike Waller, Harpenden, UK

How wonderful to open Nature and see displayed prominently the writing of an ASCAP correspondent and to see John Price conspicuous in pages additional to ASCAP's! Reading the different versions of what you have to say will educate all of us.

Price-Goethe Exchange by J W Goethe

The yielding hypothesis of depression is attractive in many respects, but using this model as a point of departure to address the query posed in the article's title ("Do depressed patients get their way") may make our effort to arrive at an answer more rather than less difficult. In what follows I will advance alternative proposals and comment on what I believe to be limitations of the yielding hypothesis, a plan of questionable wisdom given the limits of my knowledge about this theory.

That there are many ways to conceptualize affords part of the difficulty in evaluating the yielding hypothesis. Price himself notes that it is depressive yielding which we recognize "...as depressive illness or at least one form of it" (emphasis added). In other words, our limited understanding of depressive syndromes makes it difficult to be certain that all of us are addressing the same phenomenon when we use the word "depression," DSM III notwithstanding. Limitations of the psychiatric nomenclature (and, for that matter, limitations of language) are well known but often not considered in formulating models. The proposed relationship between clinical depression and ritual submissive behavior is intriguing, but it may be more helpful to regard this affective (and/or cognitive-behavioral) state as one form of distress or dysfunction human beings experience. In this way the hypothesis is not burdened by problematic features of DSM.

Another caution is that what we describe in the term "submissive" when referring to human behavior is likely to be more complex than that referred to by the term "yielding" to observed animal behavior. This fact does not diminish the value of the animal model but points again to the limitations of our language and of our knowledge of human behavior. Even among animals the placing of the organism into vulnerable position (ie, "yielding") may not have the same meaning from one species to another. For example, the hog nose snake *(Heterodan platyrhinos)* may expose its belly when confronting a foe, but only after attempting to frighten away the intruder by a series of maneuvers that approximate the prestrike behavior of cobras. Further, this snake, when rolled over and returned to the upright position, will when released again assume a belly up posture. Is the snake engaging in ritual yielding behavior or feigning death in the "expectation" that the enemy will depart? I agree that submissive behavior in animals appears to be a survival strategy. By extension we could equate survival with "getting what we want." As in the wolf-example given by Price, the general appearance of yielding and nurturance-seeking behaviors is identical (ie, exposing the vulnerable underside). The expectation of the wolf pup when in this position is that pleasure will result (ie, from the licking response of the parent). In the adult the presence of "child-like" (to use Price's terminology) yielding behavior may signify that

this expectation (appropriate and adaptive in infants) has continued. In "adult-like" yielding, however, there are no such expectations. One is, in effect, throwing oneself on the mercy of the court, hoping for the best, perhaps, but with a more limited set of potential outcomes in mind. For humans yielding behavior in the adult mode may even be seen as a sign of strength, as in the Biblical teaching to "turn the other cheek" (Matthew 5:39). (A related issue is the degree to which "depressive yielding" represents a regression as opposed to impaired development.) Is it only under extreme stress (eg, when facing certain types of threats) that an individual regresses to the child-like position of demanding/expecting gratification from others through no effort of his own? Such a model is consistent with the presentions of some depressed individuals, but "chronic" or "characterological" depression may be more easily explained by an interruption in the development of mature ritual yielding.)

It is reasonable to assume that yielding behavior, if it exists as described by Price, is subject to the same pressures that exist for (and lead to modification of) other early-like behaviors. This behavior pattern changes over time in response to a variety of factors, and in the adult form it is influenced by higher cognitive processes. Development may be arrested or impeded in some way, however, resulting in a more immature state (i.e., child-like yielding behavior) not influenced by and/or interactive with a highly developed cognitive apparatus. Perhaps the mature form of ritual yielding, in contrast to the more primitive state, included an intact capacity for accurate appraisal (and in higher organisms acknowledgment) of one's situation *vis-a-vis* an aggressor.

Let us assume that all organisms are biologically programmed to yield in order to survive. The usual form in which the ritual behavior is observed (labeled by Price as "adult-like") is adaptive, but in some individuals this response is inappropriate in place, time and/or style (ie, maladaptive, suboptimal, "child-like"). Both methods may be successful in terms of assuring survival in this most basic sense, but only adult form of this innate mechanism is characterized by the capacity to make accurate and careful assessments. Another characteristic may be that only such adult behavior is consistent with a continued sense of self worth. In other words one may lose a fight without being devastated and without assuming that one will lose in all future confrontations. This style of yielding also allows for expansion of one's armamentarium of adaptive (or "acquisitional") skills. By contrast, whatever the short term gains of child-like yielding behavior the individual's repertoire of acquisitional skills is not expanded. This behavior perpetuates the dependent position; it can only be satisfying and "self" confirming if the object necessary for satisfying a need or desire is always present and fully gratifying. (Such omnipresent and attentive behavior on the part of a significant other may be consistent with early like experiences for some species and to a relative degree may typify the infancy and early childhood of humans. No yielding *per se* takes place; the needs of the young are met "because they are there." It could even be argued that such experiences reinforce a child-like posture toward others, increasing the chance that the behavior will persist into adulthood.)

Do depressed patients get their own way? More particularly, do they "use their depression" to gratify needs? It is easier to accept that depression is <u>related</u> to yielding behavior than it is to endorse the notion that

patients use their depression to get what they want. If we define depression as passivity and other (manipulative) behaviors, then perhaps the individual is "using" the depression to meet his needs. On the other hand, if depression is defined as the feeling state of despair, the expectation of loss and a sense of worthlessness, then it is not the depression *per se* but other (perhaps secondary) behavior that is being used to manipulate. This distinction could be pursued but is not important if the issue of patients' using their depression is not the fundamental question. Perhaps more critical is how this presumably innate yielding response could become maladaptive. Although beyond the scope of both Price's article and this commentary, I will risk a brief excursion to consider this question.

Everyone wants his own way. In an effort to reach this objective one may use a number of strategies over time, and individual differences in behavior patterns result (eg, leadership, subservience, complete submission). All, however, wish to obtain what they want, and at the most basic level the wish (drive) is to survive. These survival strategies may be innate, biologically programmed phenomena and/or complex learned behaviors which are species-specific. If a given behavior does not work, an alternative strategy may be tried, and if there are repeated "failures"/losses, a variety of affects (some of which we label depression) may appear. The submissive behavior may continue if it is partially successful or if the person is afraid of the consequences of being other than submissive (eg, attempting an alternative strategy).

In summary, that which we call depression includes the distress we experience as a result of an existence in which we are forced to deal with the certainty that life is full of uncertainties. Anxiety, or whatever term we choose to refer to this state of more or less constant uncertainty, is a form of this distress, as is the "depression" seen in patients, individuals who are less capable than others of dealing with this distress. Their efforts to manage their lives include the use of adaptive (and maladaptive) strategies, among which may be a ritual yielding behavior. This behavior, like all others in one's armamentarium of acquisitional skills, is variably effective and may take a variety of forms, some of which may be more highly developed and, as suggested by Price, expressed in a form more metaphorically than concretely related to their anlagen. When yielding behavior is associated with need satisfying responses from others, depressed individuals may be seen as getting "their own way", but after all, isn't that what we all strive for? Fundamentally, don't all behaviors represent survival strategies (or derivatives thereof), the aim of which is to provide us with what we perceive to be our needs?

Evolutionary Metaphors of Depression

(reply to JS Price's July 1990 essay)

by VP Samohvalov & VI Egorov

John Price is well known as a former of ideas on dominance behavior. In modern sociobiology, he has returned many times to the problem of the evolutionary meaning of psychopathological disorders. He underlined the evolutionary significance of two modes of human depression, agonic and hedonic. The two types relate to different phylogenetic levels. We can agree with evolutionary explanation of depression; however, we would like to make some preliminary comments.

1. Phenomenology of depression often includes depressive stupor (in addition to agonic and hedonic

modes). This is typologically closer to "feigned" death. In fact this sign excludes patients from dominance hierarchy system and makes them for such hierarchy "inconspicuous." Among such three types, the evolutionary sequence (from agonic to hedonic mode and further to depressive stupor) is [in parallel] ...to increasing depth of depression, ie, its ontogeny.

2. Closer definition of behavioral classification of depression is possible using objective ethological methods. In any case it [has]... resulted from our studies . Exact ethological method can register the index of aggression/autoaggression and level of submission. Suggested in first point chain are correspondences to phylogenetic depth of reactions ...analogous to depressive reactions. Such were observed in primates during emotional stress .

3. The evolutionary significance of depression can be studied from concept on evolutionary stable strategies . In particular we must account for those advantages which are received by patients with various typology of mimic[ry] due to stimulation of protective behavior. It is clear that evolutionary high levels of depression (agonic) stimulate higher level of protection. The behavioral typology stimulating less[er] levels of protection must [be] subject[ed] to more intensive action of selection. Therefore, ...some clinical cases [do]...not fix one type of depression, but balancing takes place, eg, from agonic to hedonic modes.

4. The true evolutionary significance of depression can be understood through structural evolutionary study including data of phylogeny, ontogeny and historical development of analogous behavioral forms.

These opinions only underlie the significance of evolutionary studies of depression including methods of human sociobiology.

Another Reply to L Sloman by J Price

I am pleased that so many people have accepted your invitation to comment on my essay. I should like to reply to each individually, but that would be too much space in ASCAP. Before an overall reply, I would first like to deal with a slight difference in model between myself and Leon. This has confused me lately and may confuse others too. Leon and I have much common ground, ie:

1. Depression evolved as one yielding component (yielding strategy) of ritual agonistic behaviour.

2. Ritual agonistic behaviour (including depression) is a means of amplifying small differences in capacity (RHP); and, in so doing, it increases correlations between small inherited differences in capacity (such as intelligence) and reproductive success. Thus depression is of interest not only to psychiatry but to evolutionary biology as a whole, in that it is a mechanism for speeding the rate of evolutionary change.

3. Therapeutically, depression may be "reframed" as yielding and be given "positive connotation" as such (these are technical terms used in family therapy). In doing this we are following the example of the I Ching, approving the accommodating tendency or Yin: bend but don't break. Of course, depression may sometimes more usefully be reframed in other ways, such as nurturance-eliciting behaviour or physical illness. The choice of frame depends on therapeutic need, not on beliefs about evolution or adaptive function.

Turning to differences, Leon is unimpressed by the voluntary/involuntary dimension of yielding; his model is one of increasing severity and duration along the dimension:

submission-->hypersubmissiveness-->depression

The individual is driven to the right along this dimension by the

strength of his angry feelings (dominating tendency). With mild anger, voluntary submission can occur and lead to resolution of conflict; with moderate anger, clinical depression is required to achieve yielding. Without the hopelessness and helplessness of depression, more voluntary submission would not be effective in the face of strong anger.

In my model, the two ends of Leon's dimension (voluntary submission and depressive yielding) are seen as alternatives which may to some extent operate independently. One has the choice to submit voluntarily, and in so doing one may pre-empt the need for depressive yielding. Any impediment to voluntary submission (of which excessive anger is one) may predispose to depressive yielding. (The word voluntary is a bad one, and is used as a shorthand for "presumed to be mediated at a high level of the central nervous system," as opposed to depressive yielding, mediated at a low level of the nervous system, ie, "reptilian brain").

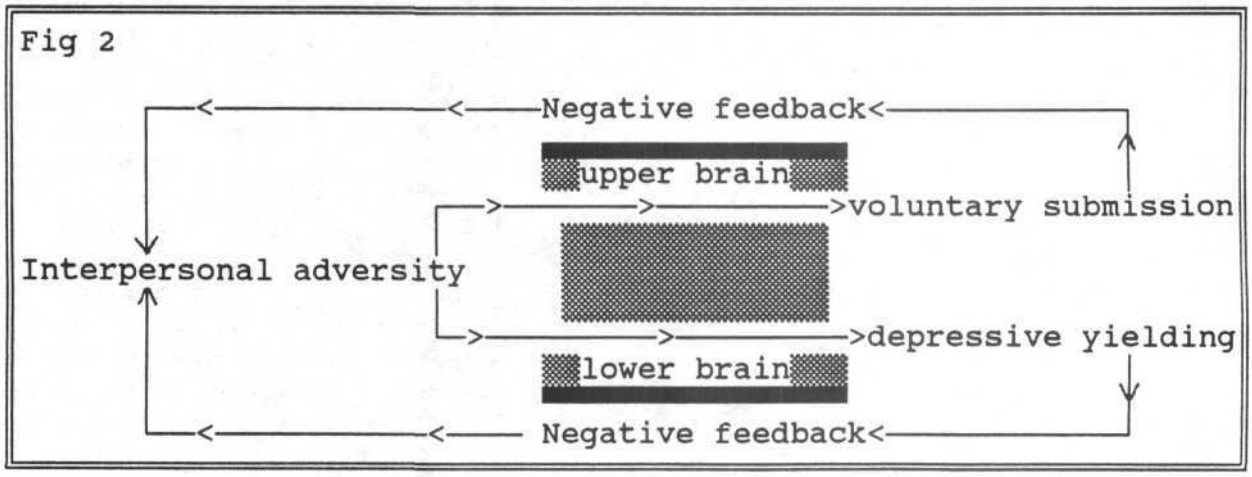
Analogy of temperature control

In order to clarify the (slight) difference between the two models, let me return again to the metaphor of body temperature control (see ASCAP, Nov 1990). Consider all the ways we know for combating cold. We can move our bodies (into the sun, out of droughts, to the other hemisphere, etc), we can put on clothing, we can light a fire or switch on the central heating; on the other hand, we can shiver, we can vasoconstrict, we can cut down sweating, we can generate heat in the liver. These two groups of responses clearly occur at two different levels of CNS organisation.

For simplicity, I will just talk about switching on the central heating as the higher level response and shivering as the lower level response. Now, let cold be the equivalent of interpersonal adversity (originally, in evolution, the RHP signals of a rival; by deprivation, stress, bad news, failure, punishment, frustrative non-reward, etc.). Then *depressive yielding is to shivering as voluntary submission is to switching on the central heating.* The central processes which mediate between cold and response are carried out at two different levels of the nervous system, one leading to the decision to "switch on", the other leading to the "decision" to shiver. Likewise, interpersonal adversity affects the brain at two levels, one leading to voluntary submission, the other to depressive yielding.

This model can be expressed in diagrammatic form as in Fig 2.

Fig 2



If the upper negative feedback loop is not effective in keeping interpersonal adversity below a certain threshold, the lower feedback loop is called into operation. (I have left out the strategy of elevation of mood, which is an alternative to depressive yielding.)

The difference of level underlies important differences between the two methods of combating cold and between the two methods of yielding:

1. *Access to different information in the decision-making process.* The cold —--> central heating sequence is processed at a level which can take into account information about weather forecasts, the amount of oil in the storage tank, government requests to conserve fuel, etc. This kind of information is not available to the cold --> shivering sequence. Other information may be available to the lower level process which is not available in deciding about the heating; for instance, body temperature, fat reserves, current level of vasoconstriction, etc; but our conscious minds are not privy to the decision about shivering and therefore we have no "insight" into the information used to reach it.

Voluntary submission may be affected by various types of information which are not likely to affect the threshold of depressive yielding; for, instance, cultural values about the honourableness of yielding; is it a "discretion is the better part of valor" or a "death before dishonour" culture? In the determination of depressive yielding, we do not know what sort of information about adversity our lower brains are processing, just as we do not know what information is used in the decision to shiver. The basic information is a comparison of own RHP with opponent's RHP, and it may well be that the sums are carried out differently from a comparison of relative RHP at the higher brain level. Possibly the lower brain has information about internal matters such as liver glycogen reserves.

2. *Reversibility.* Another important difference is that the central heating may be turned off again, even without any rise in the ambient temperature, if new information becomes available, such that there is a malfunction in the boiler or the fuel is running out. But shivering cannot be switched off, and nor can depression, and this is probably why it is more reassuring to see one's rival depressed than to see him submitting voluntarily.

3. *Timing.* Related to reversibility is timing. Voluntary submission is an act which may be of extremely short duration. Depressive yielding is a state lasting a certain time.

4. *Variation in "willingness".* With voluntary submission, as with the central heating, there may be enormous differences in willingness. Imagine a man in the middle of winter demonstrating his new central heating system to his friends. He is highly motivated to switch it on. On the other hand, take a man who believes that only weaklings turn on central heating before November 1; he is presented with a sudden cold snap in October and the cold tempts him strongly to switch on; there is conflict between his feelings of cold and his feelings of manliness; then his wife moves in on the act, accuses him of stinginess, and drags him screaming to the thermostat, which he switches on under duress. I would still call this voluntary, even if it is performed unwillingly, because it is a different order of "voluntariness" from shivering.

In the case of yielding, consider a wife who gives up her job at the request of her husband. She may do so with great relief, thankful that he now earns enough to maintain her as a lady of leisure. On the other hand, consider a wife who works because she

likes it, who believes women have the right to work, and may even believe that "my job is the only thing that keeps me sane." The husband does not wish her to work, and nags her daily about it. She tries to persuade him, but fails. The husband goes on and on to such an extent that she realises it endangers their marriage. The only way she can save the marriage is to give up work, and so she does so, albeit with great reluctance. I still call this voluntary submission, because she had the choice of giving up the job or continuing until some other end-point is reached. This could be marital separation or it could be depressive yielding. In the latter case she gives up her job, not because she decides, either willingly or unwillingly, to do so, but because she is too ill to work.

With the involuntary responses of shivering and depressive yielding, the dimension of "willingness" is not relevant. It does not make sense to discuss whether or not a person is willing to shiver; nor does it make sense to discuss whether a person is willing to become depressed.

5. *Insight.* One always knows why one is switching the central heating on, but one does not always know why one is shivering. It could be cold, but it could be fear or sexual desire. One's attitude might be, "why is my body shaking like this?" In the case of yielding, one knows why one is submitting, but one does not know why one is depressed. In the case of the wife who gives up her job because she is driven into a state of depressive yielding, she probably does not realise that it is her husband's nagging which has made her ill, and nor, probably, does the husband; in fact, they are likely to attribute her incapacity to "the change," the Pill, "flu," myalgic encephalomyelitis, etc. This lack of insight into causation is one reason why depression is such an effective yielding strategy; if one doesn't know what it is due to, it is hard to do anything.

6. *Directedness.* Shivering is not directed, whereas "switching on" is directed towards the objective of raising the temperature. Voluntary submission has an object, one submits to someone or something. Depressive yielding has no object. More technically, depression signals low absolute RHP; it is not associated with an increase in signals of unfavourable relative RHP.

The observations of Schelde (ASCAP, Feb 1991) are important here; his depressed patients were high on passive yielding but low on active submission. Possibly this lack of active submission makes it difficult for critics to take the yielding hypothesis of depression seriously.

Causal relation between the voluntary and involuntary response

We should note that the relation between "switching on" and shivering is not symmetrical. Switching on prevents shivering, but shivering does not prevent switching on; in fact, if anything, it facilitates it - the shivering man is more likely to switch on than the non-shivering man. Do the same relations hold between depressive yielding and voluntary submission? Certainly, voluntary submission pre-empts depressive yielding, as in the case of the wife who decided to give up her job, and thus stopped the husband's nagging and the depression it would eventually have caused. But does depressive yielding facilitate voluntary submission? On the one hand, the mood of "giving in and giving up" which is characteristic of depression would seem to do that; as Shand said[12], "sorrow abates pride". On the other hand, depression does not seem to facilitate "directed submission" in the sense of flattery, flowery speeches of submission, or even the task of going out and finding someone to submit to.

Returning to the wife who worked,

let us say that she became depressed due to her husband's nagging, but was not yet sufficiently depressed to be unable to work. Then the depression might facilitate passive submission to her husband's wishes. She might say, "Oh, all right, I'll chuck it in, I'm really past caring." Her loss of interest (in the job and the feminist cause) and her reduced self-esteem (about her worth as an employee) would also facilitate the giving up. But this would still be voluntary submission, albeit facilitated by the depression, in the way that switching on was facilitated by shivering.

An example of depressive yielding facilitating voluntary submission can be seen in the film The St. Louis Blues about the jazz composer WC Handy, and in The Last Chronicle of Barset by Trollop; and depressive yielding not leading to voluntary submission is depicted in the film Rustler's Rhapsody and in Whip Hand by Dick Francis.

Are *depressed patients likely to be in a posture of voluntary submission?*

Are depressed patients likely to be in a state of voluntary submission, or are they, as Bibring[13] says, people who are clinging on grimly to unrealisable goals? The answer is not straightforward, and depends very much on one's sampling - it is similar to the question, are shivering people more or less likely to have the heating switched on? Shivering people consist of different subgroups; those who have decided not to switch on, those who have switched on recently and have not yet felt the benefit, and those who have tried to switch on but whose central heating does not work. Likewise, depressed people are likely to consist of those who have decided not to submit, those who have submitted but whose depression still has some momentum of its own which needs to "run its course", and those who have tried to submit but whose submission was blocked for some reason. On the whole, people at the onset of depression are likely to be non-submitters, in the way that people at the onset of shivering are unlikely to have switched on; whereas at the end of a depression they are more likely to have submitted, in the way that people stopping shivering are likely to have switched on. People with very chronic depressions who reach the psychiatrist are likely to be people of such overweening pride (or such great anger, as Leon points out) that they will never submit (Bibring's case) or people who cannot submit, because they cannot physically produce the goods.

Yielding decision and yielding task

In the case of the woman working, either voluntary submission or depressive yielding will achieve the endpoint of her not working and thus cut off the husband's nagging. The woman may decide to submit, and her task is merely to refrain from working. But what if the husband's requirement is that she should go to work? Then she not only has to submit to his wishes, but get a job, and so even if she makes a decision of submission, she may not be able to carry out the submissive task. And continued nagging, by making her depressed, will make it even more difficult for her to carry out the task, even if it helps her to make the decision. The same applies to other yielding tasks, particularly those over which there is no voluntary control. If the husband is nagging because she does not respond to him sexually, then neither form of yielding is available to her (unless she is a very good actress, and even then she cannot simulate the physiological components of the sexual response); in fact the depressive yielding, by reducing her libido, actually makes voluntary submission more difficult. In such a case, the husband may not be aware that he is angry at her because of

the lack of sexual response, and she may not be aware that she is depressed because he is nagging. The seeds of chronicity have been sown, and a final referral to Dr Bibring is more than likely.

If I now return pedantically to the temperature control model, we can distinguish among decisions to switch. Even if the decision is made, the task may be impossible because the switch is faulty; then, if switching on is delayed, the onset of shivering may make the task of switching on even more difficult because of reduced manual dexterity.

Conflict between aggressive and submissive tendencies

In Leon's model, depression arises from the conflict between dominant responses and submissive responses. Such conflict may occur, but it is occurring at the higher brain level. According to my model, if the dominant tendency is acted on, and does not vanquish the opposition, the individual continues in the agonistic situation and therefore continues to receive punishment (the equivalent of cold) and it is this receipt of punishment at the lower brain level which triggers depressive yielding. The two models overlap if Leon's conflict between dominant and submissive tendencies results in continued punishment (or failure, guilt, etc, if the agonistic encounter is a symbolic one, as with the "superego"). The difference is that "conflict between dominant and submissive responses" is just one of many reasons for continuing to fight a losing battle. The proximate cause is failure of voluntary submission for whatever reason.

Hypersubmissiveness

Depressive yielding is quite different from hypersubmissiveness. The equivalent of hypersubmissiveness in the temperature analogy would be turning up the heating too high, or having double glazing put in, or putting on too many jerseys. They would not lead to shivering; on the contrary, they would help to prevent shivering.

Therapeutic implications

Switching on not only pre-empts shivering, it also cures it. Likewise voluntary submission may not only pre-empt depressive yielding, it may help to cure it. But if we cure it too soon, we may take away some of the motivation for voluntary submission, in the way that, if we stop someone shivering, we may reduce his motivation to "switch on". If part of the "work" of depression is to induce voluntary submission, the clinician has to be wary in cases in which he thinks there is still some voluntary submission to be done. On the one hand, he wants to relieve the patient's depressive incapacity so that he (the patient) can start sorting out his real life problems; on the other hand, he does not want to relieve the patient's mood of "giving up" until what needs to be given up has in fact been given up. I think an intuition of this lies behind the occasional remark by a clinician that a patient "needs to get more depressed before he can get better." In commenting on Tierney's case (Apr ASCAP), I approved of relieving the depression with ECT because the time for any effective voluntary submission was long past. However, in the case of the depressed PhD student (reply to Katic), I did not try to reduce the depression until the unrealistic aspiration to complete the PhD had been given up. Of course, the clinician can often facilitate voluntary submission with psychotherapy, but it is not always easy to get a patient to give up, and sometimes the depressed mood helps.

Alternatives to depressive yielding are winning, minimising the conflict, and resolving the conflict in the hedonic mode, but these have no counterparts in the shivering analogy.

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2. For ASCAP Newsletter Volume 4 (Jan through Dec, 1991) please send $18 (or equivalent) for the 12 issues. Make checks or money orders out to "Department of Psychiatry and Behavioral Sciences, UTMB."

3. ASCAP philosophy and goal. High scientific importance rests on comparing animal behaviors across-species to understand better human behavior, knowing as we do so that evolutionary factors must be considered for understanding properly such behaviors. To accomplish these comparisons, very different new ways of viewing psychological and behavioral phenomena are required. This in turn explains why we need new words to define and illustrate new dimensions of comparisons across species. We expect that work in natural history biology combined with cellular-molecular biologic research will emerge as a comprehensive biologic basic science of psychiatry. Both top-down and bottom-up analyses are needed. Indeed, this must happen if we are to explain psychiatric illnesses as deviations from normal processes, something not possible now. Compare to pathogenesis in diseases of internal medicine.

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