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THE STUFF THAT DREAMS ARE MADE OF

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In our dreams we are taken back into an earlier world. It is a world much more like that of the savage, the child, the criminal, the madman, than is the world of our respectable civilized waking life. That is, in large part, it must be confessed, the charm of dreams. It is also the reason of their scientific value. Through our dreams we may realize our relation to stages of evolution we have long left behind, and by the self-vivisection of our sleeping life we may learn to know something regarding the mind of primitive man and the source of some of his beliefs, thus throwing light on the facts we obtain by ethnographic research.

This aspect of dreams has not always been kept steadily in sight, though it can no longer be said that the study of dreams is neglected. From one point of view or another – not only by the religious sect which, it appears, constitutes a "Dream Church" in Denmark, but by such carefully inquisitive investigators as those who have been trained under the inspiring influence of Prof. Stanley Hall – dreaming is seriously studied. I need not, therefore, apologize for the fact that I have during many years taken note from time to time and recorded the details and circumstances of vivid dreams when I could study their mechanism immediately on awakening, and that I have occupied myself, not with the singularities and marvels of dreaming – of which, indeed, I know little or nothing – but with their simplest and most general laws and tendencies. A few of these laws and tendencies I wish to set forth and illustrate. The interest of such a task is twofold. It not only reveals to us an archaic world of vast emotions and imperfect thoughts, but by helping us to attain a clear knowledge of the ordinary dream processes, it enables us in advance to deal with many of the extraordinary phenomena of dreaming, sometimes presented to us by wonder-loving people as awesomely mysterious, if not indeed supernatural. The careful analysis of mere ordinary dreams frequently gives us the key to these abnormal dreams.

Perhaps the chief and most frequent tendency in the mechanism of dreaming is that by which isolated impressions from waking life flow together in dreams to be welded into a whole. There is then produced, in the strictest sense, a confusion. For instance, a lady, who in the course of the day has admired a fine baby and bought a big fish for dinner, dreams with horror and surprise of finding a fully developed baby in a large codfish. The confusion may be more remote, embodying abstract ideas and without reference to recent impressions. Thus I dreamed that my wife was expounding to me a theory by which the substitution of slates for tiles in roofing had been accompanied by, and intimately associated with, the growing diminution of crime in England. Amid my wife's rather contemptuous opposition, I opposed this theory, pointing out the picturesqueness of tiles, their cheapness, greater comfort both in winter and summer, but at the same time it occurred to me as a peculiar coincidence that tiles should have a sanguinary tinge suggestive of criminal bloodthirstiness. I need scarcely say that this bizarre theory had never suggested itself to my waking thoughts. There was, however, a real connecting link in the confusion – the redness – and it is a noteworthy point, of great significance in the interpretation of dreams, that that link, although clearly active from the first, remained subconscious until the end of the dream, when it presented itself as an entirely novel coincidence.

The best simile for the mechanism of the most usual type of dream phenomena is the magic lantern. Our dreams are like dissolving views in which the dissolving process is carried on swiftly or slowly, but always uninterruptedly, so that, at any moment, two (often indeed more) incongruous pictures are presented to consciousness which strives to make one whole of them, and sometimes succeeds and is sometimes baffled. Or we may say that the problem presented to dreaming consciousness resembles that experiment in which psychologists pronounce three wholly unconnected words, and require the subject to combine them at once in a connected sentence. It is unnecessary to add that such analogies fail to indicate the subtle complexity of the apparatus which is at work in the manufacture of dreams.

It is the presence of the strife I have just referred to between apparently irreconcilable groups of images, in the effort of overcoming the critical skepticism of sleeping consciousness – a feeble skepticism, it may be, but, as many people do not seem to recognize, a real skepticism – that the impressive emotional effects of dreams are often displayed. It sometimes happens that two irreconcilable groups of impressions reach sleeping consciousness, one flowing from a recent stratum of memories, the other from an older stratum. A typical form of this phenomenon often occurs in our dreams of dead friends. Professor Sully remarks that in dreams of the dead "awareness of the fact of death wholly disappears, or reduces itself to a vague feeling of something delightfully wonderful in the restored presence." That, however, as I have elsewhere shown,[1] is not the typical process in dreaming of the dead; although in the later dreams of those who often see their dead friends during sleep, the process is abbreviated, and the friend's presence is accepted without a struggle – a very interesting point, for it tends to show that in dreams, as in the hypnotic state, the recollection of previous similar states of consciousness persists, and the illusion is strengthened by repetition.

In typical dreams of a dead friend there is a struggle between that stream of recent memories which represents him as dead and that older stream which represents him as living. These two streams are inevitably caused by the fact of death, which sets up a barrier between them and renders one set of memories incongruous with the other set. In dreams we are not able to arrange our memories chronologically, but we are perpetually reasoning and striving to be logical. Consequently the two conflicting streams of memories break against each other in restless conflict, and sleeping consciousness endeavors to propound some theory which will reconcile them. The most frequent theories are, as I have found, either that the news of the friend's death was altogether false, or that he had been buried alive by mistake, or else that having really died his soul has returned to earth for a brief space. The mental and emotional conflict which such dreams involve renders them very vivid. They make a profound impression even after awakening, and for some sensitive persons are too sacred to speak of. Even so cautious and skeptical a thinker as Renan, when, after the death of his beloved sister Henriette, he dreamed more than once that she had been buried alive, and that he heard her voice calling to him from her grave, had to still his horrible suspicions by the consideration that she had been tended by experienced doctors. On less well-balanced minds, and more especially in primitive stages of civilization, we can scarcely doubt that such dreams, resting as they do on the foundation of consciousness, have had a powerful influence in persuading man that death is but a transient fact, and that the soul is independent of the body. I do not wish to assert that they suffice to originate the belief.[2]

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[1] On Dreaming of the Dead. Psychological Review, September, 1895. In this paper I reported several cases showing the nature and evolution of dreams concerning dead friends. I have since received evidence from various friends and correspondents, scientific and unscientific, of both sexes, confirming my belief in a frequency of this type of dream. Professor Binet (L'Année Psychologique, 1896) has also furnished a case in support of my view, and is seeking for further evidence.

[2] In Japan stories of the returning of the dead are very common. Lafcadio Hearn gives one as told by a Japanese which closely resembles the type of dream I am discussing. "A lover resolves to commit suicide on the grave of his sweetheart. He found her tomb and knelt before it and prayed and wept, and whispered to her that which he was about to do. And suddenly he heard her voice cry to him 'Anata!' and felt her hand upon his hand; and he turned and saw her kneeling beside him, smiling and beautiful as he remembered her, only a little pale. Then his heart leaped so that he could not speak for the wonder and the doubt and the joy of that moment. But

While dreams are thus often formed by the molding together of more or less congruous images by a feeble but still intelligent sleeping activity, another factor is to be found in the involuntary wavering and perpetually mere meaningless change of dream imagery. Such concentration as is possible during sleep always reveals a shifting, oscillating, uncertain movement of the vision before us. We are, as it were, reading a sign-post in the dusk, or making guesses at the names of the stations as our express train flashes by the painted letters. Any one who has ever been subject to the hypnagogic imagery sometimes seen in the half-waking state, or who has ever taken mescal, knows that it is absolutely impossible to fix an image. It is this factor in dreams which causes them so often to baffle our analysis. In addition to the mere, as it were, mechanical flowing together of images and ideas, and the more or less intelligent molding of them into a whole, there is thus a failure of sleeping attention to fix definitely the final result – a failure which itself may evidently serve to carry on the dream process by suggesting new images and combinations. I dreamed once that I was with a doctor in his surgery, and saw in his hand a note from a patient saying that doctors were fools and did him no good, but he had lately taken some *selvdrolla*, recommended by a friend, and it had done him more good than anything, so please send him some more. I saw the note clearly, not, indeed, being conscious of reading it word by word, but only of its meaning as I looked at it; the one word I actually seemed to see, letter by letter, was the name of the drug, and that changed and fluctuated beneath my vision as I gazed at it, the final impression being *selvdrolla*. The doctor took from a shelf a bottle containing a bright yellow oleaginous fluid, and poured a little out, remarking that it had lately come into favor, especially in uric-acid disorders, but was extremely expensive. I expressed my surprise, having never before heard of it. Then, again to my surprise, he poured rather copiously from the bottle on to a plate of food, saying, in explanation, that it was pleasant to take and not dangerous. This was a vivid morning dream, and on awakening I had no difficulty in detecting the source of its various minor details, especially a note received on the previous evening and containing a dubious figure, the precise nature of which I had used my pocket lens to determine. But what was *selvdrolla*, the most vivid element of the dream? I sought vainly among my recent memories, and had almost renounced the search when I recalled a large bottle of salad oil seen on the supper table the previous evening; not, indeed, resembling the dream bottle, but containing a precisely similar fluid. *Selvdrolla* was evidently a corruption of "salad oil." I select this dream to illustrate the uncertainty of dream consciousness, because it also illustrates at the same time the element of certainty in dream *subconsciousness*. Throughout my dream I remained, consciously, in entire ignorance as to the real nature of *selvdrolla*, yet a latent element in consciousness was all the time presenting it to me in ever-clearer imagery.

While the confusions of dreaming are usually the union of unconnected streams of imagery which have, as it were, come from widely remote parts of the memory system to strike together at the narrow focus of shaping consciousness, in some rarer cases the fused images are really suggested by analogy and are not accidental. Maury records successions of dream imagery strung together by verbal resemblances; I have found such dreams rare, but other forms of association fairly common. Thus I once dreamed that I was with a dentist who was about to extract a tooth from a patient. Before applying the forceps he remarked to me (at the same time setting fire to a perfumed cloth at the end of something like a broomstick in order to dissipate the unpleasant odor) that it was the largest tooth he had ever seen. When extracted I found that it was indeed enormous, in the shape of a caldron, with walls an inch thick. Taking from my pocket a tape measure (such as I always carry in waking life) I founds the diameter to be not less than twenty-five inches; the interior was like roughly hewn rock, and there were sea-weeds and lichenlike growths within. The size of the tooth seemed to me large, but not extraordinarily so. It is well known that pain in the teeth, or the dentist's manipulations,

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she said: 'Do not doubt; it is really I. I am not dead. It was all a mistake. I was buried because my parents thought me dead – buried too soon. Yet you see I am not dead, not a ghost. It is I; do not doubt it!'"

cause those organs to seem of extravagant extent; in dreams this tendency rules unchecked; thus a friend once dreamed that mice were playing about in a cavity in her tooth. But for the dream first quoted there was no known dental origin; it arose solely or chiefly from a walk during the previous afternoon among the rocks of the Cornish coast at low tide, and the fantastic analogy, which had not occurred to waking consciousness, suggested itself during sleep.

The following dream illustrates an association of quite a different order: I imagined I was sitting at a window, at the top of a house, writing. As I looked up from my table I saw, with all the emotions naturally accompanying such a sight, a woman in her night dress appear at a lofty window some distance off and throw herself down. I went on writing, however, and found that in the course of my literary employment – I am not clear as to its precise nature – the very next thing I had to do was to describe exactly such a scene as I had just witnessed. I was extremely puzzled at such an extraordinary coincidence: it seemed to me wholly inexplicable. Such dreams, reduplicating the imagery in a new sensory medium, are fairly common, with me at all events, though I can not easily explain them. The association is not so much of analogy as of sensory media, in this case the visual image becoming a verbal motor image. In other cases a scene is first seen as in reality, and then in a picture. It is interesting to observe the profound astonishment with which sleeping consciousness apperceives such simple reduplication.

It sometimes happens that the confused imagery of dreams includes elements drawn from forgotten memories – that is to say, that sleeping consciousness can draw on faint impressions of the past which waking consciousness is unable to reach. This is a very important type of dream because of its bearing on the explanation of certain dream phenomena which we are sometimes asked to bow down before as supernatural. I may illustrate what I mean by the following very instructive case. I woke up recalling the chief items of a rather vivid dream: I had imagined myself in a large old house, where the furniture, though of good quality, was ancient, and the chairs threatened to give way as one sat on them. The place belonged to one Sir Peter Bryan, a hale old gentleman who was accompanied by his son and grandson. There was a question of my buying the place from him, and I was very complimentary to the old gentleman's appearance of youthfulness, absurdly affecting not to know which was the grandfather and which the grandson. On awaking I said to myself that here was a purely imaginative dream, quite unsuggested by any definite experiences. But when I began to recall the trifling incidents of the previous day I realized that that was far from being the case. So far from the dream having been a pure effort of imagination I found that every minute item could be traced to some separate source. The name of Sir Peter Bryan alone completely baffled me; I could not even recall that I had at that time ever heard of any one called Bryan. I abandoned the search and made my notes of the dream and its sources. I had scarcely done so when I chanced to take up a volume of biographies which I had glanced through carelessly the day before. I found that it contained, among others, the lives of Lord *Peter*borough and George *Bryan* Brummel. I had certainly seen those names the day before; yet before I took up the book once again it would have been impossible for me to recall the exact name of Beau Brummel, and I should have been inclined to say that I had never even heard the name of Bryan. I repeat that I regard this as, psychologically, a most instructive dream. It rarely happens (though I could give one or two more examples from the experience of friends) that we can so clearly and definitely demonstrate the presence of a forgotten memory in a dream; in the case of old memories it is usually impossible. It so happened that the forgotten memory which in this case re-emerged to sleeping consciousness was a fact of no consequence to myself or any one else. But if it had been the whereabouts of a lost deed or a large sum of money, and I had been able to declare, as in this case, that the impression received in my dream had never to my knowledge existed in waking consciousness, and yet were to declare my faith that the dream probably had a simple and natural explanation, on every hand I should be sarcastically told that there is no credulity to match the credulity of the skeptic.

The profound emotions of waking life, the questions and problems on which we spread our chief voluntary mental energy, are not those which usually present themselves at once to dream consciousness. It is, so far as the immediate past is concerned, mostly the trifling, the incidental, the "forgotten" impressions of daily life which reappear in our dreams. The psychic activities that are awake most intensely are those that sleep most profoundly. If we preserve the common image of the "stream of consciousness," we might say that the grave facts of life sink too deeply into the flood to reappear at once in the calm of repose, while the mere light and buoyant trifles of life, flung carelessly in during the day, at once rise to the surface, to dance and mingle and evolve in ways that this familiar image of "the stream of consciousness" will not further help us to picture.

So far I have been discussing only one of the great groups into which dreams may be divided. Most investigators of dreams agree that there are two such groups, the one having its basis in memories, the other founded on actual physical sensations experienced at the moment of dreaming and interpreted by sleeping consciousness. Various names have been given to these two groups; Sully, for instance, terms them central and peripheral. Perhaps the best names, however, are those adopted by Miss Calkins, who calls the first group representative, the second group presentative.

All writers on dreaming have brought forward presentative dreams, and there can be no doubt that impressions received during sleep from any of the external senses may serve as a basis for dreams. I need only record one example to illustrate this main and most obvious group of presentative dreams. I dreamed that I was listening to a performance of Haydn's Creation, the chief orchestral part of the performance seeming to consist chiefly of the very realistic representation of the song of birds, though I could not identify the note of any particular bird. Then followed solos by male singers, whom I saw, especially one who attracted my attention by singing at the close in a scarcely audible voice. On awakening the source of the dream was not immediately obvious, but I soon realized that it was the song of a canary in another room. I had never heard Haydn's Creation, except in fragments, nor thought of it at any recent period; its reputation as regards the realistic representation of natural sounds had evidently caused it to be put forward by sleeping consciousness as a plausible explanation of the sounds heard, and the visual centers had accepted the theory.

It is a familiar fact that internal sensations also form a frequent basis of dreams. All the internal organs, when disturbed or distended or excited, may induce dreams, and especially that aggravated kind of dreaming which we call nightmare. This fact is so well known that such dreams are usually dismissed without further analysis. It is a mistake, however, so to dismiss them, for it seems probable that it is precisely here that we may find the most instructive field of dream psychology. On account of the profoundly emotional effect of such dreams they are very interesting to study, but this very element of emotion renders them somewhat obscure objects of study. I do not venture to offer with absolute certainty one or two novel suggestions which dream experiences have led me to regard as probable.

Dreams of flying have so often been recorded – from the time of St. Jerome, who mentions that he was subject to them – that they may fairly be considered to constitute one of the commonest forms of dreaming. All my life, it seems to me, I have at intervals had such dreams in which I imagined myself rhythmically bounding into the air and supported on the air. These dreams, in my case at all events, are not generally remembered immediately on awakening (seeming to indicate that they depend on a cause which does not usually come into action at the end of sleep), but they leave behind them a vague but profound sense of belief in their reality and reasonableness.[3] Several writers have attempted to explain this familiar phenomenon. Gowers considers that a spontaneous contraction of the stapedius muscle of the ear during sleep causes a sensation of falling. Stanley Hall, who has

[3] Many saints (Saint Ida, of Louvain, for example) claimed the power of rising into the air, and one asks one's self whether this faith may not be based on dream experiences mistranslated by a disordered brain. M. Raffaelli, the eminent French painter, who is subject to these sleeping experiences of floating on the air, confesses that they are so convincing that he has jumped out of bed on awaking and attempted to repeat the experience. "I need not tell you," he adds, "that I have never been able to succeed."

himself from childhood had dreams of flying, boldly argues that we have here "some faint reminiscent atavistic echo from the primeval sea"; and that such dreams are really survivals – psychic vestigial remains – taking us back to the far past, in which man's ancestors needed no feet to swim or float. Such a theory may accord with the profound conviction of reality that accompanies such dreams, though this may be more simply accounted for, even by mere repetition, as with dreams of the dead; but it is rather a hazardous theory, and it seems to me infinitely more probable that such dreams are a misinterpretation of actual internal sensations.

My own explanation was immediately suggested by the following dream. I dreamed that I was watching a girl acrobat, in appropriate costume, who was rhythmically rising to a great height in the air and then falling, without touching the floor, though each time she approached quite close to it. At last she ceased, exhausted and perspiring, and had to be led away. Her movements were not controlled by mechanism, and apparently I did not regard mechanism as necessary. It was a vivid dream, and I awoke with a distinct sensation of oppression in the chest. In trying to account for this dream, which was not founded on any memory, it occurred to me that probably I had here the key to a great group of dreams. The rhythmic rising and falling of the acrobat was simply the objectivation of the rhythmic rising and falling of my own respiratory muscles under the influence of some slight and unknown physical oppression, and this oppression was further translated into a condition of perspiring exhaustion in the girl, just as it is recorded that a man with heart disease dreamed habitually of sweating and panting horses climbing up hill. We may recall also the curious sensation as of the body being transformed into a vast bellows which is often the last sensation felt before the unconsciousness produced by nitrous oxide gas. When we are lying down there is a real rhythmic rising and falling of the chest and abdomen, centering in the diaphragm, a series of oscillations which at both extremes are only limited by the air. Moreover, in this position we have to recognize that the whole internal organism – the circulatory, nervous, and other systems – are differently balanced from what they are in the upright position, and that a disturbance of internal equilibrium always accompanies falling. Further, it is possible that the misinterpretation is confirmed to sleeping consciousness by sensations from without, by the absence of the tactile pressure produced by boots on the foot, or the contact of the ground with the soles; we are at once conscious of movement and conscious that the soles of the feet are in contact only with the air. Thus in normal sleep the conditions may be said to be always favorable for producing dreams of flying or of floating in the air, and any slight thoracic disturbance, even in healthy persons, arising from lungs, heart, or stomach, and serving to bring these conditions to sleeping consciousness, may determine such a dream.

There is another common class of dreams which, it seems fairly evident to me, must also find their psychological explanation chiefly in the visceral sensations – I mean dreams of murder. Many psychologists have referred with profound concern to the facility and prevalence of murder in dreams, sometimes as a proof of the innate wickedness of human nature made manifest in the unconstraint of sleep, sometimes as evidence of an atavistic return to the modes of feeling of our ancestors, the thin veneer of civilization being removed during sleep. Maudsley and Mme. de Manacéïne, for example, find evidence in such dreams of a return to primitive modes of feeling. It may well be that there is some element of truth in this view, but even if so we still have to account for the production of such dreams. For this we must, in part at least, fall back upon the logical outcome of dream confusions, owing to which, for instance, a lady who has carved a duck at dinner may a few hours later wake up exhausted by the imaginary effort of cutting off her husband's head. But I think we may find evidence that the dream of murder is often a falsely logical deduction from abnormal visceral and especially digestive sensations.

I may illustrate such dreams by the following example: A lady dreamed that her husband called her aside and said: "Now, do not scream or make a fuss; I am going to tell you something. I have to kill a man. It is necessary, to put him out of his agony." He then took her into his study and showed her a young man lying on the floor with a wound in his breast, and covered with blood. "But how will

you do it?" she asked. "Never mind," he replied, "leave that to me." He took something up and leaned over the man. She turned aside and heard a horrible gurgling sound. Then all was over. "Now," he said, "we must get rid of the body. I want you to send for So-and-so's cart, and tell him I wish to drive it." The cart came. "You must help me to make the body into a parcel," he said to his wife; "give me plenty of brown paper." They made it into a parcel, and with terrible difficulty and effort the wife assisted her husband to get the body down stairs and lift it into the cart. At every stage, however, she presented to him the difficulties of the situation. But he carelessly answered all objections, said he would take the body up to the moor, among the stones, remove the brown paper, and people would think the murdered man had killed himself. He drove off and soon returned with the empty cart. "What's this blood in my cart?" asked the man to whom it belonged, looking inside. "Oh, that's only paint," replied the husband. But the dreamer had all along been full of apprehension lest the deed should be discovered, and the last thing she could recall, before waking in terror, was looking out of the window at a large crowd which surrounded the house with shouts of "Murder!" and threats.

This tragedy, with its almost Elizabethan air, was built up out of a few commonplace impressions received during the previous day, none of which impressions contained any suggestion of murder. The tragic element appears to have been altogether due to the psychic influences of indigestion arising from a supper of pheasant. To account for our oppression during sleep, sleeping consciousness assumes moral causes which alone appear to it of sufficient gravity to be the adequate cause of the immense emotions we are experiencing. Even in our waking and fully conscious states we are inclined to give the preference to moral over physical causes, quite irrespective of the justice of our preferences; in our sleeping states this tendency is exaggerated, and the reign of purely moral causes is not disturbed by even a suggestion of mere physical causation.

There is certainly no profounder emotional excitement during sleep than that which arises from a disturbed or distended stomach, and is reflected by the pneumogastric to the accelerated heart and the impeded respiration.[4] We are thereby thrown into a state of uninhibited emotional agitation, a state of agony and terror such as we rarely or never attain during waking life. Sleeping consciousness, blindfolded and blundering, a prey to these massive waves from below, and fumbling about desperately for some explanation, jumps at the idea that only the attempt to escape some terrible danger or the guilty consciousness of some awful crime can account for this immense emotional uproar. Thus the dream is suffused by a conviction which the continued emotion serves to support. We do not – it seems most simple and reasonable to conclude – experience terror because we think we have committed a crime, but we think we have committed a crime because we experience terror. And the fact that in such dreams we are far more concerned with escape from the results of crime than with any agony of remorse is not, as some have thought, due to our innate indifference to crime, but simply to the fact that our emotional state suggests to us active escape from danger rather than the more passive grief of remorse. Thus our dreams bear witness to the fact that our intelligence is often but a tool in the hands of our emotions.[5]

I have had frequent occasion to refer to the objectivation of subjective sensations as a phenomenon of dreaming. It is, indeed, so frequent and so important a phenomenon that it needs some further reference. In hysteria (which by some of the most recent authorities, like Sollier, is regarded as a species of somnambulism), in "demon-possession," and many other abnormal phenomena it is well known that there is, as it were, a doubling of personality; the *ego* is split up into two or more parts, each of which may act as a separate personality. The literature of morbid psychology is full of extraordinary and varied cases exhibiting this splitting up of personality. But it is usually forgotten that in dreams the doubling of personality is a normal and constant phenomenon in all healthy people.

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[4] Other pains and discomforts – toothache, for instance – may, however, give rise to dreams of murder.

[5] It may be added that they also present evidence – to which attention has not, I believe, been previously called – in support of the James-Lange or physiological theory of emotion, according to which the element of bodily change in emotion is the cause and not the result of the emotion.

In dreaming we can divide our body between ourselves and another person. Thus a medical friend dreamed that in conversation with a lady patient he found his hand resting on her knee and was unable to remove it; awakening in horror from this unprofessional situation he found his own hand firmly clasped between his knees; the hand had remained his own, the knee had become another person's, the hand being claimed, rather than the knee, on account of its greater tactile sensibility. Again, we sometimes objectify our own physical discomforts felt during sleep in the emotions of some other person, or even in some external situations. And, possibly, every dream in which there is any dramatic element is an instance of the same splitting up of personality; in our dreams we may experience shame or confusion from the rebuke or the arguments of other persons, but the persons who administer the rebuke or apply the argument are still ourselves.

When we consider that this dream process, with its perpetual dramatization of our own personality, has been going on as long as man has been man – and probably much longer, for it is evident that animals dream – it is impossible to overestimate its immense influence on human belief. Men's primitive conceptions of religion, of morals, of many of the mightiest phenomena of life, especially the more exceptional phenomena, have certainly been influenced by this constant dream experience. It is the universal primitive explanation of abnormal psychic and even physical phenomena that some other person or spirit is working within the subject of the abnormal experience. Certainly dreaming is not the sole source of such conceptions, but they could scarcely have been found convincing, and possibly could not ever have arisen, among races who were wholly devoid of dream experiences. A large part of all progress in psychological knowledge, and, indeed, a large part of civilization itself, lies in realizing that the apparently objective is really subjective, that the angels and demons and geniuses of all sorts that seemed at first to take possession of the feeble and vacant individuality are themselves but modes of action of marvelously rich and varied personalities. But in our dreams we are brought back into the magic circle of early culture, and we shrink and shudder in the presence of imaginative phantoms that are built up of our own thoughts and emotions, and are really our own flesh.

There is one other general characteristic of dreams that is worth noting, because its significance is not usually recognized. In dreams we are always reasoning. It is sometimes imagined that reason is in abeyance during sleep. So far from this being the case, we may almost be said to reason much more during sleep than when we are awake. That our reasoning is bad, even preposterous, that it constantly ignores the most elementary facts of waking life, scarcely affects the question. All dreaming is a process of reasoning. That artful confusion of ideas and images which at the outset I referred to as the most constant feature of dream mechanism is nothing but a process of reasoning, a perpetual effort to argue out harmoniously the absurdly limited and incongruous data present to sleeping consciousness. Binet, grounding his conclusions on hypnotic experiments, has very justly determined that reasoning is the fundamental part of all thinking, the very texture of thought. It is founded on perception itself, which already contains all the elements of the ancient syllogism. For in all perception, as he shows, there is a succession of three images, of which the first fuses with the second, which in its turn suggests the third. Now this establishment of new associations, this construction of images, which, as we may easily convince ourselves, is precisely what takes place in dreaming, is reasoning itself.

Reasoning is a synthesis of images suggested by resemblance and contiguity, indeed a sort of logical vision, more intense even than actual vision, since it produces hallucinations. To reasoning all forms of mental activity may finally be reduced; mind, as Wundt has said, is a thing that reasons. When we apply these general statements to dreaming, we may see that the whole phenomenon of dreaming is really the same process of image-formation, based on resemblance and contiguity, which is at the basis of reasoning. Every dream is the outcome of this strenuous, wide-ranging instinct to reason. The supposed "imaginative faculty," regarded as so highly active during sleep, is simply the inevitable play of this automatic logic. The characteristic of the reasoning of dreams is that it is unusually bad, and this badness is due chiefly to the absence of memory elements that would

be present to waking consciousness, and to the absence of sensory elements to check the false reasoning which without them appears to us conclusive. That is to say – to fall back on the excellent generalization which Parish has elaborately applied to all forms of hallucination – there is a process of dissociation by which ordinary channels of association are temporarily blocked and the conditions prepared for the formation of the hallucination. It is, as Parish has argued, in sleep and in those sleep-resembling states called hypnagogic that a condition of dissociation leading to hallucination is most apt to occur.

The following dream illustrates the part played by dissociation: A lady dreamed that an acquaintance wished to send a small sum of money to a person in Ireland. She rashly offered to take it over to Ireland. On arriving home she began to repent of her promise, as the weather was extremely wild and cold. She began, however, to make preparations for dressing warmly, and went to consult an Irish friend, who said she would have to be floated over to Ireland tightly jammed in a crab basket. On returning home she fully discussed the matter with her husband, who thought it would be folly to undertake such a journey, and she finally relinquished it, with great relief. In this dream – the elements of which could all be accounted for – the association between sending money and postal orders which would at once occur to waking consciousness was closed; consciousness was a prey to such suggestions as reached it, but on the basis of these suggestions it reasoned and concluded quite sagaciously. The phenomena of dreaming furnish a delightful illustration of the fact that reasoning, in its rough form, is only the crudest and most elementary form of intellectual operation, and that the finer forms of thinking only become possible when we hold in check this tendency to reason. "All the thinking in the world," as Goethe puts it, "will not lead us to thought."

It is in such characteristics as these – at once primitive, childlike, and insane – that we may find the charm of dreaming. In our sleeping emotional life we are much more like ourselves than we are in our sleeping intellectual life. It is a mistake to imagine that our moral and æsthetic instincts are abolished in dreams; they are often weakened, but by no means abolished. Such a result is natural when we remember that our emotions and instincts are both more primitive and less under the dominion of the external senses than are our ideas. Yet in both respects we are removed a stage backward in our dreams. The emotional intensity, the absurd logic, the tendency to personification – nearly all the points I have referred to as characterizing our dreams – are the characteristics of the child, the savage, and the madman. Time and space are annihilated, gravity is suspended, and we are joyfully borne up in the air, as it were, in the arms of angels; we are brought into a deeper communion with Nature, and in his dreams a man will listen to the arguments of his dog with as little surprise as Balaam heard the reproaches of his ass. The unexpected limitations of our dream world, the exclusion of so many elements which are present even unconsciously in waking life, imparts a splendid freedom and ease to the intellectual operations of the sleeping mind, and an extravagant romance, a poignant tragedy, to our emotions. "He has never known happiness," said Lamb, speaking out of his own experience, "who has never been mad." And there are many who taste in dreams a happiness they never know when awake. In the waking moments of our complex civilized life we are ever in a state of suspense which makes all great conclusions impossible; the multiplicity of the facts of life, always present to consciousness, restrains the free play of logic (except for that happy dreamer, the mathematician) and surrounds most of our pains and nearly all our pleasures with infinite qualifications; we are tied down to a sober tameness. In our dreams the fetters of civilization are loosened, and we know the fearful joy of freedom.

At the same time it is these characteristics which make dreams a fit subject of serious study. It was not until the present century that the psychological importance of the study of insanity was recognized. So recent is the study of savage mind that the workers who have laid its foundation are yet all living. The systematic investigation of children only began yesterday. To-day our dreams begin to seem to us an allied subject of study, inasmuch as they reveal within ourselves a means of entering sympathetically into ideas and emotional attitudes belonging to narrow or ill-adjusted states

of consciousness which otherwise we are now unable to experience. And they have this further value, that they show us how many abnormal phenomena – possession, double consciousness, unconscious memory, and so forth – which have often led the ignorant and unwary to many strange conclusions, really have a simple explanation in the healthy normal experience of all of us during sleep. Here, also, it is true that we ourselves and our beliefs are to some extent "such stuff as dreams are made of."

> The harmonious and equitable evolution of man, says President Dabney, of the University of Tennessee, "does not mean that every man must be educated just like his fellow. The harmony is within each individual. That community is most highly educated in which each individual has attained the maximum of his possibilities in the direction of his peculiar talents and opportunities."

THE BEST METHODS OF TAXATION

By the Late Hon. DAVID A. WELLS

PART I

This historical survey of tax experience among peoples widely differing in their economic condition and social relations, and this examination of the scope and practice of taxation, with especial reference to the tax systems of the United States as defined and interpreted by judicial authority, prepare the way for a discussion of the best methods of taxation for a country situated as is the United States. General as are the theoretical principles underlying taxation, the application of these principles to existing conditions must be modified to meet the long usage and inherited prejudice of the people, and the form of production or manner of distributing wealth. This holds true in the face of appearances so opposed to it as to defy definition and acceptance. No less promising field for an income tax can be pictured than British India, and few more promising fields than France. Yet India has borne such a tax for years, while France will not permit a true tax on income to be adopted as a part of its revenue system. In the latter country the plea is made that the upper and middle classes already pay under other forms of taxation more than their due proportion of the public burdens, and an additional and necessarily discriminating duty laid upon them will only make this inequality the greater. Class interest may thus oppose its veto to a change that promises to reduce the burdens of one class of taxpayers at the expense of another; or may even oppose a change that offers the chance of collecting a larger revenue with less real difficulty and sacrifice on the part of the taxed. No opposition can set aside even temporarily the great rules that clearly define a tax from tribute, a legal and beneficial taking by the state of a certain part of the public wealth from a demand that involves waste or mischievous expenditure, for which the state or people derive no advantage commensurate with the cost, or from which individuals obtain a gain not defensible in justice, and at the expense of only one part of the community.

After so many centuries of experiment, in which hardly a possible source of state revenue has escaped attention, some knowledge of the great principles of taxation might have been evolved. Unfortunately, the experience of one nation is not accepted as containing lessons applicable to the needs or conditions of another, and one generation rarely appeals to history save to defend its own experiments. Ignorance, half knowledge, which is quite as dangerous, and interest guide or influence legislation, and those who predict failure or danger are regarded as theorists, and denounced as unpractical. Nowhere is the tendency to move independent of enlightened knowledge more evident than in the United States. At every appearance of the tax question, State and national legislatures are overwhelmed with measures that have been tried in the past, and after a thorough test condemned beyond any hope of defense.

Yet history shows the gradual disappearance of certain forms of taxation which enjoyed great popularity for a time, and accomplished the end of their creation in a crude and often cruel manner. Looking over long periods of time, it is seen that some advances have been made, rather from a change in the economic condition of the people than from a true appreciation of the principles in question. The development of popular liberty has been an essential factor, and the alterations in tax methods require a close analysis of the causes leading to the rise and dominance of political and constitutional principle. While it is true that a popular uprising against fiscal exactions usually marked the limit of endurance of an oppressive system, it is also true that the same uprisings marked the completion of

one stage of political development, and the readiness or even the need of entering upon a new stage. In one sense the progress of a people toward civilization in its highest meaning may be illustrated by its fiscal machinery and methods of obtaining its revenue from the people. It will be of interest to glance at some of these passing phases which have generally come down to a late day, and are still to be found in activity in some of the most advanced states of Europe.

The practice of farming out the revenues of a state or any part of it has become nearly obsolete, and where it does exist is the mark of a fiscal machinery as yet not fully developed. The opportunities and temptation which the contract system offered for oppressing the taxpayers were apparent long before the state was in a position to assert its ability to make its own collections. In France the *fermiers généraux* were a political factor, standing between the king and his people, regarded as necessary to the former and as oppressors of the latter. Their unpopularity, in part justified by their conduct, was a not unimportant item in the arraignment of royalty by the people. Wherever introduced, the farming of taxes proved in the long run as unwise politically as it was unprofitable financially; and the only reasonable defense for adopting it was the want of strength in the state to command its own revenue – a want as likely to arise from the dishonesty of its agents as from a political weakness. In early times the most universal manner of supplying the treasury of the state, the farming of taxes has become so rare as to be classed as a curiosity. Italy still employs this machinery to collect her taxes on tobacco, and Spain from necessity has mortgaged her taxes to the bank, with the task of collecting them.

Of the same general character are the state lotteries, of which some few and quite important instances may still be found in action. Of the immorality of these instruments there can be little doubt, and there is quite as unanimous an opinion as to their inefficiency as fiscal instruments. Yet it is only within very recent years that state lotteries have been discarded even in the most advanced countries. The machinery of lotteries has often been modified, but, no matter how altered in details, they all have appealed to the love of games of chance. Adam Smith asserted that the "absurd presumption" of men in their own good fortune is even more universal than the overweening conceit which the greater part of men have in their own abilities.[6] Yet another assertion of the same writer is as true: "The world neither ever saw, nor ever will see, a perfectly fair lottery, or one in which the whole gain compensated the whole loss." Where the state undertakes it, there is a profit generally assured to the state, but that profit is by no means certain, and can not make good the demoralization introduced among the people. State lotteries are still a part of the revenue system in Italy and Austria (proper), where the receipts are important, but show a decided tendency to diminish; Hungary and Denmark, where they are of little moment; and in Spain, where they are retained because of the general incapacity of the administration to reach other and more profitable sources of revenue. The experience of the State of Louisiana in connection with a State lottery is too recent to require examination. It is not probable that once abandoned such an instrument for obtaining money from the people will be revived, save as a last resort.

The state monopoly in the manufacture and sale of an article for fiscal purposes holds a place in European countries of high importance, and is met elsewhere under conditions not so favorable to its maintenance. As an example of the latter may be cited the colonial policy of the Dutch in their possessions in the East. After the termination of the trading companies, the Government undertook the entire control of the colonies, and sought to make them a source of revenue. The natives were to be taxed, but, having little of their own to be taxed, and practicing no occupation that could of its own volition become a profitable source of revenue, the state undertook to organize industry, and, by creating an opportunity for employing the labor of the natives, to receive the profits of production for its own uses. The native chiefs were made "masters of industry" and collectors of the revenue; and a certain part of the labor of the natives, one day in every five, was decreed to the state. In order to derive a profit, this labor must be bestowed in cultivating some product as find a market

[6] Wealth of Nations, vol. i, p. 112 (Rogers's edition).

in international trade. Hence arose the importance of the sugar, coffee, tobacco, and spice crops of these Dutch islands, and for many years a handsome profit to the treasury was obtained from the management and sales of product. With the great fall in prices of sugar and coffee throughout the world, and the narrowing of the market for cane sugar, the Government obtained a less income each year, and has found it of advantage to relax the conditions surrounding cultivation, and to throw the management of the plantations more and more into private hands. To such an extent has this transition been effected that the state can no longer be considered as controlling a monopoly in product or sales, and is content with a revenue from other sources, one that does not even cover the expenses incurred in the colonial system. This experiment differs widely from those industries undertaken with the aid or encouragement of the state to be found in India. It was not with a fiscal object that they were established, and not infrequently the state sacrifices revenue by releasing them from tax burdens they would ordinarily endure. As one of the few remaining instances of the direct participation of a state in the production of products intended for foreign markets, yet undertaken and maintained for fiscal reasons, the history of the Dutch colonies in the East is instructive.

In Prussia the working of certain mines is in the hands of the state, and was originally looked upon as an important contribution to the income of the state. As in the Dutch experience, the changes in production throughout the world have greatly reduced the returns and made the income variable; yet there is little disposition to dispose of these possessions. "The danger of mineral supplies being worked in a reckless and extravagant manner without regard to the welfare of future generations, and the dread of combinations by the producers of such commodities as tin, copper, and salt, with the aim of raising prices, have both tended to hinder the alienation of state mines."[7]

The more common form of state monopoly is that which occupies a middle position, established for reasons of public safety or utility as well as of revenue. The salt monopoly enforced in Prussia was only abolished in 1867, and is still maintained in every canton of Switzerland. The strongest plea in its defense has been the guarantee by the state of the purity of the article sold, and this phase of the question has superseded the revenue aspect. Few articles of prime necessity, like salt, are subject to monopolies imposed by the state, and by a process of elimination it is only articles of luxury or voluntary consumption that are regarded as fit objects of monopoly for the benefit of the state.

A tax imposed upon an article at a certain stage of its production or manufacture may enforce the expediency or necessity of a state monopoly. Where the supervision of the state agents must be so close as to interfere with the conduct of the industry, the state intervenes and itself controls the manufacture and sale. Tobacco has long been subject to this fiscal *régime*, and, proving so productive of revenue, there is little to be said against a monopoly by the state of its manufacture and sale.

In Italy the tobacco monopoly is conceded to a company, but its return of net revenue to the state is nearly as large as the revenue derived from the taxes on real property (about thirty-eight million dollars a year). Prussia imposes a charge on the home-grown tobacco by a tax on the land devoted to its culture, but the return is very small, and Bismarck wished to introduce a true tobacco monopoly, modeled on that of France. But the conditions were opposed to his scheme, for the use of tobacco is general throughout the empire, and a proposition to increase its price by taxation or modify its free manufacture and distribution excited a widespread opposition. France maintains a full monopoly, and finds it too profitable to be lightly set aside unless some equally profitable source of revenue is discovered to make good the loss its abolition would involve.

While historical support is given to the maintenance of a monopoly as in France, it is not probable that the system will find imitators in other states, however tempting the returns obtained might seem. Great Britain has by her insular position solved the problem in another way. By interdicting the domestic cultivation of tobacco, all that is consumed must be imported, and a customs duty offers a ready instrument for making the plant, in whatever form it enters, contribute its dues

[7] Bastable. Public Finance, p. 181.

to the exchequer. In Russia, as in the United States, where tobacco is a domestic product, the tax is imposed upon its manufacture, and this method requires supervision but no monopoly of the state.

The tobacco *régime* is defended almost entirely on fiscal grounds, and as a monopoly, an extreme measure, has proved its value as an instrument of taxation. Other reasons, of a moral character, are urged to induce the state to monopolize the manufacture and sale of distilled spirits. Both France and Germany have considered this question, and, in spite of confident predictions of a large profit, have decided not to undertake it. Russia, on the other hand, has taken it up quite as much on social as on revenue grounds, and is gradually securing a monopoly of the trade in spirits. The initial cost of the undertaking is large, and, as the system has not yet been perfected, it is too early to give a judgment on its availability as a financial instrument.

The transit dues, once commonly used by different countries, have been generally abandoned, and in China must they be sought for in their original forms of vexatious and unprofitable force. They arose from a desire to derive some benefit from a commerce permitted grudgingly, and rarely attaining any high results. The same end was sought by duties on exports, much employed when the country was supposed to be drained of its wealth by what was sent out of it. The conditions necessary for a successful duty on exports are not often found, and only in a few countries are they now existent. In Italy, South America, and Asia, exports of certain natural products are taxed, and, as in the case of Brazil, yield a notable revenue. In view of the rapid advancement of production in new countries and of inventions in the old, whereby many natural monopolies have been destroyed and competition made more general, such duties prove to be more obstructive to trade than productive of revenue, and are rapidly being abandoned. In spite of a formal prohibition of export duties in the Constitution of the United States, they are sometimes suggested in all seriousness.

In thus clearing the path of what may be called dead or dying methods of recent tax systems, the advantages enjoyed by the United States in their freedom from such survivals become more evident. The practice of farming taxes never gained a foothold in any part of the country. Lotteries have been occasional, and with two exceptions have been conducted on a limited scale – that of Louisiana is well known; an earlier instance is less known. During the Revolution one of the means resorted to by the Continental Congress for income was a lottery, but the attempt proved disastrous to all concerned, and was finally abandoned even more thoroughly than was the continental currency. State monopolies of production and sale of any commodity have never met with favor, and stand condemned in the desire for individual initiative. As sources of revenue, the public lands, state control of the post office, and of such municipal undertakings as the water and, in a very few cases, the gas supply, has been employed, and in place of profit the mere cost of management is sought. More than any country of continental Europe, the United States has depended upon taxes, pure and simple, unsupported or modified by state domains, state mines, state manufactures, or state monopolies. Even Great Britain in her local taxation is bound and hampered by precedent, and pursues a system that is notoriously confused, costly, and vexatious. Long usage and the erection of independent and conflicting authorities on principles other than fiscal have imposed upon the local agents the duty of assessing and collecting county and borough taxes which are as indefensible in theory as they are difficult in practice.

From this weight of tradition and precedent the United States has been almost entirely free, and it was possible to construct out of small beginnings systems of Federal and State taxation at least reasonable and consistent, producing an increasing revenue with the rapid development of wealth and the larger number of taxable objects; and so elastic as to adapt themselves to such changes as are inevitable in any progressive movement of commerce or industry. That no such system has resulted after a century of national life, and an even longer term of local (colonial and State) activities, these papers have tended to show. That the time is at hand when the problem of a thorough reform of both State and Federal taxation must be met, current facts prove beyond any doubt. If I have aided in a proper comprehension of these problems, and, by collecting certain experiences in taxation among other peoples and in different stages of civilization, contributed toward a proper solution, the end of

this work will have been attained. It is not possible to introduce a complete change of policy at once; it is not only feasible but necessary to indicate the direction this change should take, and the ends to be secured in making them. And first as to Federal taxation:

In a democracy like that of the United States, the continuance of a mixed system of direct and indirect taxes is a foregone conclusion. Not that there is an absence of change or modification in the details of this double system, or in the application or distribution of a particular impost or duty. To deny such modification is to deny any movement in the body politic, or any progress in the industrial and commercial economy of the people. There is a steady and continuous movement in every direction, and the mere effort to escape taxation results in a new adjustment of related facts. This development has, partly through necessity and partly through a rising consciousness of what a tax implies, been tending from indirect to direct taxes. Ever restive under a rigid supervision by the state of private concerns, there has been a wholesome opposition to inquisitorial taxes. But this opposition has been carried too far, and is due more to the ignorant and at times brutal disregard by the agents selected for enforcing the law than to an appreciation of the injustice of the tax. Whether in customs or excise, the same blunders of management have been committed, and created a spirit in the people that is injurious to their best interests. On the one hand, private enterprises have been unduly favored by the removal of foreign competition, a favor that is now disappearing through the remarkable development of domestic competition. Thus taxes have been extensively used for other purposes than to obtain revenue, and for private ends. On the other hand, there has been created the feeling that taxation is a proper instrument for effecting a more equal distribution of wealth among the people, and readily becomes an instrument of oppression.

The almost absolute dependence of the Federal Government upon the customs duties for revenue through a great part of its existence was a striking fact. The simplicity of collection and the comparatively moderate scale of duties, although considered high at the time of imposition, gave this branch of the possible sources of revenue a magnified importance. The development of the country was slow, and at times greatly hampered by the tariff policy; but until about 1857 no other source of income was needed to meet the expenditures of the Government in a time of peace.

In recent years this has all changed, and not for the better. The immense development in manufactures and financial ability accomplished since 1860 has made a tariff for protection an anachronism. The political features of customs legislation have been pushed so far as almost to overshadow the fiscal qualities. The wave of protectionism that followed the abrogation of the commercial treaties of Europe about 1880 has resulted in tariffs framed with the desire to injure the commerce of other states rather than to meet the needs of a treasury. In the United States this policy has been carried beyond that of Europe, and the tariff now in existence is more protective than any hitherto enforced, short of absolute prohibition of imports.

In more respects than one the tariff law of 1897 was an extreme application of the protective policy. Each year the United States has demonstrated its ability not only to meet the industrial competition of the world on an equal footing, but to engage with it aggressively and with complete success. It is not necessary to give the figures of exports of manufactures to establish this fact; it is now beyond question. To frame a measure of extreme protection was, therefore, to overlook the most striking phase of the industrial situation existing in the United States. With an ability to manufacture cheaply and on a grand scale, and with a capacity to supply the demands of a market larger than any home market, there was no foreign competition to encounter, and the higher rates of duties meant nothing, either for protection or for revenue. In carrying further into action a tariff framed more for protection than for revenue, a twofold error was committed. The provisions were so complicated as to make the application difficult, and in applying these provisions inquisitorial and vexatious regulations were necessary to assure even a reasonable fulfillment of the requirements. In former tariff laws a general description carried a large class of articles, and a uniform duty, usually *ad valorem*, was collected. But under the demand for a more scientific tariff, these general classes were broken up into

a number of enumerated articles, each one carrying a specific or mixed duty, and an omnium or basket clause at the end to catch any article that could not be included in any enumeration. This desire to fix specific rates upon each imported commodity has been applied more generally in the law of 1897 than in any previous tariff act. An examination of the imports of manufactures of textile fibers will illustrate this increase of complexity without any increase of revenue. Indeed, these classifications and rates, being suggested by interested parties, have for their object a reduction of imports, and as a rule a reduction in revenue from them follows.

The second objection to the increasing complexity of the tariff laws is to be found in the petty annoyances imposed upon importers and others in enforcing the not always consistent provisions of the law. These vexations are made all the more telling by the fact that the administration of the law is apt to be in the hands of those who are openly hostile to foreign importations, and therefore regard the importer in an unfriendly spirit. The power given to the customs agents is enormous, and it is not remarkable that it is abused. The demand for samples, the appraisement of articles, the classification of new or compound commodities, all offer room for controversy, which is not always decided by an appeal to the courts of justice. In special instances, where a section of the law has been framed in behalf of a special interest, the attempt to enforce it becomes petty tyranny of the most intolerable kind.

In operation the law soon exhibited its failure as a revenue measure. Although duties were generally increased, the more important articles taxed yielded a smaller revenue than under lower rates. The aggregate collections under the bill did not meet the expectations of its sponsors, and for two reasons: first, because the higher duties discouraged imports; and secondly, the demand for imported articles was steadily decreasing under the expanding ability of home manufactures to meet the needs of the market. No measure short of a direct encouragement to importations can change this situation, or prevent the further shrinkage in the use of foreign manufactures. It follows that the tariff, unless radically altered, can no longer be depended on for a return sufficient to defray one half of the rapidly increasing expenditures of the national Government. By refusing to impose moderate duties on articles of general consumption, revenue is sacrificed; by insisting upon imposing protective duties where little revenue can be had, the tariff is converted into a political weapon. Its dangerous qualities are strengthened by turning these duties against the products of certain countries, a policy specially fit to invite reprisals.

Even the framers of this latest tariff entertained the belief that some provision should be made for breaking its full effect. The familiar scheme for reciprocity treaties, under which moderate concessions in some of the duties could be made, was retained; but France was the only power that could have an object in seriously entertaining the proposition to enter into a negotiation. No real reduction in duties could be given to Germany or any other country, and it has become a recognized fact that Germany does not hesitate to seize an opportunity to exclude the products of the United States, and on the same grounds as support the high duties in the American tariff. The system of drawbacks has ceased to be of much moment in our customs policy, and in the export interest in canned goods finds its chief exercise. Nor does a privilege to manufacture in bond affect more than one article of importance – ores of lead containing silver. No matter how it is regarded, the tariff of 1897 was not framed for revenue, and in experience has not proved sufficiently productive to meet its share of the expenditures of Government. The animus of its sponsors in attaining the immediate political object sacrificed the more important and permanent object of revenue.

Were the true object of customs duties – revenue – to be kept in view in tariff legislation, it would be a simple matter to devise a measure that would be satisfactory and highly productive of revenue. In the fifteen hundred or more articles enumerated in the tariff schedules, more than fourteen hundred are nonproductive, or yield so small a return as to have in the aggregate no appreciable effect on the total receipts. The number left after so large an exclusion can be still further reduced without reducing the revenue one tenth; and it is from a small number of articles, hardly twenty-five, that

the great part of the customs revenue is obtained. By reducing the rates of duties on these to a point of highest revenue efficiency, at which the import is not interfered with and yet not encouraged, a higher return could be had than from the existing complicated, overloaded, and political compilation of duties, usually imposed for any reason other than what they will bring into the treasury.

When, therefore, the best methods of Federal taxation are broached, the reform of the tariff stands first in importance. It is necessary to bring it more into line with the industrial conditions of to-day, which call for foreign markets rather than a domestic or closed market; and for a liberal commercial policy in place of one that regards the products of other countries, whether imported in the crude or manufactured forms, as constituting a menace to American labor and American interests. It calls for a systematic and intelligent revision, which shall throw out such duties as are no longer of service even for protection, and to reduce those that are hostile to the products of other countries and bear in themselves the seeds of reprisals in the future. Now that the United States is going into the great markets with its manufactures, and obtaining a foothold against all competitors, the invitation to retaliation holds a danger far greater to its own interests than any that can be inflicted on other peoples. The greater the advances made the more readily will recourse be had to reprisals and hostile legislation; and in support of every act appeal may be had to examples set by the United States.[8]

[8] "The old protectionist, with the stock arguments about the influence of the tariff upon wages and all the rest of it, is beginning to die out. He told us all he had to say about the 'pauper labor' of Europe, by which he often meant the best educated and most skillful artisans of the world. We got tired of hearing about how the importer paid the tax, how it was Europe and England in particular that was all the time squeezing our lives out, till nearly all of us, being of English ancestry ourselves, wondered whether we, even, could be so good as we hoped we were, if we had sprung from something so essentially perverted and bad. We were told, too, that American tourists who went to Europe and spent money there which they ought to have squandered at home were not friends of their country, and that they did us a particularly hostile act when they brought clothing, statuary, or diamond rings back with them from foreign parts. A season of high prices was a real heaven, and wars and fires were good things because they destroyed property that would have to be replaced, and this would create that demand which, reacting on supply, would increase prices. To say that an article was cheap was to say that the political party in power was no longer worthy of public confidence. It was related that each government could make its people so rich, and the idea was thought to have been traced down from Henry C. Carey, that the rest of the world could be safely disregarded altogether."Seriously, who believes any of this stuff nowadays? The protectionist is not reckoning with such popular impotency and stupidity. He believes in his fellow-man, and wants to give him a helping hand. He does not care what effect it has on England or Ireland. He is not sure that a protective tariff in and of itself will increase the wages of the workmen. He is even inclined to think that less wages and profits would do well enough for every man, if it were cheaper to live and there were not such extravagant demands upon every person from all sides – this without being a socialist. He is certain that 'a cheap coat' does not necessarily make 'a cheap man,' but the cheaper the coat the better it will be for the wearer. That is what we are all trying to do, improve our processes, increase our effective working power, which means, if you please, to make things cheaper." —*The Manufacturer* (organ of the Manufacturers' Club of Philadelphia).

MENTAL DEFECTIVES AND THE SOCIAL WELFARE

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Periods of extraordinary efflorescence or fruitage are followed by exhaustion and sterility not infrequently demanding the free use of the pruning knife; and, just as we remark how frequent is idiocy the offspring of genius, so do we find the same seeming paradox, of mental defect in rank and increasing growth the product of this most wonderful nineteenth century.

True, science has contributed to numbers by revealing as mental defectives the many "misunderstood," "the backward," "the feebly gifted," as well as by showing what was once esteemed moral perversion to be moral imbecility; but a truth to which science also attests is, that unstable nerve centers uniting and reacting through successive generations, producing various forms of neuroses, evidenced in insanity, moral and mental imbecility, idiocy and epilepsy, do show the influence of a highly nervous age.

Our last census reports, although necessarily uncertain and unreliable, yet show ninety thousand mental defectives, not including the insane. Unrecognized and unacknowledged cases swell the number easily to one hundred thousand within our present borders – how many we are going to annex remains to be seen; but this is an enemy that attacks not our frontiers but our hearthstones. We have reached that point when we must conquer it, lest it should conquer us, and the means to this end may be summed up in three words – separation, asexualization, and permanent sequestration. "Diseases desperate grown by desperate appliances are relieved, or not at all," and we must recognize that heroic measures now are as essential to the welfare of the unfortunate as to society, which will then naturally adjust itself to new conditions. Viewing the separation and massing of these irresponsibles – innocent victims of ignorance, debauchery, or selfish lust – men will come to realize that a greater crime than taking is the giving of such life; and so a greater reverence for the sacredness of marriage, a deeper sense of the great responsibilities of parenthood, will do more to avert this evil than the most stringent marriage laws. That the present demands some restraint upon the ignorant and the indifferent there can be no doubt, and laws preventing the marriage of defectives and of their immediate descendants would go far to stem the tide of harmful heredity.

But what to do with those now in our midst is the vital question! They must be provided for in a way that shall insure safety to society, economy to the State, and protection and happiness to the individual. The answer found in the experience of half a century is, briefly, asylums for the helpless – training schools and colonies for those capable of becoming helpful. These in very name and nature being widely separate, just as separate as titles and names indicate, should be their working systems. Work among the feeble-minded, a philanthropic movement directed first toward the idiot, soon found a limit in dealing with a subject not trainable and but slightly if at all improvable. Thence, diverging and broadening as idiocy became better understood and imbecility in various phases became recognized, it found its true province in strengthening and encouraging feeble intellects, arousing and stimulating indolent and weak wills, and in training and directing into healthful channels the abnormal energy of those destitute of the moral sense. How wide the divergence can readily be seen, as also how entirely incompatible with union must be work further apart in reality than is the training of an imbecile and a normal child.

For the idiot, who not only can not be trained, but who in many cases is unimprovable even in the simplest matters of self-help, nothing is needed but that care and attention found in every well-regulated nursery of delicate children, the *sine qua non* being regular hours, simple nourishing food, frequent baths, and tender mothering. As many are paralyzed, blind, lame, or epileptic, it is desirable that the dormitories, well ventilated, be on the same floor with the living rooms and of easy access to bathrooms and playgrounds. Covered and carefully guarded porches should afford the much-needed fresh air and outdoor life in all weathers. These, with cheerful, sunny playrooms, provided with simple toys and furnished with bright decorations varying with the season, will contribute the maximum of pleasure for this life of perpetual infancy. Low vitality, general poverty of the whole physical make-up, the prevalence of phthisis and epilepsy and kindred diseases require the daily inspection of a physician, while the comfort and well-being of the whole, both workers and children, are insured by a capable and sympathetic house mother.

The character of attendants is of the first importance, as these are they who live with the children; it should combine that firmness, tenderness, and balance that constitute an even temperament, capable of recognizing and meeting an occasion without loss of self-control. The duties involve not only the care of the idiots, but the training and direction of idio-imbeciles as aids, and this dealing with natures often wholly animal, requires a certain refinement and dignity of character – at least an entire absence of coarseness – while a knowledge of the simpler manual arts, and if possible of drawing and music, will do much to soften and brighten these darkened natures. As these qualities are valuable as well as rare, the remuneration should be in proportion; certainly sufficient to induce permanency and to compensate for such isolation. A life of constant wear and tear demands also regular periods of rest, and the corps therefore should be sufficiently large to give relief hours daily as well as vacations.

The idio-imbecile, but one remove from his weaker brother, to whose wants he may be trained to minister, finds here his fitting place, and the domestic service of these asylums may be largely drawn from this class and also from that of the low-grade imbecile. Working as an aid, never alone, always under direction, he finds in a monotonous round of the simplest daily avocations his life happiness, his only safety from lapsing into idiocy, and therefore his true home.

The relief to the home, the actual benefit to the State in this housing and care of the idiot and idio-imbecile can never be fully estimated. It is reckoned, however, in a general way that for every idiot sequestrated the energies of two if not four normal persons are returned to society.

Imbecility, mental or moral, congenital or accidental, is either an inherent defect or an irrecoverable loss, an incurable disease for which hospitals can do nothing, nor can reformatories form again that which never has been formed. Could language be made clear enough to enable the public mind to grasp this fact, the work of training schools, the only hope of the imbecile, would then be simplified, and people might be willing to accept what they can give, in the only way in which it can be given, to be of any permanent value. As it is, the few charlatans who profess to train and in a few years send out an imbecile ready to take a high-school or college course not only deceive those from whom they may gather a few thousands, but their representations, coupled with that of a sensational press, effectually impede the progress of a work which must eventually find its true place in the system of public education.

Influenced by these misrepresentations, parents come with profound idiots and high hopes of a course of training (here is one of the misfortunes of an idiot asylum within a training school), and simply refuse to accept a negative to their expectations. Again – to waifs and strays, high-grade imbeciles, developing after years of labored training proficiency in music, drawing, or some one of the industrial arts, friends will suddenly crop up and, dazzled by what seems phenomenal genius, seek to withdraw them just as they become useful to the community. Little do they know of the weak will, indolent nature, and utter lack of "go," that forbid competition with normal labor and must forever be subject to the will of another; still less of the weak physical build that is kept intact only by watchful

care, and which would succumb to any undue hardship. So much for the difficulties that beset the work. Now as to the work itself.

As this must vary according to the status of the individual, a careful study and a correct diagnosis are of primary importance in order that the work may be fitted to the child, not the child to the work. The plan pursued is as follows: A thorough examination – physical, mental, and moral – is first made by the chief physician in connection with papers properly filled out giving personal and family history. He is then sent to the hospital for a fortnight to insure immunity from disease. There, while perfectly free and unrestrained among his fellows, he is under constant observation of the nurses; these observations, carefully noted, are returned to the chief physician, who turns both over to the principal of schools, designating the grade in which he is to enter for probation. Here under different environment he is again tested for some weeks and finally placed.

It is hard for the uninitiated to understand that the grade, be it high, middle, or low, is not associated with promotion and advancement as in schools for normal children. On the contrary, it signifies the quality and status of the individual, his limitations, his possibilities, and consequently determines almost unfailingly the training for his life work; not by any hard-and-fast lines, but by a general mapping out of means which experience has proved will best insure his development, because best suited to his needs. Every latitude is allowed and, as the comfort of both the teacher and the entire class depends upon each going to his own place, there is easy and natural transference according to the necessity indicated by either progress or retrogression; but the varied occupations in each grade give ample scope for indulgence of individual proclivity in the means of development, and it is found that the original diagnosis, based upon experience, rarely errs.

The motto of the schools – "We learn by doing; the working hand makes strong the working brain" – shows manual training to be the basis of the scheme of development, varied for each grade to suit the intelligence. Thus classified, various occupations are arranged and presented with the double intent of securing all-round development, and of giving at the same time opportunity for choice according to individual bent, the child being gradually permitted to devote himself more exclusively to that in which he shows a tendency to excel, and to gain a certain automatic ease in what shall prove the initial of a life employment. A knowledge of writing and of numbers is acquired incidentally as a necessary part of these occupations in daily practice, and arithmetic, taught with objects, is chiefly counting, separating into fractional parts, and practical measurements. Books are used rather as a convenient means of attracting and holding attention while inducing habits of consecutive thinking than for a knowledge of facts to be memorized. Those who can learn to read gain naturally a means of self-entertainment, of self-instruction, hence a certain amount of culture, so long as protected in an institution from indiscriminate and pernicious literature.

The low-grade imbecile, but a slight degree removed from the idio-imbecile, is, like him, totally incapable of grasping artificial signs or symbols. He can therefore never learn to read or write; figures have no meaning for him, nor numbers, beyond the very simplest counting acquired in the daily repetition of some simple task such as knitting, netting, braiding rope, straw, or knotting twine. The excitation of interest in these, which will also give hand and arm power, the arousing of the sluggish, indolent will, through the stimulus of pleasurable emotions, the physical development by means of the various drills and the moral influence of refined, orderly surroundings – these, together with some practical work of house, garden, or farm, which forms part of the daily routine, are all that school life can do for him.

From this preparation he passes to the industrial department, where he receives training in that occupation which the school has indicated for him, becoming in his limited way a useful and contented member of a community which should be his life home. As both of these types develop either extreme docility or perversity – the one quiet, gentle, obedient, following any suggestion even of a comrade's stronger will; the other obstinate, indolent, often brutal and cruel – the necessity for constant guardianship is therefore self-evident.

When we consider that the training of a high-grade imbecile takes four times the period commonly allotted to a normal child, some idea of the vital energy expended on the training of the lower grades may be found in the following example:

I find in our museum of educational work a little ball which I am inclined to regard the most valuable thing in the whole collection. The boy who made it was a low-grade imbecile. His hand against every man, he fancied every man's against him. Always under strict custodial care, that he might harm neither himself nor others, he would vent his spleen in tearing his clothing. His teacher, a woman of rare patience and devotedness, sat beside him one day, tearing strips of old linen and laying them in order. "See, Willie, let us make some pretty strips and lay them so." His wonder grew apace at seeing her doing what he had been reproved for doing; at once he responded, and a new bond of sympathy was established between them. She was playing his game – the only one, poor little lad, that he was capable of – and he joined in.

"Now, we will draw out the pretty threads and lay them in rows." For weeks the boy found quiet pastime in this occupation, and the violent nature grew quieter in proportion. One day the teacher said, "Let us tie these threads together and make a long string." It took him months and months to learn to tie those knots, but meanwhile his attendants were having breathing space. "Now we will wind this into a pretty ball, and I will cover all you make for the boys to play with"; and a new occupation was added to his meager list.

The next link in this chain of development was a lesson in knitting. Again, through months of patient teaching, it was at last accomplished, and the boy to the day of his death found his life happiness in knitting caps for the children, in place of tearing both them and their clothing. You see the teacher was wise enough to utilize the natural activities of the child and divert evil propensities into healthful channels. Had she brought knitting and bright yarn or anything foreign to him first, it would in truth have been fitting new cloth to old garments and the rent would have been widened: his obstinacy would have been aroused, and he would have continued to tear to the end of the chapter.

The imbecile of middle grade receives that fuller presentation of work suited to fuller capacity. Some time is devoted to the three "Rs," as it is found that attention may be aroused and concentrated in the phonetic drills, more especially if associated with pictures, and the drawing of the objects named free-hand; thus eye, ear, and hand are encouraged to work simultaneously. Those who accomplish finally the reading of short simple stories not only enjoy evenings in the library, but may be enabled to glean suggestions for the various handicrafts for which they are being trained. This effort at quick observation and original thinking is further carried forward in the ambidextrous movements of free-hand drawing, designing, and sketching from life – finding ready and practical application in the daily use of tools. The value of the rule and the try-square is tested in the manufacture of the various useful articles in both paper and wood included under the head of sloyd, and "a boy can not learn to take a straight shaving off a plank," says Ruskin, "or to drive a fine curve without faltering, or to lay a brick level in the mortar, without learning a multitude of other matters which life of man could never teach him."

Equally useful to the girl in the workroom as to the boy in the shop is this training of a ready eye, this quick intuition of balance and proportion, this practice of obedience of hand and arm to brain, until it becomes automatic. To both, therefore, the value of such preparation will be incalculable. It is noticeable that boys of this grade turn out as good workers in the ordinary crafts of shoemaking, carpentering, and house painting as those of higher grade who, although capable of grasping more intelligently the details of work, yet do not bring to it that energy and perseverance of one who finds in it "this one thing I do." With the imbecile of high grade, able to accomplish studies equal to about the first intermediate of the public schools, there is a diffusion of interest; the intelligence broadens rather than deepens during the school period in natural response to environment. With greater grasp of numerical values and of letters he attains proficiency impossible to the lower grades in drawing, in music, in printing, and in cabinet work. Other industries will probably be provided for him as the

demand increases, for it must be remembered that this is a class whose needs have been the last to be recognized in a work begun, as I have before said, for the idiot. Regarded as queer, unlike other children – unable to keep up – he has, after an unsuccessful trial at school, been kept at home, in some cases an aid, in others a tyrant, to those relatives charged with his care.

Changed conditions of both family and school, fortunately for him, combine to render this no longer possible, as absence of proper training is always certain to result in deterioration. The pressure upon the primary schools in the struggle for higher education leaves no time to contend with dull, backward children. In the family the care-takers grow fewer in proportion as the home-makers become home-winners, and so these feeble ones are a burden instead of an aid in the ordinary household offices.

The next hope is a training school where, with false hopes fostered by ignorance and sensationalism, they are entered, and after a few years, a time all too short for any lasting benefit, a sentimentality equally stupid withdraws them from that guardianship absolutely essential, with just that little knowledge which will render them more dangerous to society, because less recognizable – an evil element perpetuating an evil growth. Under both conditions these unfortunates have suffered from that lack of constant care and supervision which should be theirs from the cradle to the grave.

The separation of backward children in the schools and the placing of them in special classes for special training is the first step in the right direction. Here, after sufficient time for observation and diagnosing by teacher and physician, the defectives so adjudged will naturally drift to the training schools for the feeble-minded; these, if relieved of the odium as well as the care of their helpless population, will then be encouraged to arrange for this brighter class of defectives industries which will provide not only for development and happiness, but will largely aid in maintenance. The recognition of the necessity for this weeding out of the schools, having place first on the Continent, next in England, and later in our own country, marks an era in the national as well as in the special schools. Both will be benefited largely, and formal expression of this, found in the addition to our National Educational Association of a department representing the training of all classes of defectives, is one of the most encouraging signs of the times.

The same experience which dictates the separation of the idiot from the imbecile, the backward from the normal child, urges also that a permanent sequestration would tend alike to the safety and happiness of the normal and abnormal classes. The experiment made of preparing and sending out into the world these irresponsibles has proved, to say the least, not encouraging, and the advisability of their permanent detention has become self-evident.

The heads of training schools here are a unit in urging that provision be made for those who have reached the limit of school progress. That experience has reached a similar conclusion in England is testified in the munificent gift lately made to the Royal Albert Asylum, and by the opinion of its superintendent, Dr. T. Telford-Smith, thus clearly expressed:

"It is yearly more noticeable that the public mind is coming gradually but surely to recognize the threefold value of the work of such institutions as the Royal Albert Asylum. The educational and the custodial aspects early aroused the sympathies of the charitable; but the preventive aspect is another which must force itself upon all who thoughtfully consider the subject. The far-reaching and inexorable law of heredity is written large for those who study the imbecile."

The following paragraph, from a daily paper, shows that, in America at least, public opinion and the acts of the legislature have become ripe for action:

"The State of Connecticut is about to try a curious experiment in social legislation, having passed a law forbidding any man or woman, imbecile or feeble-minded, to marry under forty-five years of age, the penalty being imprisonment for not less than three years; and persons aiding and abetting are also liable. The hope of the legislature is to keep down dégenerate families."

That this experiment is wise and justifiable who can doubt?

To glance at another and sadder, but not less real, side of the same question, can any one doubt but that the adolescent and adult female imbecile needs lifelong care and protection? Surely the noble gift to the asylum by Sir Thomas Storey of a home for forty such cases is a wise, far-seeing, and statesmanlike act.

It is greatly to be hoped that this noble example may be speedily emulated on both sides of the sea, and that each State may shortly possess, in addition to its training school, its own colony farm with all the industries of a village, drawing its workers from the well-directed energies of a carefully guarded community. Cottages, each with its house mother, would insure that sense of home, and that affectionate and sympathetic oversight so essential to this society composed of those who are always children, while measures, which science has already pointed out and experience proved as advisable, might, if protected by wise legislation, permit less vigilance on the part of care-takers and consequent happiness because of greater freedom to its members.

It is a happy coincidence that Massachusetts, the pioneer State in the work among the feeble-minded, should in its fifty-first year celebrate the beginning of its second half century by the inauguration of this most eventful step in the onward progress of the work. The training school at Waltham has lately purchased sixteen hundred and sixty acres of land for the establishment of a colony which is to have natural and healthful growth from the fostering care of the parent institution.

As these colonies increase, drawing from society a pernicious element and transforming it under watchful care into healthful growth, may not in time the national Government, finding these homes of prevention a more excellent way than prison houses of cure for ill, be induced to provide a national colony for this race more to be commiserated because of a childhood more hopeless than that of the two others in our midst on whom so much has been expended?

THE WHEAT PROBLEM AGAIN

By EDWARD ATKINSON

In a recent article in the North American Review, Mr. John Hyde, the statistician of the United States Department of Agriculture, a gentleman of very high authority and repute, presents this problem in such terms as to throw a doubt upon the validity of any forecast of the potential increase in the product of wheat, or, in fact, of any crop in this country. Without referring to myself by name, he yet makes it very plain that he does not attach any value to my recent forecast of wheat production printed in the Popular Science Monthly for December, 1898.

On the other hand, he rightly says that since Tyndall's address to the British Association for the Advancement of Science in 1874 no treatise presented to that association has excited so general an interest or provoked so much unfavorable criticism as Sir William Crookes's recent utterances on the subject of the approaching scarcity in the supply of wheat.

Mr. Hyde disclaims any intention to give his own views, but yet no one can read his treatise without noting a substantial agreement with Sir William Crookes, perhaps almost unconsciously to himself. In his closing paragraph he says: "To discuss the extent to which under conceivable conditions the United States may, *notwithstanding the somewhat dubious outlook*, still continue to contribute to the food supply of other nations, would be little more than speculation."

The Italics are my own.

I venture to point out that the use of the word "speculation" is an example of many instances. Like a dog, one may give a word a bad name, yet it may be a good dog and a very good word when rightly used. In the true and very innocent meaning of the word "speculation" we find exactly what the public has a right to expect and even to demand from the Department of Agriculture. In Webster's Dictionary I find that, when used in such a connection as this problem of the potential of this country in farm productions, the word "speculation" stands for "a mental view of anything in its various aspects and relations; contemplation; intellectual examination."

If any "mental view" has yet been taken in the Department of Agriculture of the proportion of the land of this country which may be termed "arable," I have yet to find the record. If any "contemplation" has been devoted to the proportions of this arable land which may be devoted to different crops in each section, I have been remiss in not securing the reports. If any "mental view" has been taken of the relative area now devoted to each principal crop, and that which may be so devoted hereafter in order to meet the prospective demand upon the land, either for the supply of our own population or of other nations, where is the record? If there is no such "speculation" now of record, is it not time that a true agricultural survey corresponding to our geologic and geodetic surveys should be entered upon? I have reason to believe that such surveys have been made by many European states in which all the arable land in some kingdoms is classified, listed, and so recorded that any one wishing to know the best place for any special product can get the information by reference to the proper department of the Government.

I have had occasion to make several studies of this kind. In order to inform myself on the potential of the South in the production of cotton, I undertook a study of the physical geography and climatology of the cotton States and of other cotton-producing countries nearly forty years ago. The results of this research were first given in Cheap Cotton by Free Labor, published in 1861. In that pamphlet and in many treatises following, finally in an address in Atlanta, in 1880, a true forecast or "speculation" or "intellectual examination" will be found of the production of the cotton fiber, the potential of the future and of the cotton-seed-oil industry, then almost unheard of in this

country. In 1880 I also entered upon my first "speculation" (not in the market) on the lines of a "contemplation" or forecast of the effect of agricultural machinery applied to our wheat land, coupled with the prospective reduction in the cost of carrying wheat to England, upon the condition of the American farmer and the British landlord. That forecast of prosperity to our farmers in the supply of bread at low cost to our kin beyond the sea has been justified at every point and in every detail. I therefore ventured to review Sir William Crookes's address, and I am well assured that what Mr. Hyde now calls a "somewhat dubious outlook" is subject to no doubt whatever as to our ability to continue our full supply for domestic consumption and export for the next century.

Let me now repeat again what I have often said: statistics are good servants, but very bad masters. I long since ceased to put any great reliance upon averages of crops, wages, or products covering wide areas and varying conditions, unless I could find out, *first*, the personal equation of the man who compiled them; *second*, ascertain what he knew himself about the subject of which his statistics or figures were the symbols; and, *third*, unless I could verify these great averages from one or more typical areas of farm land, or from one or more representative factories or workshops, of the conditions of which I could myself obtain personal information.

General statistics and averages of farm products and earnings I regard with more suspicion than almost any others because of the immense variation in conditions.

I have sometimes almost come to the conclusion that so many of the figures of the United States census are mere statistical rubbish as to throw a doubt on nearly all the schedules. Yet without accurate statistics on many points, many of them yet to be secured, the conduct of our national affairs must become as uncertain as would be the conduct of any great business corporation without a true ledger account and a trial balance. Hence the necessity for a permanent census bureau and for a careful "speculation" or "intellectual" and intelligent examination and "contemplation" or study of the facts about our land by which our future welfare must be governed.

A good beginning has been made by the authorities of many States, yet more by the body of well-trained men in charge of the Agricultural Experiment Station, in whose support too much can not be said. To them I appealed when trying to get an adequate conception of our potential in wheat.

When we think of the blunders which have been made in very recent years, we may well have some suspicion that we may still be very ignorant on many points about our own country. Who really knows very much about the great middle section of the South, what is called the "Land of the Sky," comprising the upland plateaus and mountain sections of Virginia, North and South Carolina, Georgia, Alabama, eastern Tennessee, and Kentucky? Within this area, as large as France and twice as large as Great Britain, will be found timber and minerals equal to both the countries named, and a potential in agriculture equal to either, as yet very sparsely populated.

Конец ознакомительного фрагмента.