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OFFICIAL ORGAN OF THE INTERNATIONAL INSTITUTE
FOR SEX-ECONOMY AND ORGONE-RESEARCH

DIRECTOR: WILHELM REICH, M. D.

EDITOR: THEODORE P. WOLFE, M. D.

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*Love, work and knowledge are the well-
springs of our life. They should also govern it.*



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FROM THE ORGONE AND CANCER RESEARCH LABORATORY

EXPERIMENTAL ORGONE THERAPY OF THE
CANCER BIOPATHY (1937-1943)*

By WILHELM REICH, M.D.

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* Translated from the manuscript by Theodore P. Wolfe, M.D. Third article in a series on the cancer problem. Cf. I. "The carcinomatous shrinking biopathy," *Internat. J. of Sex-economy and Orgone-Research*, 1, 1942, 131-155, and II. "The natural organization of protozoa from orgone energy vesicles (bions)," *ibid.*, 1942, 193-225.

INTRODUCTION

In the following pages I shall show the ways in which the orgone therapy experiments of today developed in the course of seven years of experimental work in cancer. To the unprepared reader, the orgone therapy experiments may seem like hocus-pocus. Orgone energy is taken from the air. The cancer patients sit in a simple cabinet made of an outer wall of organic material and an inner wall of metal. There are no complicated contraptions, no wires, no buttons to press, no whirring motors. The orgone energy, with all its far-reaching effects on the shrinking biopathy, does not cost any money. More than that, our Institute has taken steps to prevent any profiteering with this energy. This may sound surprising, "too simple," and "too good to be true." This simplicity, together with the quackery and profiteering going on all around us, will make the reader inclined to strong disbelief. It is imperative, therefore, to give a thorough account. It is impossible here to enter upon every question and every doubt. The reader who has questions which he does not find answered in this article may send his queries to the Editor of the "International Journal of Sex-economy and Orgone-Research." They will be answered to the best of our knowledge. The connections between our findings and those of traditional cancer research are discussed in a separate, as yet unpublished article.

I. THE SEX-STARVATION OF THE ORGANISM IN CHRONIC ABSTINENCE. ILLUSTRATED BY A CASE OF SHRINKING BIOPATHY WITHOUT TUMOR.

In my article, "The carcinomatous shrinking biopathy" (*See* footnote, page 1), I showed that the local tumor is not itself the cancer disease. The process behind the tumor is a shrinking of the autonomic life apparatus. The patient described in that article had been freed of

her local tumors by the orgone therapy; nevertheless, she died of this shrinking of the life apparatus which was the result of a severe sexual disturbance.

Recently, I had occasion to observe another case of carcinomatous shrinking biopathy which confirms and amplifies the earlier observations. This case, like the first, clearly demonstrates the social and sexual background of the carcinomatous shrinking biopathy. At the same time it shows the possibilities which the orgone therapy of this disease opens to the physician and the educator. The responsibilities which the sexual biopathies impose on the sex-economist and psychiatrist are tremendous. Unavoidably, the knowledge of the nature of the biopathies can be gained only bit by bit, from case to case. One case will leave questions unanswered which the next case will answer, while it, in turn, opens up new questions. All these problems are accessible only to the psychiatrist who thinks in terms of sex-economy. To the mechanistic pathologist they are and will remain a closed book.

A sex-economist, an outstanding co-worker of our Institute, had treated a woman with a severe character neurosis and had brought about a striking change in her within a few months. An acquaintance of hers noticed this change. She knew of a thirty-year-old woman who for two years had suffered from a disease which no physician seemed to be able to explain. In this way, the patient came to my laboratory.

The first impression I gained of her was this: She had a facial expression which could be described only with the word "death mask." The skin of the face was pale and somewhat livid. The cheeks were sunken so that the jawbones protruded sharply. The eyes had a tired, veiled, hopeless expression. The corners of her mouth were drawn down, expressing deep resignation and depression. The body was thin; ribs and vertebrae stood out. The muscu-

lature all over the body was so thin that there could not be any doubt about the presence of an atrophic process. Movements were tired, slow, somewhat dragging. The patient spoke slowly, as if with great effort, without facial expression. The voice was monotonous and without force. It looked as if all activity were held back, as if there were not sufficient energy behind the impulses. The bones of the pelvis also stood out. Hands and feet were cold, pale and clammy. The patient seemed to want to establish contact with me without being able to come through.

Her weight was 90 lbs. During the previous 4 weeks, she had lost 10 lbs. Two years previously, her weight had been 120 lbs. She had always been rather thin since the age of 5; up to that age she is said to have been rather fat. After that, she grew rapidly and became thin. Ever since, her weight had been below average. As a child she had had measles and whooping-cough. She had frequent "colds," up to now, and had an adenoid operation. Menstruation began at the age of 14 and was regular, every four weeks, but always lasted a week or longer and was very painful.

Five years ago, she went to a psychiatrist in an attempt to straighten out her sexual difficulties. Since the age of puberty she had been convinced that "she was not all right sexually." She often had to interrupt school in order to "build up her health." She often felt weak, tired easily and could not keep up with the school work. The simplest task seemed tremendous. She suffered from severe depressions and chronic lack of vitality. Her resignation gradually turned into complete inactivity.

Her mother had undergone a total extirpation of the uterus for cancer, but died later of bone metastases. According to the patient, the mother was a very quiet person, very much devoted to her children. She died as resignedly as she had lived.

The patient's education with regard to sexuality had been very strict and ascetic. She had never had sexual intercourse. She was never allowed to go to dances. During puberty, she had for a time the urge to become acquainted with men, but her attempts failed. Her strictly religious family tolerated no situation which might have become "dangerous." In trying to break through these external barriers, she found that she was suffering from insuperable *internal* barriers which made it impossible for her to approach a man. This condition had set in in late puberty and had persisted to date. It was the main reason for her depressions and her withdrawn way of living. In spite of the fact that she was pretty, men seemed to avoid her. A few times it seemed that a friendship might develop. But none of them had a chance to develop, because at the mere thought of physical intimacy, a *spasm of the genital organs* would inevitably set in. As time went on, she developed a fear of these painful spasms and avoided anything which might possibly lead to sexual activity. She knew that this was pathological but she saw no way out. She did not dare ask a physician's advice or talk to anybody else about it. In brief, she resigned herself. She had never masturbated although her genital excitation made her suffer. She only used to keep her hands at her genital at night. Unlike similar cases of sexual abstinence, she had good insight into her disturbance. She was little inclined to camouflage her disturbance with ascetic ideologies. Her suffering, therefore, was all the more intense. She expressed herself rather uninhibitedly about it during the first interviews. I shall interrupt the description of her abstinence here and come back to it later.

The serious condition of the patient required a thorough physical examination. The result was highly surprising. The physician who examined her prescribed

a diet but found nothing wrong with her physically. His report was as follows: "This is to certify that I have given Miss X a complete physical examination, including blood and urine examination, and find her to be in good health." This finding contradicted the patient's appearance so much that at first I did not understand it. After all, the patient had lost 10 lbs. in 4 weeks; her weight, although she was tall, was only 90 lbs.; for two years, she had been incapable of working, had been lying around at home, feeling weak and incapable of any social contact. To overlook the biopathy resulting from abstinence was only usual, but the loss of weight was hard to overlook, and so was the general impression given by the patient. Such an oversight is possible only because physicians are trained exclusively for mechanical and chemical examinations. They overlook a severe biopathic picture very frequently, simply because they have not learned to pay any attention to the *bodily expression* and to the *mode of sexual living*.

The patient had a tumor the size of a bean at the outer margin of the right breast. I asked her whether the physician had noticed it. He had. But since this tumor alternately grew bigger and again smaller, he had made the diagnosis of a harmless glandular enlargement, apparently on the assumption that a malignant tumor would keep on growing and would not spontaneously recede. This small tumor had been present for about a year, without ever growing beyond its present size. In order not to frighten the patient, I refrained from having a biopsy done. Since the patient wished to undergo the orgone therapy experiment, there was no reason why I should not wait to see whether the tumor would disappear after a few irradiations. If it would disappear *rapidly*, it would have been a malignant tumor. If it took many weeks or even months to disappear, or if it neither re-

ceded nor grew, it would have shown itself to be a harmless glandular enlargement. In addition, we had our cancer tests to aid us in arriving at a definite diagnosis.

All of these tests¹ were *positive*. The examination of the rate of disintegration of the erythrocytes showed bionous disintegration and the formation of T-spikes in about one minute. The orgone margin of the erythrocytes was narrow and only slightly blue. The hemoglobin content was normal. The culture test showed cloudiness of the bouillon after 24 hours. Inoculation on agar and Gram stain revealed the typical growth of T-bacilli. The autoclavation test of the blood showed a strong T-reaction of the erythrocytes (about 60%).

These results of the cancer tests, together with the vegetative condition of the patient, definitely established the diagnosis of an *advanced* carcinomatous shrinking biopathy. Whether the tumor in the right breast was carcinomatous or not was of small significance. I felt that the patient would not live beyond another year.

I notified a near relative whom I had give me a written statement to the effect that the diagnosis was cancer and that I could not promise any cure. I warned the relatives that, if the orgone therapy experiment should fail, rapid deterioration and early death were to be expected. I knew that no physician could deduce cancer from the present disease picture and with the customary methods. But even if a physician, on the basis of the poor general condition, had suspected cancer, there would not have been any method of treatment except the orgone, for there were no local tumors which, with customary diagnostic methods, could be diagnosed as cancer.

The patient started with daily orgone irradiations in my laboratory. Later she ordered an orgone accumulator and took

¹ Cf. *Internat. J. of Sex-economy and Orgone-Research*, 1, 1942, 141 ff.

two daily irradiations of half an hour each; one in the early morning, after the bath, and one in the evening before retiring. The result of this treatment, in the course of the next 8 weeks, was as follows:

Weight: After one week, no increase, still 90 lbs., but not any further loss either. After two weeks, 91 lbs.; after four weeks, 92 lbs.; after six weeks, 95 lbs.; after 3 months, 100 lbs.; after 4 months, 102 lbs. In other words, the shrinking process had not only been arrested, but the increase in weight became progressively more rapid.

Growth of T-bacilli in blood medium: After five weeks, bouillon as well as agar cultures were *negative*, and remained so.

Autoclavation test: After three weeks, no improvement; still about 50% T-reaction. The blood bion solution did not have the character of a pure colloid, but showed, as is usual in advanced cancer, a blue-green discoloration.

Tumor of the breast: After 10 days of orgone irradiation, the tumor was no longer palpable. (Observation of earlier cases had shown that orgone therapy eliminates breast tumors of medium size in a space of two to three weeks).

These observations were of signal importance for the orgone therapy experiment. They showed that an advanced carcinomatous condition can exist in the absence of any conspicuous *local* manifestation. This confirmed my earlier conviction that the essence of the cancer disease is a general shrinking of the vital apparatus; that the local tumor is not the disease, but only one of the symptoms. These observations showed further that customary medical training does *not* enable the physician to diagnose cancer until *conspicuous local manifestations* make their appearance. They proved, furthermore, the usefulness of our biological blood bion tests in cases where the usual methods of examination do not yet reveal cancer. Even if a surgeon had suspected the tumor of the breast to be cancer and

had operated, the general shrinking biopathy would have, nevertheless, persisted, and the patient would have died from it. In any case, it is inconceivable that this very small tumor, without metastases in the axillary glands, could have been the *cause* of the poor general condition. The tumor was of a more recent date than the general shrinking condition. The existence of a "carcinomatous shrinking biopathy *without* tumor" is an established fact. It remains to be seen how frequent such cases are. At any rate, the possibility of orgone therapy divests the disease of much of its horror, no matter how many detail problems remain to be worked out. In this case, the therapeutic orgone experiment was successful. It has the right to be tested and developed on a large scale. This aspect of the problem will be discussed elsewhere.

Before turning to the main subject of this article—the principle of the orgone therapy experiments, the problem of the development of the cancer cells and the processes in the tissues—I shall have to say more about this patient.

When the first number of the INTERNATIONAL JOURNAL OF SEX-ECONOMY AND ORGONE-RESEARCH appeared, a well-meaning physician said that sex-economy was very important and quite correct, but "what on earth did it have to do with cancer?" He thought it a mistake to talk about cancer in the first number of the Journal; that would only prejudice people against sex-economy, he reasoned. Many others show astonishment and incredulity when I call cancer a sexual biopathy or a sex-starvation scourge. These reactions show that the central point of our work has not been grasped:

The diseases resulting from sexual stasis are severe biopathic diseases of the organism. Cancer biopathy is one of the diseases in which the chronic disturbances of the sexual economy express themselves. Cancer is a sexual biopathy or sex-starvation dis-

ease. Therefore, sex-economy and cancer research are inseparable. "Character-analysis," "vegetotherapy" and "orgone therapy" may appear as different therapeutic methods, but they are, basically, *one and the same biotherapy*, working in a unitary organism. They have a common root in the biosystem. Their superficial differentiation corresponds to the superficial differentiation of the total organism into biophysical, characterological and physiological functions.

I had the patient examined by a gynecologist. This examination confirmed my diagnosis of vegetative shrinking: The uterus was very small, the ovaries could not be palpated on rectal examination. The breast glands seemed to be completely undeveloped. Whether we are dealing here with an atrophy or a primary underdevelopment of the sexual organs is, of course, difficult to say. The gynecologist thought it was a matter of primary hypofunction of the ovaries. Our theoretical concepts do not admit of the assumption of such a primary and isolated ovarian disturbance. For the ovaries do not function independently, but are a part of the total functional system of the autonomic life apparatus and dependent on it. On the basis of the sexual history of the patient, I am inclined, therefore, to consider the underdevelopment of her breasts and genital organs an *atrophy of disuse*. The question as to what extent endocrine glands may play a primary role or to what extent they are only executive organs of the total plasm function cannot be definitely answered at this time.

In addition to the orgone therapy, I treated the patient vegetotherapeutically. Very soon, the patient began asking a series of questions: "Does sexual intercourse hurt?" "When are you going to rape me?" (Like so many other chronically abstinent people, this patient suffered from intense rape phantasies. She was convinced that a woman could not stay

alone in a room with a man without being raped). "Does the man move the penis in the vagina? Wouldn't that hurt?" "What does one do when one gets too many children?" (She knew nothing about contraception.) "Does a woman have to give in to a man if he wants satisfaction? I dread it." The patient was ignorant with regard to the most primitive questions of sex life. As a child she had kept asking her mother questions but had been rebuffed, had stopped asking anybody such questions and now believed that one was not supposed to know "such things." She had developed a strong fixation to her father. He was a strict authoritarian disciplinarian and moralist who had immediately suppressed the first adolescent impulses in the girl. Soon after that, she had developed perverse phantasies which made her suffer a great deal. The main content of these phantasies was brutal violation. This led to panicky fear whenever a boy came near her. Even then, at puberty, this anxiety was accompanied by spasms of the genital apparatus. Later on, they became a chronic complaint. More and more, she avoided men and became increasingly lonely.

She had absorbed the usual distorted concepts of sexuality and had anchored them characterologically: Sex is evil, a terrible sin against God. One has sexual intercourse only in marriage, and even then only in order to have children. (Of course, everything she saw all around her contradicted this.) The man violates girls in order to "still his lust." Women have no sexual desires, they only bear children. They have sexual intercourse only because the man "needs that sort of thing." If one masturbates, one becomes a cripple, an idiot. (Therefore, she never really masturbated, only always kept her hand at the genital at night, in a stereotyped manner.) Man is different from the animals in that he is not sexual. Everything sexual is animal-like and has to be fought. One

must cultivate "higher values" and must not have "bad thoughts."

Of course, she did have "bad thoughts," felt guilty about them, tried to repress them, and developed "worse" thoughts. Even as a child she developed brutal sadistic phantasies which scared her, so that she tried to suppress them. She had impulses to bite men's penises off or to tear them off. At puberty, when she was about to dance with a boy, the impulse to choke him would break through into her consciousness. This made her withdraw still more. Her father warned her against venereal diseases, making her believe that sexual intercourse would inevitably result in venereal disease. He did not mention how one could protect oneself against it. Thus she was, helpless, left to her own devices, torn between longing for love and fear of it. This led her into dangerous situations. Her curiosity made her approach completely strange men and indulge in various sexual practices only to flee in a panic and withdraw completely for months at a time. That it was her anxiety which led her into dangerous situations is easily understandable. She had the urge to find out whether what she had been told was true. This anxiety was an expression of her urge for sexual gratification. This only confirms what sex-economy has always contended: *Compulsive morality and abstinence create the exact opposite of what they are intended to create: they create sexual criminality and perversions.*

She did not know the anatomy of her genital. Since her genital made her suffer so much, the thought of how it was built and how it worked was with her almost constantly. It would come to her during perfectly harmless conversations with male or female acquaintances. And so she had again to take flight and withdraw. Only once, at the age of 20, had she felt more deeply for a boy and attempted to break through. But she soon gave up. She "went to pieces." The genital excitation became

so intense, and the genital spasm became momentarily so violent that she wanted to commit suicide. She could not conceive of the sexual act as other than a brutal violation.

As early as puberty, her tremendous sexual stasis impaired her working capacity. Whenever she became interested in her work, compulsive sexual thoughts would intrude. Apparently, the emotional stimulus of the work simultaneously stirred up the dread sexual excitation. *Sexual stasis is the most important cause of work disturbances in puberty.* As time went on, her working capacity kept decreasing, until the patient reached a stage of complete emotional emptiness. During the past two years or so, the emotional emptiness had developed into somatic shrinking.

In these first attempts to treat a shrinking biopathy vegetotherapeutically I started out from the following premises: Carcinomatous shrinking as well as the cardiovascular biopathy, the "stasis neurosis," are based on sexual stasis.² Nevertheless, there must be an essential difference between the carcinomatous and the cardiovascular biopathy. Cancer characters show predominantly mild emotions and characterological resignation. Hypertensives, on the other hand, people who suffer from chronic vascular contraction, are "emotionally labile," more or less explosive, characters. This is expressed in their acute anxiety attacks; on the other hand, I have never seen cancer patients with violent emotions, explosions of anger, etc. In spite of their common basis, sexual stasis, these two biopathies show essential differences. The decisive factor here is *how the organism reacts to the sexual stasis* once it has come about.

In exploring new connections, we are

² Cancer and cardiovascular disease are the most frequent causes of death. Cf. Thorburn, Wm. F., "Mechanistic Medicine and the Biopathies." *Internat. J. of Sex-economy and Orgone-Research*, 1, 1942, 257.

again and again forced to make certain assumptions which the disease pictures impress on us, without being able to say with certainty that these assumptions are correct. We have to leave it to further experiences to confirm or refute our assumption. The clinical comparison of cancer biopathy and cardiovascular hypertension necessitated the assumption of a basically different energy process in the two:

In the cardiovascular biopathy (stasis neuroses due to abstinence) the sexual excitation remains alive, biologically, physiologically and emotionally. That is, the biological core of the organism, the autonomic vital apparatus, continues to produce energy to the fullest extent. The organism, in its state of contraction, reacts to this with outbreaks of anxiety or anger and with somatic symptoms such as hyperthyroidism, diarrhea, tachycardia, etc.

In cancer, on the other hand, the biological core reduces its energy production. Thus, as time goes on, the excitations and emotions become weaker and weaker. Here, the energy household is disturbed far more severely than in such neuroses as hysteria, in spite of the much more conspicuous symptoms of the latter. Functionally speaking, an eruption of anxiety or anger is still a discharge of energy, pathological as it may be. Chronic emotional calm, on the other hand, must correspond to a depletion of energy in the cell and plasma system.

Though with some hesitation, I cannot help speaking here of "*suffocation of the cell energy system.*" Character resignation must correspond to a gradual cessation of the energy functions of the vital apparatus. I would like to illustrate by an analogy:

In a running brook, the water changes constantly. This makes possible the so-called self-purification of the water; dirt is soon dissolved—a process which is as yet not understood. In *stagnant* water, on

the other hand, processes of putrefaction are not only not eliminated, but furthered. Amebae and other protozoa grow poorly or not at all in running water, but copiously in stagnant water. We still do not know what this "suffocation" in stagnant water, or in the stagnant energy system of the organism, consists in; but we have every reason to assume the existence of such a process. It can be no accident that cancer cells develop so readily in organisms in which the energy no longer flows freely. Apparently, the cancer biopathy—in contradistinction to other biopathies—begins with this calm in sexual and emotional life. While the previous history of cancer patients frequently shows numerous symptoms of stasis anxiety, they are very rare in the *mature*, or cancer stage. There seems to be a sharp reduction of the *biological energy metabolism* which in the healthy person is so vividly reflected in the function of the orgasm. These assumptions seem very important and deserve thorough investigation.

It should not be assumed that the organism accepts the gradual extinction of the energy system without a fight. At a time when the orgonotic excitation of the total system decreases, the excitation may still be intense in individual cells or cell systems, just as a suffocating organism defends itself against the final relaxation by clonisms. That is, even at a time when the *total* organism has lost its capacity for excitation and for energy metabolism, *individual cells may still show orgonotic over-excitation.* It goes without saying that such isolated excitations, which no longer take place in connection with the excitations of the total organism, can no longer be physiologically normal. They must exert a harmful influence on the cell *structure.*

I shall interrupt this discussion here in order to go back to our patient. At any rate, orgone physics promises to provide important insights into the affective function of the cells and its relation to orgone

energy metabolism. For example, the orgonotic lumination of bions reveals important connections with the phenomena of cell lumination and cell excitation in the organism.

The affective and energy behavior of our patient fully corresponded to the assumptions just described. She kept asking about sexual matters, but there was no urge or excitation behind the questions. A patient with anxiety hysteria, for example, would have asked the same questions with the greatest excitation, or she would have repressed them and developed anxiety; the *emotional* significance of the questions would have been immediately evident. Not so in our patient. Everything she said or asked about was *flat*, as if devoid of interest, in spite of the fact that these things filled her life. Her phantasies were cruel, but she herself seemed untouched by them and superficial. Soon she began to complain herself about this superficiality, about the "corpse-like" quality of her way of experiencing things. She felt that she was unable to establish genuine contact with anything or anybody. This emotional calm of the cancer character is entirely different from the coldness and contactlessness of the compulsive character; in the latter, strong energy impulses are inhibited by the emotional block, while in the former the energy is simply lacking.

Precise observation of the patient's behavior contradicted the assumption that there were repressed affects in the biological depth. Not only were there no affects on the surface; *there were no affects in the depth either*. The breakthrough to the orgasm reflex succeeded with surprising ease; but again, there was hardly any affect connected with it. *Affects are the expression of biological cell excitation*. If, in the case of a patient with stasis neurosis and anxiety, one breaks through the respiratory inhibition, strong excitations inevitably and immediately appear. But this was by no means the case in our pa-

tient. Though the correction of her respiration over a period of two months resulted in spontaneous vegetative movements, it produced no strong affects. While the stasis-neurotic patient develops an intense fear of the orgasm reflex, our patient was not afraid of it because there was so little energy behind it. In other words, the affective debility reached far down into the biological system.

I was confronted by the question whether it would be possible to dissolve spasms of the genital apparatus in the absence of strong excitations. For it was clear that she could get well only if her sexuality would begin to function strongly. After only two weeks, she began to develop vegetative currents in the genital, though they were weak. With that, the genital spasms became milder and the pain disappeared. But the excitation was so weak that the patient did not develop the usual fear, and the excitation failed to increase. This was an extraordinary finding, and in contrast to the usual observations in neuroses. It confirmed the assumption that in the shrinking biopathy the sources of excitation in the autonomic vital system gradually become extinguished. The extent to which dwindling energy functions can again be revived by orgone therapy and vegetotherapy remains to be investigated.

Resignation without open or latent protest against the frustration of happy functioning, then, must be regarded as one of the essential causes of the shrinking biopathy. *The biopathic shrinking is the continuation, in the realm of cell functioning, of chronic characterological resignation*.

Let us think of the biological, physiological and psychological functions in terms of a wide circle with a center ("core"). The shrinking of the circle periphery then would correspond to the characterological and emotional resignation. The center, the core, is as yet untouched. But the process progresses to-

ward the center, the "biological core." This biological core is nothing but the sum total of all plasmatic cell functions. When the shrinking process reaches this core, then *the plasma itself begins to shrink*. This coincides with the process of weight loss. But long before the plasma function is directly disturbed, the peripheral physiological and character functions are disturbed: first the ability to establish social contact, to enjoy life and pleasure, the ability to work, and then vegetative excitation and pulsation.

The vital apparatus works in layers around the biological core; the biosystem consists of superficial and deeper layers. Such a layering was first found in the character.³ Correspondingly, there are superficial and deep disturbances of bodily functioning. An *acute* respiratory disturbance will not affect the biosystem. A *chronic* respiratory disturbance, in the form of a chronic inspiratory attitude, will create chronic anxiety; but it will not affect the biological cell plasma function as long as the energy functions of the cells continue, that is, as long as the organism continues to produce strong impulses. When, however, the peripheral character resignation has progressed to the biological core, when, thus, *the production of impulses in the cells itself is affected*, we are dealing with the process of biopathic shrinking. This process will have to be further investigated in schizophrenia, especially the hebephrenic form.

That this process is specific in cancer is now an established fact. The real carcinomatous process is essentially like the protozoal life in a pool where there is no movement of water but ample growth of protozoa. Unfortunately, these processes in cancer can only be deduced and not directly observed microscopically. Thus there is a gap without *immediate* observation between characterological and biological

affective debility and that carcinomatous process in the cell plasma which—in the form of vesicular, bionous disintegration—we can observe microscopically.

We shall now turn to these pathological processes in the cells and the tissues. In so doing, we shall remember an important fact which is overlooked by orthodox cancer research: No simple scar, wart, injury or chronic irritation can lead to cancer *unless* there are already present basic disturbances of vital functioning in the core of the biological system which then, secondarily, take hold of the local injury. The question is: *how does this take place?*

II. THE RIDDLE OF THE DEVELOPMENT OF THE CANCER CELL. THE DEVELOPMENT OF PROTOZOA: THE KEY TO THE UNDERSTANDING OF THE CANCER CELL.

Among the many unsolved problems presented by the cancer scourge hardly any has excited as much curiosity, among physicians and laymen alike, as the question of the origin of the cancer cell. Healthy tissue is "at rest," that is, the individual cells live together in an organic harmony and collectively fulfill the functions of the respective organs, such as taking up food, digestion, excretion, respiration, sexual excitation and gratification, etc. In brief, the cells are subordinated to the organ functions; they function in the sense of guaranteeing the vital functions of the total organism. Cancer tissue develops from *seemingly* healthy tissues. Its chief characteristic—according to traditional concepts—is this: one or more cells which were at rest begin to get "restless"; they divide rapidly, become rampant and grow into large heaps, thus forming the "cancer tumor." In contrast to healthy tissue cells, cancer cells are mobile. Dividing rapidly, they grow into the surrounding tissues, thus destroying them. They are rightly called "infiltrating" and "destructive." Let us concentrate first

³ Cf. Wilhelm Reich, CHARAKTER-ANALYSE. 1933.

on the one all-important question: *How is it possible that an immobile cell, living and functioning properly within the tissue, changes into a mobile, "wild" cell which leaves the tissue and destroys everything it meets in its path?* That this happens is all the more remarkable in that the cancer cell itself has a low vitality, that is, it disintegrates very readily.

Up to now, the jump from the healthy cell to the cancer cell has remained a riddle. The characteristics of the healthy cell are very well known. The forms and many characteristics of the cancer cell are also fairly well known. But one knows nothing about what happens in between the two, nothing about how one is transformed into the other.

About six years ago, bion research, by way of a rather peculiar detour, succeeded in solving this riddle. The solution of this one most important riddle opened many avenues of approach to an understanding of cancer as well as to the fight against it. The most important finding was this: *The belief that the cancer cell develops directly out of healthy cells is erroneous.* Long before the development of the first cancer cell in the organism, there are a series of pathological processes in the respective tissue and its immediate surroundings. These local processes, in turn, are induced by a general disease of the vital apparatus. Thus the development of a cancer cell in a certain spot is in reality only *one* phase in the development of that general disease which is called "cancer." This general systemic disease we term *carcinomatous shrinking biopathy*. The cancer tumor is not even the most important part of the cancer disease. It is only the most striking one and up to now has been the only palpable finding in cancer biopathy. The discovery of the shrinking biopathy is so important because it turned our attention to that which is essential. If, as we know now, the general disease, and not the local tumor, is the essential thing, then, logically,

the treatment of cancer must also be a *general* one; it cannot be restricted to the small spot in the organism where a tumor happens to make its appearance. The ignorance of the *general* disease "cancer," and the erroneous belief that the local tumor is the actual disease, is the reason why the fight against cancer has made no progress.

Let us return to the question of what takes place in the tissue *previous* to the development of the first fully developed cancer cell. In order to answer this question, we must first get rid of some methods which have *handicapped* cancer research, and learn some new ones:

a) We make it a habit to examine healthy and cancer-suspect tissues in the *living* state, not, as is customary, in the *dead* state, fixed and stained. The fixed stain preparation may serve as control. But the living preparation shows findings which never could be made in the dead preparation.

b) We make our observations with a magnification of at least 2000x. This is essential, because otherwise the observations which alone will explain the development of the cancer cell cannot be made.

c) We often repeat and practice our observations in excreta (sputum, feces, urine), living blood, skin cells, in short, all available cells of the organism.

UNUSUAL FORMS IN CANCER TISSUE AND BLOOD OF CANCER PATIENTS

In healthy living tissue and in healthy blood, examined at 2000x, we find exclusively such cells as are described in the literature as the normal constituents of the organism. Now let us examine blood, excreta and tissues of a cancer patient, say with carcinoma of the lung. We find formed cells and unformed shapes such as we never see in healthy experimental animals or in the tissues or sputum of healthy humans. In particular, we find

striated or *vesicular* structures with a strong *blue glimmer* which look neither like cells nor like bacteria. Some have irregular outlines, as if not formed at all, while others show an elongated, *club-like* or *caudate* shape. We are surprised to find in the sputum what look like caudate, quickly moving and pulsating amebae. *How do ameboid forms get into the lung?* Certainly not through "air infection," for there are no amebae in the air. *They must have developed in the lung itself.* Out of what? Certainly not from germs which happened to have entered the lung. We have learned that in grass infusions amebae develop from vesicularly disintegrating grass through various intermediate stages, and that there are no "germs" in the sense of traditional protozoology. Could it be that the amebae and similar forms developed from disintegrating lung tissue, just as the amebae in grass infusions develop from the disintegrating grass tissue? This is an arresting idea for it explains at one stroke the origin of cancer cells. However, one should hold on to such ideas and make definite statements only after having assembled all the necessary objective proofs for their correctness. (Cf. fig. 9, p. 69.)

We have misgivings with regard to our idea: Why has it never occurred to anybody simply to examine the sputum of patients suffering from or suspect of cancer for unusual formations? Undoubtedly, they would have found the presence of amebae in the lungs. If things are that simple, caution is doubly indicated. Let us first examine the literature on cancer. In no comprehensive work on cancer is there as much as a mention of the existence, let alone the form or variety of *living*, mobile cancer cells in living tissues or in excretions. It is almost inconceivable that several generations of cancer researchers should have so grievously erred. So, either our idea is nonsense and the amebae in the sputum have nothing to do with can-

cer, or—generations of cancer researchers have in fact made a tremendous error.

Let us not gloat over this, but look seriously at all sides of the question. First, do such errors, of commission or omission, occur in science? Undoubtedly they do; more than that, they always precede important new discoveries. Incalculable numbers of women died of puerperal fever at a time when, before Pasteur and Lister, one knew nothing about infection and sterilization. It would have been very simple indeed to develop an old discovery of Leeuwenhoek and to look into microscopes. What kept the physicians of Pasteur's time from using microscopes was nothing but an old, well-established prejudice; it resulted in incalculable deaths. Today every physician or educator is familiar with infantile sexual activities. Yet, before Freud discovered them, they did not exist in the eyes of science. How simple it is today to realize that the chief interest of children is the sexual one.

Considering these examples from the history of science, which could be infinitely extended, we become less hesitant in assuming that a similar catastrophic error has been made by the cancer researchers. But we have to find out just what this error consists in, how it came about; and on the other hand, we must positively prove our concept to be correct. Having come upon the possibility of a gigantic error, we have to face the issue. Either our concept is wrong; then we must admit it. Or traditional cancer research started out from erroneous premises and got on the wrong track; then we have to prove that. To state it right here: *Traditional cancer research does, in fact, start out from erroneous premises and proceeds on the wrong track.*

It is easy to see what a consistent study of the excretions and the blood of cancer patients would mean: It would soon become possible to make an *early* diagnosis of cancer. One would no longer have to

wait until the cancer tumor has reached such proportions that the diagnosis by X-ray or biopsy becomes possible. In addition, one would gain an insight into the origin of cancer and find ways of curing it.

To prove the basic error of traditional cancer research is the same thing as to prove the correctness of our concept concerning the origin of cancer cells. If we can understand how the cancer cell develops from healthy tissue we can also understand where traditional cancer research failed.

Let us examine the sputum of a patient with lung cancer at magnifications above 2000x, say, 3000x or 4000x. We find a wealth of very small lancet-shaped bodies which we did not see at 2000x. They have the same shape and motility as the T-bacilli which we can cultivate from degenerating tissue or blood, or from putrescent protein. They are the same bodies which we find in charcoal bion preparations or in cultures made from any kind of cancer tissue.

Since T-bacilli are the result of tissue degeneration and putrid disintegration, the conclusion is inevitable that a process of disintegration and putrefaction is taking place in the lung tissue. We have to decide the question as to whether these T-bacilli are a result or one of the causes of the tissue disintegration. One thing is certain: They did not enter the lung from the air. This is easy to prove. For no matter how we try, *none of the known culture media can be infected with T-bacilli from the air*. Only when the cultivated air bacteria (rot bacteria, subtilis, staphylococci, etc.) themselves degenerate, do we obtain T-bacilli. They are easily recognized in the culture. They form a narrow, green-blue margin around the degenerating culture. There is a strong acid and ammonia-like odor. From this margin, pure cultures of T-bacilli can be obtained. The question as to whether the T-bacilli precede the cancer or are a result

of it, or both, can be answered experimentally. More about this later.

In the sputum of the lung cancer patient, we also find blue, contractile forms of diverse shapes which are absent in healthy lung tissue. They are PA bions. They, too, must have developed in the lung. Like the T-bacilli, they cannot be cultivated from the air. We know that they are PA bions because they have the same paralyzing effect on the T-bacilli as the experimental PA bions from earth or coal. A new question arises: *What is the connection between these large blue bions and cancer?* The longer and the more exactly we observe, the more complicated things become. Nevertheless, the answer will prove simple.

AUTOINFECTION OF THE ORGANISM DUE TO TISSUE DISINTEGRATION

The formations found in the sputum derive from the organism itself. We have to find out how they develop. They are the product of a tissue degeneration and act like an *autoinfection* of the organism. To make sure, we examine other excretions in cancer patients, urine, feces; secretions from vagina and uterus; epithelium from skin cancers; tissue from spontaneous cancer tumor in mice. The more cancer tissues of diverse origin we examine, the more certain become our conclusions:

- a) The fully developed cancer cell is only the final phase of a long series of pathological tissue changes which hitherto have remained unexplored;
- b) There are a number of typical phases of tissue disintegration and of the development of certain forms which are not to be found in healthy tissues;
- c) The first phase of carcinomatous tissue degeneration is the loss of normal structure through the formation of vesicles;
- d) The vesicular disintegration of the tissue results in two basic types of bions:

the blue PA bions and the black T-bacilli;

e) *From these bionous energy vesicles there develop cancer cells, through many intermediate phases to the mobile, ameboid protozoon.*

Whatever cancer tissue we examine, we always find the same forms of departure and transition. (Cf. figs. 5-8, 16-19, p. 65 ff.)

Healthy muscle tissue shows a regular striated structure without vesicles. Cancerous muscle tissue shows a vesicular structure (cf. figs. 1, 2, p. 65). Healthy living cells show a bluish protoplasm without structure or with fine striation. The same cells in cancer tissue show deep-blue bionous vesicles or tiny black bodies. Healthy cells disintegrate, when boiled in KCl, into large blue bions. Cancer cells, when boiled, disintegrate into T-bodies. The cancer cell, then, differs from normal tissue cells in that it disintegrates not into blue PA bions but into T-bacilli.

No matter from what part of the body the cancer tissue comes or what particular kind of cancer it is (sarcoma, adenocarcinoma, epithelioma, etc.): cancer is characterized by the *vesicular structure of the surrounding tissue* and the various forms which develop into a fully-developed cancer cell or result from the disintegration of the latter. The first step in the development of a tumor is always vesicular tissue disintegration. This justifies the assumption that the infiltrating growth of cancer cells into the surrounding tissue is due not only to already developed cancer cells, but also, even to a higher degree, to a disintegration of the softened tissue in the surroundings. The surrounding healthy tissue must undergo vesicular disintegration before the infiltrating growth of the cancer cells becomes possible. It is a matter of a mutual interaction between already formed cancer tissue and surrounding healthy tissue. The first vesicularly disintegrated cell group develops into cancer cell tissue. This in turn damages the surrounding tissue and causes

its vesicular disintegration. This tissue, in its state of vesicular disintegration, no longer offers any considerable resistance to the cancerous growth and itself increasingly develops into cancer tissue. This is the explanation of the typical destructive and infiltrating growth of the cancer tumor. The microphotos of unstained living cancer tissue (cf. figs. 4, 7, p. 66 f.) show the gradual transition into dark cancer formations.

The shape of fully-developed cancer cells is typical for all forms of cancer, no matter whether they are found in a bone, a gland or a muscle (cf. fig. 9, p. 69). Once one has seen it, one easily recognizes it by its club-like, caudate form. It takes on this shape long before it attains motility. If one finds, in a vaginal secretion for example, elongated, vesicular formations of a club-like shape, with a strong blue glimmer, the diagnosis of incipient cancer is beyond doubt. There is, at this stage, no telling whether or not the disease is going to progress. This depends on many circumstances, which will be discussed below.

These club-shaped bodies cannot be confused with any healthy cell. Only the gastric secretions contain cylindrical cells from the gastric mucosa which on casual observation one might take for cancer cells. The somewhat experienced observer, however, will not confuse the two. Besides these typical club-shaped bodies one finds large round cells the plasma of which shows no structure or is composed of bions of intense dark blue color.

The typical stages of the development of cancer cells, as observed in mice and humans, are as follows:

- a) Vesicular disintegration of the tissue. This disintegration is caused by a local spasm and chronic general energy stasis;
- b) Organization of the bionous vesicles into heaps ("bion heap");
- c) Formation of a membrane around the bion heap;

d) Dissolution of the bions into structureless or striated blue plasma. (This does not always take place; the bions may keep their original form);

e) Formation of club-shaped cells;

f) Development of motility in the fully developed club-shaped cells. The movements cannot be seen at a magnification of less than 3-400x. They are slow and jerky, from place to place;

g) Liquefaction of the plasm and with that development of flowing ameboid protozoa. In human cancer, the development very rarely proceeds to this point, because usually death occurs before this stage is reached. In mice, especially mice which have developed artificial cancer as a result of T-bacilli injections, these ameboid forms are seen much more frequently. The cancer cells move by way of rhythmic contractions or by flowing from place to place. Many cancer cells have a tail and move in the manner of fish. (This was recorded on movie film.) The fully-developed cancer cells show an infinite variety of form. For reasons as yet unintelligible, the small cells are much more malignant than the large ones. The most malignant form is the small-cell sarcoma in youth.

The development of a cancer tumor, then, corresponds to a *protozoal self-disintegration and autoinfection of the organism*. To put it differently: *Individual tissues of the metazoal organism develop into protozoa* of different size and shape. If this process were not stopped by early death, the cancer mouse or the cancer patient would change completely into protozoa. The fatal accompaniment of this metamorphosis of tissues into protozoa is the typical cancerous process of putrefaction. This putrefaction of the organs and the blood will have to be discussed separately. In bion research, it makes little difference whether the cancer cells develop from epithelial tissue, gland tissue, connective tissue or bone; the basic process

is always the same. Thus, the usual differentiation of cancer forms (epithelioma, adenocarcinoma, glioma, etc.) loses much of its significance.

THE FUNCTION OF THE ORGASM IN THE ENERGY METABOLISM OF THE CELL

The biopathic shrinking process must of necessity affect the process of local tumor formation. Vegetotherapeutic observations show *local spasms* and *disturbances in the biological charge* of the tissues to be the most immediate basis of tumor development. The *respiratory inhibition*, on the other hand, forms the basis for the general shrinking of the organism. These processes explain the disturbances in the total organism and in the individual organs, but they do not explain the disturbances of the *cell* functions in the affected organs. In a rather devious way, this problem led back to the old question: *What is the function of the sexual orgasm in the energy metabolism of the cell? Why has the metazoon developed this cardinal function, and on what biophysical processes in the cells is it based?* Such questions may seem superfluous or naive. Yet, they are of decisive significance.

Sexological research before sex-economy did not even raise this question, and sex-economic research thus far has been unable to answer it. We cannot retreat to the convenient mystical standpoint that man differs from the animals by being "asexual" or that "one can exist without the orgasmic function." The damages to humanity caused by orgasmic impotence are too widespread and too disastrous to be overlooked any longer. Sex-economy has long known the fact that the orgasm determines the energy equilibrium of the organism, without, however, understanding this fact. We only knew that the orgasm regulates the energy household and that orgasmic impotence causes biopathies. But we did not know *how* the orgasm

fulfils this function, or, in other words, what causes the orgasmic (orgonotic) discharge *in the cells*. Sex-economic cancer research unexpectedly led to the solution of this important question:

The local cancer tumor develops in spastic and poorly charged, that is, in suffocating tissues. This process must have a pronounced effect on the individual cells. Chemical investigations have provided many important findings here, such as the production of lactic acid in cancer tissue, the excess of carbon dioxide which points to a process of suffocation, etc. Bion research adds to the chemical viewpoint the energy viewpoint, in other words, that of orgone physics. It shows that energy stasis leads to a bionous disintegration of the cell substance, and that the cancer cell develops secondarily from the resulting bions. Thus we have to investigate the question: In what manner does energy stasis in a tissue lead to a bionous disintegration *of the cells*?

Every cell, with its nucleus, plasm and orgone energy field, forms a tiny but complete "orgonotic system." As every cell contains orgone energy, its structure must be correlated to its orgone charge. It is not difficult to see what this correlation is: The *nucleus* is the most important part of the cell and the one containing the largest amount of energy. Plasm without a nucleus is not viable; on the other hand, cells can live with a minimal amount of plasm, as, e.g., the male sperm cells. The nucleus is the "vegetative center" of the individual cell, just as the autonomic nervous system forms the "biological core" or "vegetative center" of the total organism. The nucleus and the autonomic nervous system are the parts richest in energy in their orgonotic systems, cell and total organism, respectively.

The nucleus is, energetically speaking, more vigorous than the cell plasm. All essential biological processes and functions originate in the nucleus. Thus, cell di-

vision begins with the division of the nucleus which is then followed by the division of the plasm. Amebae in the process of dividing often live for hours with a divided nucleus, that is, two nuclei, before the body is divided into two amebae.

The German biologist, Richard Hertwig, was the first to investigate and formulate the relationship between nucleus and plasm in his now famous "*nucleus-plasma-relation*."⁴ It had been known for a long time that most cells, at the time of division, show a certain size which varies only within very narrow limits. *After* division, the daughter cell grows to the size which the parent cell showed immediately *before* division. Classical biology considers a normal nucleus-plasma-relation that relation which the cell shows immediately *after* division. According to Popoff, a young daughter cell grows evenly up to the time of division. Until that time, the nucleus grows relatively less rapidly than the plasm. Only then does the nucleus suddenly begin to grow ("growth of division"), so that immediately preceding the division, it attains, like the plasm, about double its previous size. This means that after division—when the growth of the nucleus lags behind that of the plasm—the nucleus-plasma-relation is shifted to the advantage of the plasm: there is more plasm than nucleus. This creates a tension in the cell which makes the nucleus grow and re-establish the normal nucleus-plasma-relation. Hertwig assumed that it is this tension which not only causes the growth of the nucleus but also initiates the division.

On the basis of our orgasm formula, we can add: *Just previous to division, the cell is mechanically tauter and more highly biologically charged than after division when it is smaller.*⁵ The nucleus-plasma-

⁴ Cf. Hartmann, ALLGEMEINE BIOLOGIE, 2nd ed., 1933, p. 364 ff.

⁵ Cf. THE FUNCTION OF THE ORGASM, p. 253 ff.

relation previous to division is shifted to the advantage of the nucleus because the nucleus is organotically stronger than the plasm. The relation of the *mass* of nucleus to mass of plasm remaining the same, the *organotic* relation must shift considerably to the advantage of the nucleus. The high relative tension and charge of the nucleus then causes division. As we know, the process of division follows the formula of tension and charge and leads to a *discharge* in the process of division and to a *relaxation* in the daughter cells. We now have to see what all this has to do with the problem of the cancer cell.

In the dead, stained tissue section, cancer cells are diagnosed from the following characteristics: The nuclei are arranged in an irregular manner; there are numerous "mitoses" (divisions of nuclei); the nuclei are extremely rich in chromatin, large and close together; the nuclear substance seems to outweigh the plasm substance. If we try to coordinate this finding with the orgone physics of cancer cell formation, the next question is:

Can Hertwig's nucleus-plasma-relation be expressed in terms of orgone biophysics? The answer is Yes. The nucleus is the organotically stronger system of the cell, the plasm the weaker system. There is a difference between the orgone charge of the nucleus and that of the plasm. This is evident from microscopic examination. The nucleus shows all the organotic characteristics to a higher degree than the plasm; it has a stronger radiation and bluish coloration. Around the cell there is an *orgone energy field*; this is the orgone-weakest part of the "total organotic system" of the cell. It is a basic law of orgone physics (contrary to electrophysics and mechanics) that *the stronger organotic system withdraws energy from the weaker system and attracts it*. This fact is of utmost significance and throws light on important, hitherto unsolved questions. For example:

a) What holds the cell together?

b) How is it possible that—apart from the period of division—the nucleus-plasma-relation remains practically the same, that, in other words, the nucleus is always stronger in orgone energy than the plasm? Since every organism constantly radiates orgone, why does it not gradually lose its orgone charge completely?

The answer is as follows: The nucleus is the functional energy center and the energy source of the cell, its "autonomic nervous system," as it were. The plasm is the reservoir of the food and the executive organ of the impulses from the nucleus, as the organs of digestion and locomotion in the metazoon are the executive organs of the autonomic apparatus. *The nucleus constantly withdraws orgone energy from the cell plasm*, energy which is brought to the cell by way of nutrition and respiration. In this way, the nucleus maintains an orgone charge higher than that of the plasm. The nucleus-plasma-relation has to be evaluated not only from the point of view of matter, but also from that of energy. When the plasm grows in the interim between two cell divisions, organotic matter is accumulated in the plasm; at a definite point, the nucleus grows rapidly, thus changing the relation in charge.

Thus we find that during the phase *between* two cell divisions (two organotic convulsions) *the cell constantly takes up much more orgone than it discharges*. This—and not chemical material processes—determines the growth of the total cell up to the time of the next division. This preponderance of the energy flow in the direction outside → nucleus necessarily leads to an *orgone excess* and with that to a reversal of the direction, namely *nucleus → outside*. *The discharge of an excess in biological energy, however, takes place—in the whole animal and plant world, in the protozoon as well as the metazoon—through a convulsion of the*

total plasma, in other words, the orgasm. Thus, the statement that the orgasm is a basic cell function, the "regulator of the energy household of the organism," is not based on speculation, but on orgone-physical findings. The sexual orgasm of the metazoon as well as the individual cell division takes place according to the four-beat: tension → charge → discharge → relaxation. The "orgasm formula," then, is identical with the "life formula": cell division is an orgasmic process in the strict sense of *equalization of excessive biological energy*. The orgasm is not a caprice of nature, not a burdensome function as seen by unsatisfied and biologically rigid (orgasmically impotent) individuals; it is the regulator of the household of biological energy. *The orgasm discharges the excess of orgone energy which periodically accumulates in the cell nuclei.*

Thus the study of the mysteries of the cell functions provides strong support for our orgasm theory. On the other hand, it is capable of explaining cell functions which have hitherto remained incomprehensible: The orgasm (orgone discharge by way of convulsions) is the counterpart of the accumulation of orgone which takes place in any process of growth. When the process of growth comes to a standstill, that is, when the production of orgone energy *excesses* in the biological nucleus gradually ceases, the orgasm also gradually loses its significance. It diminishes, becomes less frequent, and finally disappears altogether. This, however, is the main characteristic of normal aging, that is, involution of the organism. For this reason, the ascending part of life is strong in sexuality, and the descending part weak. This is true of individuals as well as generations. There are periods of flourishing and periods of dying in cell generations. Much remains obscure here. Let us go back to the energy processes in the cancer cell formation.

I would like to compare the precancer-

ous cell suffocation with an analogy from human living. Let us imagine a group of people under favorable conditions. Each individual has sufficient space to move in. The individuals cooperate with each other, help each other, are free from anxiety, and function fully in every respect. But let us assume that the same group of people is confined to a small space, and that, in addition, a fire breaks out. There is panic. This panic is nothing but a revolt of the life impulses against the threat of extinction. There is no more order; only disorderly reactions. People are being trampled on. The panicky fear has not only done away with all orderly functioning but has given rise to a new way of functioning, that of panic, which is deadly. This process is analogous to that of the development of wild cancer cells in suffocating tissue.

The chronic contraction of the organism prevents normal respiration and normal charge and discharge of orgone energy in the cell plasm. At first it contracts, then it begins to shrink. The chemical processes of metabolism are disturbed. The excess of carbon dioxide causes a condition similar to that of suffocation in a metazoon. In suffocation, the autonomic system reacts to the threatening extinction by violent convulsions, that is, disordered hyperactivity.

It is logical to assume that the nuclei develop such an overexcitation and disordered activity when the functioning of the plasm is reduced and the plasm itself begins to shrink. As has been pointed out so many times, the total organism as well as the individual cell are governed by the same basic laws. Normally, the nucleus forms a functional unit with the plasm. In the process of suffocation in the plasm, the nucleus behaves quite differently from the plasm. The nucleus, being the stronger organotic system, is still capable of "fighting" while the plasm, the organotically weaker system, has already given in. Thus,

the nucleus-plasma-relation shifts rapidly and dangerously in favor of the nucleus: the energy excess in the nucleus as compared with the suffocating plasm is out of all proportion. The nucleus, in a condition of excessive charge, has only one way of reacting: *lumination and division*. While in the process of shrinking the biological orgone radiation of the plasm and blood systems decrease, the mitogenetic radiation of the nuclei which are threatened with suffocation increases enormously. Klenitzky, for example, found this to be the case in carcinoma of the uterus; Gurwitsch found increased radiation and induction in tumor pulp. *The nuclei try to make up for the failure of the total organism: they take over the function of energy discharge, a function which the total organism, due to orgastic impotence and the contraction of the plasm system, is no longer able to fulfill. The natural orgastic convulsions of the total plasm system are replaced by an energy discharge on the deepest biological level in the form of nuclear lumination and division.*

This explains, in a simple way, the great number of cell divisions ("mitoses") in cancer tissue. Since these divisions can no longer take place in the normal manner, the nuclei are of various sizes. Due to the disturbed plasm function, the formation of the nucleus is also disturbed: it disintegrates into individual bions which show a strong radiation. This bionous disintegration of the nucleus extends to the whole cell and even beyond it, to neighboring cells, and leads to the reduction of the cells into a formless heap of bionous vesicles; in the dead stain preparation these appear as dense, massed nuclei and as "chromophilia." From this bion heap the protozoa which are called "cancer cells" develop; they do this with the help of the orgone energy which no longer functions in harmony with the total organism. The metazoon ceases to function and the protozoon begins to

flourish, as in a pool of stagnant water where there is no longer an energy metabolism. *Life reverts to the lowest biological level.* Where a metazoal organism can no longer exist, a protozoon, and certainly a bion, can still function.

The cancer tumor, then, is the ultimate expression of a severe disturbance of the organotic equilibrium and of the unitary functioning of the organism, on the basis of orgastic impotence. It results from a rebellion of the affected nuclei against the processes of suffocation and shrinking in the plasm. This is what causes the "wild cell growth." This process in the cells is analogous to the disturbance of the autonomic system in an acute anxiety attack, as for example in anxiety neurosis. We are fully justified in speaking of an *anxiety attack in the nuclei of suffocating tissue*. In anxiety neurosis, the anxiety attack comprises the biological core and the biological periphery. In cancer, the anxiety attack takes place in the cell nuclei alone, while there is emotional calm in the periphery. In anxiety neurosis, the anxiety takes hold of the total organism. In local cancer tumor formation, the anxiety attack is restricted to a tissue, and even there only to the nuclei. In anxiety neurosis, the whole organism is fully active. In local tumor formation, the total organism is in the process of dying off; only the nuclei have remained strong and capable of developing anxiety. The mechanism of the biopathies which result from sexual stasis, then, is in the last analysis a pathological cell mechanism.

The local process is a result of the general shrinking biopathy of the organism. The shrinking process itself takes place in three typical phases:

1. *Phase of contraction.* This begins with a chronic incapacity of vagotonic expansion which expresses itself characterologically as resignation. Its physiological characteristics are muscular spasm, pallor of the skin, weak biological charge of the

tissues, orgastic impotence, and anemia. This first phase is not specific of cancer biopathy, but is the same in all biopathies.

2. *Phase of shrinking.* This phase is characterized by shrinking of the erythrocytes, general weakness, loss of biological resistance in the total organism, loss of weight, and finally general cachexia.

3. *Phase of putrefaction.* This is characterized by loss of orgone charge in the tissue cells, transformation of the cancer substance into putrid matter, rapid development of rot bacteria (putrid disintegration), disintegration of the rot bacteria into T-bacilli, general T-bacilli intoxication, putrid bed sores, putrid odor, death.

The manifestations of the shrinking biopathy are identical with those of normal involution in old age, that is, with the gradual dying-off of the organism. The organism slowly shrinks in old age and undergoes putrefaction after death. *Cancer biopathy represents this process in a premature and accelerated form.* The cancer death is a premature but regular death. What is pathological in it is the prematurity and the acceleration, and the fact that putrefaction sets in while the organism is still alive. In an organ which, over a period of decades, is in a state of contraction, which breathes poorly and functions poorly organotically, death processes set in: orgone loss of the tissues and their cells, vesicular disintegration, formation of rot bacteria and T-bacilli. This disturbance affects primarily the blood system, and with that the total organism. The autonomic vital apparatus gradually shrinks. This process is the result of a disturbed sex-economy of the organism.

It takes place in the organism long before it produces *external symptoms* which are palpable to a mechanistic pathology. For this reason, the diagnosis of the local tumor *always comes too late.* For the same reason, *local therapy* by surgical opera-

tion, X-ray or radium does not reach the cancer disease. The extirpation of a tumor may be ever so thorough, but the process of putrefaction is not touched by it. These facts are of extreme importance for a future prevention of cancer by orgone. Only when we are in a position to attack the general process of shrinking and putrefaction are we entitled to speak of cancer *therapy.* This principle follows from the bion experiments in cancer mice and underlies the orgone therapy experiments in cancer at our Institute.

It is well known that the cancer cell is biologically weak and disintegrates readily. The cancer tumor in itself is harmless unless it develops in vital organs (brain, liver, etc.). For this reason, people with small cancer tumors often continue their normal life, without feeling ill. Many old people have cancer tumors which cause no complaints and which are not discovered until the post-mortem examination. The typical cancer pains and the general weakness do not set in until the *total organism* is affected to a considerable degree. After that, the deterioration is rapid.

Disintegrating cancer tissue always is putrid and has a putrid smell. The end-product of this disintegration is masses of T-bacilli. The biological weakness of the cancer tumor cells, therefore, constitutes the greatest danger for the patient, for the more cancer cells disintegrate, the more severe and widespread is the T-bacilli intoxication. In the case of orgone therapy, on the other hand, this fact constitutes a great advantage: *the tumor can be easily destroyed.* The difficulties of the orgone therapy of today do not lie in the destruction of the tumor but in the *elimination of the products of disintegration from the body.* In order to master this difficulty we have to know the nature of the products of disintegration. As we have already seen, an experiment points the way: If we boil healthy tissue, it disintegrates into

blue bions; if we boil cancer tissue, it disintegrates into *T-bacilli*. The blue bions have a beneficial effect in the body, the *T-bacilli* an injurious effect. *In orgone therapy, therefore, the problem shifts from that of the destruction of the tumor to that of the neutralization and elimination of the products of disintegration.*

Of course, the putrefaction of the organism can not be observed in the organs but only in the blood and the excretions. Since putrefaction is always preceded by shrinking and bionous disintegration, we have to examine the form and function of the erythrocytes. Healthy erythrocytes are taut and, at a magnification of at least 2000x, show pulsation. Erythrocytes in the process of shrinking are smaller, often not oval but round; the pulsation is weak or altogether absent. They are not taut, but often show a shrunken membrane. Healthy erythrocytes have a wide, intensely glimmering blue orgone margin; shrinking erythrocytes show a narrow and pale orgone margin. If the shrinking process has progressed to the point where shrunken membranes are immediately observable (formation of T-spikes, "poikilocytosis"), we test the resistance of the red cells in physiological salt solution. Healthy red cells retain their normal shape up to half an hour or longer. Shrinking erythrocytes, or those with an increased tendency to shrink, often disintegrate within a few minutes or even seconds, show an irregular membrane and the so-called T-spikes (*cf.* fig. 20, p. 81). The presence of T-spikes points to an advanced cancerous degeneration. "Cancerous" here means nothing but shrinking (sympathicotonia of the erythrocytes). Healthy erythrocytes disintegrate (slowly in salt solution, rapidly on autoclavation) into blue bions, cancerous erythrocytes into *T-bacilli*. Thus our tests result in a cancerous *T-reaction* compared with the normal *B-reaction* (*cf.* figs. 6, 9, p. 210 ff., *Internat. J. Sex-economy*, 1942).

Healthy blood gives no cultures of bacteria in bouillon. *Cancerous blood gives cultures of rot bacteria and T-bacilli.* These organisms can also be found by direct microscopic examination (at a magnification of at least 2000x) in the blood of cancer patients.

All these findings make the blood particularly suitable for an early recognition of cancerous processes. I venture the assumption that the blood is the first system which is affected by a general condition of contraction and later shrinking of the organism. This is not surprising in view of the fact that the blood is the "sap of life" which connects all organs into *one whole* and nourishes them. The blood also plays the most important role in the orgone therapy of cancer. For this reason, we must thoroughly understand the organotic function of the blood.

Here I would like to mention the usual theory of the spread of cancer tumors to other places in the body. According to this theory, cancer cells from the primary tumor are transported by the blood stream to other organs where they settle down and grow into secondary tumors, the so-called *metastases*. Of course, this theory was arrived at by deduction; the process cannot be observed. The question is: is this hypothesis correct? Our observations and concepts provide a different and more plausible explanation: it is unnecessary to assume that the cancer cells are transported by the blood stream. Since the process of shrinking and putrefaction is a *general* one, it is not surprising that local tumors should develop earlier in one place and later in another. At any rate, the case described in an earlier article⁶ revealed the fact that the localization of metastases is determined by local spasms and disturbed biological functioning. For example, there may be first a breast cancer as a result of a chronic tension in the pectoralis muscle, and some-

⁶ See footnote p. 1, I.

what later a second tumor at the ribs or the spine as a result of local spasms in the diaphragm. Muscular spasms are a general manifestation of a biopathy and constitute the general tendency to contraction and shrinking. The development of metastases has, of course, to be distinguished from the growth of the tumor into the adjoining tissue, as for example in the case of a cancer of the rectum which grows into the bladder.

This may be the place to mention an assumption concerning the nature of the cancer of the blood system, so-called *leukemia*. Further observations will have to prove or disprove this assumption. If the shrinking and disintegration of the erythrocytes is the most general and the earliest process in cancer, the tremendous increase in leucocytes is easily understood. The function of the white cells is not, like that of the red cells, the maintenance of tissue respiration and the supply of orgone to the tissues. Their function is the defense against bacteria and other "foreign bodies." Wherever foreign bodies (bacteria, dirt, etc.) lodge in the body, there is an accumulation of white cells, leucocytes, lymphocytes and phagocytes; purulent secretion and abscess formation are due to this. Now, when the erythrocytes begin to disintegrate, they turn into substances which are alien to the organism, into "foreign bodies." For this reason, the white cells multiply their defenses, in an attempt to "deal with" the disintegrating red cells. According to this concept, leukemia, the most prominent symptom of blood cancer, is nothing but a reaction of the organism to the shrinking of the red cells and the resulting development of T-bacilli. In accordance with this; one finds leukocytosis also in other diseases in which a shrinking of the blood system takes place. When the white cells dominate over the red cells; when, in addition, the organism has become too weak to supply fully-developed erythro-

cytes, early death becomes inevitable.

The problem of orgone therapy of cancer, therefore, is this: *Can the process of disintegration of the erythrocytes be arrested or even prevented?* If so, an avenue of approach to the tremendous problem of the prevention of cancer is opened.

In a different connection, we will deal with the fact that the cells of a cancer tumor originally developed not as a symptom but as a *defense* against the pathological process. It will be shown that this is not as revolutionary as it sounds.

Before turning to the curative function of the blood, I have to answer two questions which the reader is bound to raise:

1. *How can one know that the cancer cell develops in the manner described here, since the process cannot be observed in the organism? The question is pertinent and important. It can be answered. (Cf. the detailed discussion of this question, infra, p. 23 ff.)*

2. *What constitutes the basic error of traditional cancer research? How is it possible that the processes described here were so consistently overlooked? This is also a highly pertinent question.*

Both questions are answered by one and the same fact: *The same omission which constitutes the basic error of traditional cancer research caused also the overlooking of the developmental stages of the cancer cell.* This we shall now discuss.

THE DEVELOPMENT OF THE PROTOZOA: THE KEY TO THE UNDERSTANDING OF THE CANCER CELL

Mechanistic natural science, including mechanistic biology, is caught in the toils of mysticism. As I have pointed out so often, mysticism serves to fill the gaps which mechanism, when it comes to understanding living function, of necessity leaves open. Specifically: mechanistic natural science suffers from the precon-

ceived idea that "cell can come only from cell," "egg only from egg." That eliminates the justified question as to where the *first* egg and the *first* cell came from. The elimination of this basic problem of biology makes it automatically impossible for the mechanist to perceive a series of facts. He assumes that for each and every one of the millions of different protozoa there is a special "preformed" germ "in the air." Nobody has as yet seen any such germs. It seemed that with the "preformed" germs one could explain everything: tuberculosis, syphilis, pneumonia, etc. But then diseases were encountered in which the explanation by way of "air germs" was not so simple. These are diseases which must be ascribed to extremely small, invisible particles which are on the borderline between living and non-living matter. Such diseases as poliomyelitis or foot and mouth disease are not understood to the present day. For no virus can be cultivated from the air. The *development* of bacteria and protozoa from bionous disintegration of living or non-living matter was unknown. The existence of living organisms in grass infusions was taken for granted, as was the existence of cancer cells in the organism. True, the question of the origin of the cancer cells was raised. Since, however, they (or their "germs") cannot be found in the air, while their existence in the organism cannot be doubted, and since, furthermore, there exists something like a taboo against the assumption of the development of cells from disintegrating tissues, the following was not done:

- a) an exact examination of human excretions in their natural condition; and
- b) an exact examination of the changes that occur in a grass infusion.

To any mechanistically oriented pathologist the contention that there is something like an autogenous infection, or even a development of protozoa in the

organism, sounds *absurd*. He would not even listen to such a thing. *Nevertheless, the processes observable in the development of bacteria and protozoa from disintegrating grass or moss are the key to an understanding of the development of cancer cells and rot bacteria from disintegrating animal tissues.*

The question how it is possible to describe the development of cancer cells within the organism is to be answered as follows: In reality, we observe the development of protozoa and bacteria in grass or moss tissue in all its stages. If the assumption is correct that the amebae in the grass infusion are nothing else but the "cancer cells" of the grass, we can deduce the corresponding processes in animal tissues. This in itself would not be conclusive. Therefore, all the other observations made on the excretions of seemingly healthy and of definitely cancerous individuals, scattered and unconnected as they may be at first, are of the greatest importance. If, now, we observe in the cancer tissue and its surroundings certain processes which are identical with those observed in disintegrating moss or grass, the *combined* observations and experiments become highly probable. They become a certainty if one produces artificial cancer in healthy mice and makes serial examinations in the various phases of the disease. The observations in disintegrating grass tissue, in the excretions of cancer patients, and in the tissues of mice with artificial cancer, then, combine to form a simple and conclusive picture:

1. The cancer cells are the protozoa in bionously disintegrating animal tissues.
2. The amebae and other protozoa in grass infusions are the cancer cells of the disintegrating grass.
3. The problem of the development of cancer cells is identical with the problem of biogenesis.

These three conclusions are enough to make one draw back. But great facts are

always *very simple*. These conclusions make it possible to fill, with findings from the development of protozoa in disintegrating grass, almost any gap left by the impossibility of direct observation.

Between 1936 and 1942, I made grass infusions every year at various seasons. I was struck by the fact that it was extremely difficult or altogether impossible to obtain protozoa from infusions of *fresh, young spring* grass or moss, while autumnal grass or moss always gave an abundance of numerous kinds of protozoa. Such a finding would not impress those who believe in the hypothesis of the air germs. To us, however, it seems extremely important. *It confirms the identity of the protozoon in the grass infusion and the cancer cell in the organism.* For the cancer cell never develops in young, flourishing tissue, but readily in biologically damaged, aging, "autumnal" animal tissue.

I would like to stress the fact that I had never even thought of occupying myself with the cancer problem. It forced itself upon me when, in the course of my bion experiments, I discovered and photographed the development of protozoa from bions in grass infusions. In addition to normal grass tissue and fully developed protozoa, such a preparation contains a wealth of forms which a mechanistic biology cannot define: individual blue vesicles; irregular heaps of such vesicles; heaps which show a membrane only in one spot; and other heaps which already show a taut form but are as yet only partly surrounded by a membrane. There is any number of forms at the margins of the disintegrating tissue which cannot be defined as either "grass" or "protozoon." (Cf. figs. 3a, 3b, p. 66, and 8a, p. 68.)

Here I would like to relate an interesting little occurrence. In 1936, I asked the plant laboratory of the Oslo University for a culture of amebae. Naively I asked, "How do these protozoa get into that infusion?" I had forgotten that there was a

"germ theory." The assistant looked at me in surprise, and said after a while, with a trace of contempt for my biological ignorance, "Why, from the germs in the air, of course. They settle in the grass." After that, I made hundreds of air germ cultures on various media, without ever seeing the germ of an ameba or an ameba itself. As time went on, I began to feel less badly about my "biological ignorance."

Another occurrence will show the reader that the human organism has correct knowledge even where officially it adheres to a misconception. In the fall of 1937, about a year and a half after the first conclusive findings, I prepared the first publication on the bions, the vesicular disintegration of matter and the development of protozoa. At that time, I had as yet no idea of the two basic types of bions, the blue PA bions and the black T-bacilli, or of the fact that the former can kill the latter. In brief, I had no idea that one day I would be put in the position of undertaking "orgone therapy experiments in cancer."

Then, in the fall of 1937, the campaign of the Norwegian mechanists and mystics against my bion research broke loose. Despite my explicit requests for quiet, the newspapers published numerous extensive articles pretending "finally to reveal the mysteries" of my laboratory. One day I was publicly accused of claiming that I was "able to cure cancer." I was nonplussed. Not only had I never made any such claim; I did not even harbor any thoughts about it. Why was such an accusation made against me, if accusation it be? Only much later, after the discovery of the killing effect of the blue PA bions, did I comprehend the accusation. Apparently, my hostile "critics" had had more of an inkling than I that the discovery of the biogenesis in protozoa would open a wide avenue of approach to an understanding of cancer. Traditional

cancer research, in spite of decades of gigantic effort, was in a hopeless blind alley—due to a taboo which blocked any approach to the *development* of protozoa. Protozoa were not supposed to develop from bionous grass. They were supposed to develop, due to a supernatural power, from “germs,” germs which nobody had ever seen and which were supposed to exist, “preformed,” from eternity to eternity. When I realized this, I took up, without any specific idea in mind, my observations of the cancer tissue which the cancer hospital had sent me many months before. I was in the habit of simply letting preparations stand in order to see what finally became of them. There were some old cultures of cancer tissue in bouillon. To my surprise, *all of these now showed a blue-green discoloration*. They had a strong acid, ammonia-like and putrid odor. The inoculation on agar resulted in an intense smooth growth of blue-green color. Taking material from the margin I inoculated another agar plate—and for the first time saw the T-bacilli which were to break down the wall which hitherto had surrounded the cancer problem.

The T-bacilli have been extensively described. Thus I can confine myself to a description of the development of the cancer work. This is imperative. For the simple statement, “*Cancer is basically a putrefaction of the blood and tissues, a slow living death, as it were,*” assumes meaning only through the connections which disclosed themselves spontaneously in the course of many experiments and observations. This description will make clear why the simple nature of cancer has hitherto been overlooked. A lump of gold in the Colorado mountains is a very simple fact. But to find one's way to it is complicated and possibly dangerous.

The discovery of the T-bacilli in old cancer tissue immediately confronted me with several questions, the solution of

which took many years of hard work:

1. *Can T-bacilli, when injected into healthy mice, produce cancer?*

2. *What is the connection between T-bacilli and cancer cell? Are they its cause or do they result from its disintegration?*

3. *If the T-bacilli are the cause of the cancerous growth, how do they get into the organism to begin with?*

At the time of the discovery of the T-bodies, I had, of course, no idea of their connection with the process of death and of the fact that, quite generally, they are the result of putrid disintegration of living tissues. But the path over which I was led by my experiment with the T-bacilli disclosed new secrets of the cancer scourge at every step. The description of this path is thus identical with a description of the nature of cancer as far as it has been disclosed to date.

But before turning to this description, I shall answer the question as to the error of traditional cancer research which was raised above. In summary, it is this:

1. Neither the blue bions from which cancer cells develop nor the small T-bacilli into which they disintegrate can be seen in the stained tissue section. They can be seen only in the living preparation. Traditional cancer research, however, works almost exclusively with dead tissues.

2. For the same reason, the intermediary stages in the development of cancer could not be discovered.

3. With a magnification below 2000x, no correct observations are possible. Traditional cancer research, however, rarely works with magnifications exceeding 1000x.

4. The denial, on principle, of the natural organization of protozoa from living or non-living material completely blocked any approach to an understanding of the cancer cell.

5. The erroneous hypothesis of the “air germs” diverted the searchers' attention.

6. The cancer disease is a general disturbance of functioning in the biosystem. Therefore, it can be comprehended *functionally* only. Medicine and biology, however, have a mechanistic, purely physico-chemical orientation. They look for causes in *individual* cells, *individual* organs, *dead* tissues, and *individual* chemical substances. Thus the *total function*, which determines every detail function, remains overlooked. Similarly, the sexual function remains the stepchild of science. The functioning of a radio set cannot be explained by a description of the chemical composition of the glass or the metal of the tubes, or a description of the mechanical arrangement of the parts. Similarly, the biopathic function of the cancer disease can never be described by the form and the stain reaction of the cancer cells or their arrangement in relation to the cells of the healthy tissue. Neither can the chemical composition of the protein, may it be ever so complex, ever disclose one iota of the *living pulsation*.

Let us now follow the path over which we are led by the investigation of the T-bacilli.

III. LIVING DEATH: ORGONE LOSS OF THE TISSUES AND PREMORTAL PUTREFACTION.

I must go far back and summarize widely scattered facts. The T-bacilli disclose a *deadly* process in the *living* organism, a "*living death*." "T" derives from the German word for death, *Tod*, and refers to two facts: the T-bacilli are the *result* of the dying of living tissues; they are also the *cause* of death if injected into mice in high dosages.

When I had obtained my first culture of T-bacilli, I injected it into healthy mice. Many of these died within one week, others rallied, only to die a few months later. In the course of about two years (1937-1939) several hundred healthy white

mice were injected, in groups of six. Two mice of each group were injected with PA bions alone; two were injected with T-bacilli (the dosage varying from group to group); and two were injected with T-bacilli *and* PA bions.

The combined injection of PA bions and T-bacilli was suggested by the microscopic observation that the PA bions paralyzed and agglutinated the T-bacilli. As previously reported, the result after two years was the following: all mice injected with PA bions alone remained healthy; all mice injected with T-bacilli alone soon died or developed, within about 15 months, various stages of cancer; most of the mice injected with PA bions *and* T-bacilli remained healthy. *This effect of the blue PA bions was the starting point of the orgone therapy experiments in cancer.*

I might limit myself now to the purely empirical results and content myself with the practical success achieved so far. This would save the reader a good deal of thinking about complicated processes. Unfortunately, I cannot do so. True, what has been achieved has made a wide breach in the cancer problem, but it will take a great deal of intensive work if cancer is to be really eliminated from the world.

The most general result of the orgone therapy experiments is this: *it will be far easier to prevent cancer than it is to cure a fully developed cancer.* Just this makes it necessary for me to go into more detail: *The cancer problem is identical with the infinitely difficult problem of the connection between life and death.* As we have seen, cancer is nothing but a premature and accelerated "normal" dying-off of the organism. The processes which lead to the premature death from cancer are exactly the same as those which lead to natural death.

I can assure the reader that I am fully conscious of the enormous implications of these statements and that I am not mak-

ing them frivolously. I did not even look for the problem. I found myself squarely confronted by it in the course of the bion experiments. I had to make a choice: either to give up the whole bion research, or else to venture upon this gigantic problem. If I did not immediately publish the first bion experiments, although they were highly successful, it was because it had very soon become clear that the cancer problem was identical with the life-and-death problem. This is not as surprising as it may seem at first glance, since the very first bion experiments and the observation of the natural organization of protozoa had led straight into the question of *biogenesis*. This, too, was altogether unintentional. The bion experiments, through the findings concerning the PA bions and T-bacilli, led directly to cancer. Since life and death are inextricably interlaced, the question of the development of protozoa inevitably led to the question of cancer *death*, and with that, of death in general.

Unconsciously I must have been somehow prepared for the whole problem. I had come in contact with the problem of death as long ago as 1926 when I began to refute Freud's hypothesis of the death *instinct*. I was able to show that a *wish* to suffer and die does not exist. But there is an *objective process of dying* which sets in long before the acute stoppage of the heart. After I had succeeded in refuting the theory of the death *instinct*,⁷ the interest in the objective process of dying, nevertheless, remained, a process which the individual does not wish for but fears and to which the organism, sooner or later, must succumb. *The T-bacilli are a palpable part of this death process*. This I shall now substantiate.

Orgone biophysics reduces all manifestations of life to the basic biophysical function of *pulsation*. Fundamentally, the

life process consists in a constant oscillation of the total organism and each one of its organs between *expansion* and *contraction*. "Health" is characterized by a sex-economic energy household and by the *completeness* of this pulsation in all organs. If expansion chronically predominates at the expense of contraction, we speak of *vagotonia*. If contraction chronically predominates we speak of *sympatheticotonia*. As we have seen, this chronically fixed contraction leads to muscular spasms and a chronic attitude of inspiration. This leads to an excess of carbon dioxide in the tissues (Warburg) and the process of shrinking and loss of body substance which culminates in cachexia.

The life process, then, functions as a constant pulsation. This pulsation takes place in each organ according to its own intrinsic rhythm, and in the total organism according to a pleasure-and-anxiety rhythm which depends on the individual character. In the healthy organism, an energy surplus is periodically equalized by the extreme pulsations (contractions) of the orgasm. However, expansion and contraction also govern the *total life time* in *one extended* pulsation. The expansion of the biosystem sets in with the fertilization of the egg and continues—with expansion outweighing contraction—until middle age. Until the forties, growth, sexuality, *joie de vivre*, expansive activity and intellectual development normally predominate. From then on, with the onset of "aging," of so-called involution, the contraction of the vital system gradually gains the upperhand. Growth ceases and is replaced by a very gradual shrinking of all vital functions until at an advanced age it goes as far as involution of the tissues. The natural involution of age goes hand in hand with the cessation of the sexual function. The urge for sexual pleasure, for activity and development decreases correspondingly. The character turns "con-

⁷ Cf. THE FUNCTION OF THE ORGASM, p. 222 ff.

servative," the desire for rest gains the upperhand.

This natural contraction of the vital system may, at an advanced age, culminate in a "physiological cancer death." At an advanced age, cancer is far less dangerous than in youth. In many cases of death from old age, cancer, of which there had been no indication, is accidentally discovered on autopsy. The death of the organism itself is accompanied by an intense muscular contraction, the so-called rigor mortis, which clearly shows us the contraction of the vital system. Finally, the organism is dissolved in putrefaction. Dead tissue, in contrast to living tissue, shows no changes in bio-electric potential. Dying tissue gives only negative bio-electric reactions; the source of biological energy becomes extinguished. A fish, for example, shortly after death, still shows an orgonotic field⁸ around its body, but the reactions are weak and disappear soon. Dead branches—in contrast to living ones—show no orgonotic field. This means that the dying organism loses its biological energy. First the orgone energy field around the organism shrinks, then the tissues lose their orgone. This is the objective fact behind the popular belief that at death "the soul departs." Nöt, of course, in the mystical misinterpretation of a formed "spirit" which disappears into space and later inhabits other bodies or waits for the resurrection of its own body. The fact is, however, that the orgonotic charge of the body is the basis of living perceptions and that these perceptions decrease with the dwindling of the orgonotic charge. This process of dying does not take place in the few hours of actual dying, but, normally, stretches over decades. *Acute* dying, characterized by stoppage of the heart, is only one phase of

this process, although the decisive one. Even after the stoppage of the heart, not everything is suddenly "dead"; individual life processes continue for some time until they gradually cease as a result of lack of oxygen. Sudden death due to "shock" is nothing but a rapid total contraction of the vital apparatus to such an extent that a renewed expansion fails to occur.

The putrefaction of the tissues which follows death is the result of a bionous disintegration of the tissues. It is not necessary to assume that now "rot bacteria from the air" settle in the body. One would have to ask why it is that the rot bacteria in the air do not settle in the healthy *living* organism and cause it to rot. This is not an academic or rhetorical question. For it is the all-important question of the *natural defenses which the healthy organism puts up against the "living death" as it lives*. Bion research succeeded in giving a conclusive answer to this question.

On the most primitive levels of living substance, expansion, energy metabolism, etc., are represented by the blue PA bions, while its contraction and putrid disintegration are represented by the T-bacilli. *Is this also true for the higher organisms?* The essential characteristic of the PA bions is that they are carriers of orgone energy, "orgone energy vesicles." The T-bacilli, on the other hand, are characterized by orgone weakness or the lack of orgone charge. All body cells consist of blue, orgone-charged energy vehicles. The taking up of food constantly provides orgone in the form of the PA bions contained in the foodstuffs. As we have seen, the PA bions kill the T-bacilli because of their strong orgone charge. That is, they prevent putrefaction in the organism. Similarly, the orgone of the sun radiation kills rot bacteria. The functioning of the life process is to be ascribed to the disinfecting and charging effect of the body orgone, in brief, to the function of expansion. It counteracts the function of

⁸ The construction of an apparatus for measuring the orgonotic field around an organism has recently succeeded and will be described at a later date.

contraction and prevents this function from gaining the upperhand and resulting in the formation of T-bacilli and putrefaction.

If the orgonotic function of charge and expansion diminishes, the function of contraction can gain the upperhand and lead to death processes. The T-bacilli are a manifestation of such death processes. The cancer biopathy is nothing but such a death process. Therefore, the cultivation of the positive life functions, such as pleasure, development, activity, etc., is decisive in the prevention of premature death processes. The extension of the average life-span in many cultural circles during the past decades is to be ascribed to the breakthrough of natural sexual functioning.

These assumptions are inevitable if we try to reduce our diverse observations to a common denominator. This, and nothing else, is the task of natural science. The carcinomatous shrinking biopathy—we can justly call it a sex-starvation disease—can be comprehended only in the context of concrete processes of life and death.

When, in 1937, I succeeded for the first time in producing cancerous growths in healthy mice by the injection of T-bacilli, I believed I had discovered the "specific cause" of cancer. The T-bacilli had been cultivated from cancer tissue; they produced cancer in healthy mice; cancer cells disintegrate into T-bacilli. In this connection, I would like to mention a series of experiments with 34 healthy white mice which I carried out between 1937 and 1939 in an attempt to understand experimental tar cancer.

The fact has been known for a long time that one can produce artificial cancer in healthy mice by a prolonged application of tar to the same spot on the skin. Nevertheless, the nature of this cancerogenous effect of the tar is completely unknown. It is the same effect that one observes in certain forms of human cancer: "smokers' cancer" on the lips of in-

veterate pipe smokers, and various cancers in people who professionally have to do with tar or aniline products ("professional cancer"). Any treatise on cancer gives sufficient examples. These cancers are ascribed to the chronic irritation of the tissues.

I undertook these tar applications in mice in order to find the connection with my coal-bion experiments. The tar applications, indeed, resulted in cancerous growths in previously healthy mice. But there was a most surprising finding: after only a few weeks, *before a cancerous growth made its appearance, the blood of the mice contained T-bacilli*. They could easily be cultivated from the blood. Injected into healthy mice, they produced cancerous growths in various organs; these growths were the same as those we had obtained by injecting T-bacilli from cancer tissue or cancer blood. The question was, how did these T-bacilli get into the blood of these mice? We had to assume that they had something to do with the tar applications. Tar is nothing but a derivative from distilled carbon and hydrogen compounds. The experiments with charcoal bions solved the riddle.

First I examined charcoal bion preparations for the presence of T-bacilli. These experiments have been reported in a previous article⁹: Charcoal bion preparations contain T-bacilli immediately after the preparation is made; they can be demonstrated by microscopic observation and Gram stain. They are nothing but orgone-weak bions, that is, coal bions which either did not fully develop or else, after having developed, again disintegrated rapidly.

We then started to give healthy mice subcutaneous injections of a charcoal bion solution. In the course of about 15 months all of the 34 mice were sick; they showed all transitional forms from the vesicularly disintegrating cell to the caudate or club-shaped cancer cell. Thus we established

⁹ See footnote p. 1, II.

the fact that charcoal bions, like external tar applications, can produce artificial cancer. The principle apparently was the same. For it was possible to cultivate T-bacilli from all of these mice and to produce with these T-bacilli cancer in other healthy mice. This solved the riddle of the artificial tar cancer: *the chronic effect of tar leads to the formation of T-bacilli in the affected tissues*, partly through degeneration of the tissues into T-bacilli, partly through degeneration of the coal bions into T-bacilli; *and with that, to cancer.* (Cf. fig. 13a-f, p. 74 and 75.)

Cancer often develops from old scar tissue and from tissues which are exposed to a chronic damage as, for example, the chronic irritation of the epithelium of the tongue caused by bridge work. Severe tissue injury may result in sarcoma which may be fatal in a short time. The bion experiments now make this understandable: *tissue damage results in substances which degenerate into T-bacilli and thus stimulate cancerous growth.* In organotically strong, that is, healthy tissue, a scar or injury has no disastrous effect. That is, the decisive factor is *not*, as is customarily assumed, the local tissue damage, but the organotic strength of the tissue, the condition of the tissue which we might call its "*organotic potency.*"

All these phenomena became more comprehensible through the T-bacilli and confirmed my assumption that the T-bacilli were the specific cause of cancer, occurring only in cancer patients. It is always reassuring to find the "specific cause" of a disease. This enables us to delineate the disease from healthy organisms in which this specific cause is absent. But this concept is erroneous and blocks the approach to the nature of *immunity*, that is, the natural defense functions of the organism which are identical with its organotic potency. It would be erroneous to assume that there are people who are psychically healthy on the one hand and people who

are psychically sick on the other hand. It would be equally erroneous to assume that there are "cancer patients" here and "individuals free from cancer" there. Every "healthy" individual has, somewhere in the depths, his catatonic mechanisms and his T-bacilli. The boundary line is not sharp, and the emphasis shifts from specific "causes" of diseases to the *organotic defense function against diseases.* Before trying to treat diseases, *we must first comprehend health.*

Fortunately, the view begins to prevail in medicine that specific "microorganisms" and specific "causes" can become effective only if the organism permits it. Tubercle bacilli, for example, can affect the organism only if it presents certain conditions of bio-energy. A psychic trauma, in order to become effective, presupposes an emotional predisposition of the organism. Similarly, the tubercle bacillus can attack the organism only in the presence of a certain general impairment of biological functioning. In other words, we must consider the disposition to disease the decisive factor. *Not*, however, in the sense of the usual theories of heredity and constitution, in predetermined "genes" or moralistic concepts like "psychopathic constitution." To us, "disposition to disease" is determined by the *living organotic functioning and its disturbances.* In other words, it is essentially acquired as a result of misery in life, and not from the forebears in prenatal life. *Disposition to disease is determined by the nature and the extent of the emotional—or organotic—motility of the biosystem.*

IV. THE CANCER CELL: PRODUCT OF A DEFENSE REACTION OF THE ORGANISM.

The general assumption is that the cancer cell *causes* the onset of the disease process "cancer," in that "normal cells change into cancer cells." Exact study of the *development* of cancer cells shows this assumption to be erroneous. The reverse

is true: the cancer cell is the *result* of the fact that the tissue fights against the effects of the T-bacilli. This may sound peculiar, but only until one observes the facts. The first step in the development of the cancer tumor is not the cancer cell, nor the disintegration of the tissue into blue bions, but the mass appearance of T-bacilli in the tissue or the blood. T-bacilli are also found in *healthy* tissue and *healthy* blood. They are found wherever there is disintegration of protein.

After having made a series of examinations of the blood in cancer patients, I proceeded to examine the blood of people in whom the presence of cancer in the usual sense was out of the question. It was found possible to cultivate T-bacilli from the blood and the excretions of completely healthy people. This fact was disturbing and confusing. If, as I had come to believe in 1937, the T-bacilli were *specific* for cancer, and at the same time, they could be cultivated from healthy individuals, this could only mean that *all* people are basically suffering from cancer. Since this conclusion could not be correct, the only alternative was the conclusion that the T-bacilli are *not* specific for cancer. On the other hand, there was the incontrovertible fact that every cancer patient and all cancer tissue showed T-bacilli in abundance.

It was months before consideration and experiment provided the correct answer: *the difference between the healthy individual and the cancer patient does not lie in the absence of T-bacilli, but in the organotic potency of the organism.* That is, the healthy, organotically potent organism has the capacity of getting rid of what T-bacilli may be present, and the tendency of its blood and tissues to disintegrate into T-bacilli is very slight.

True, I was able always to cultivate T-bacilli from the blood and the excretions of healthy people. But there was an important difference: the blood and tissues

from cancer patients produced T-bacilli *easily* and *rapidly*; the blood and excretions of healthy individuals, however, had to be subjected to a *process of degeneration*, sometimes of days, sometimes of weeks, in order to obtain T-bacilli from them. *The disposition to cancer, then, can be determined by the biological resistance of blood and tissues to putrid disintegration. This biological resistance, in turn, is determined by the orgone content of blood and tissues, in other words, by the organotic potency of the organism.* Accordingly, to the extent to which any process diminishes the orgone content or the organotic function of the organism or of any of its organs, it will increase the disposition to cancer. There are a number of relevant observations and experiments here.

When I was confronted with the difficult and decisive question as to whether the T-bacilli appear only where cancer develops or whether they occur everywhere and whether cancer also can make its appearance everywhere, I began to examine the blood, epithelium and excretions of many healthy individuals. I found local T-bacilli formation in organs and tissues where cancer was out of the question. For example, I saw disintegration into T-bacilli in the vaginal or cervix epithelium of many women. In some, the T-bacilli disappeared after some time, in others they remained constant. In myself, I found T-bacilli at the tongue, in a place where a dental bridge had caused a small erosion, and I was able to cultivate them. This was about five years ago, and I still have no cancer. I cultivated T-bacilli from the blood of one of my assistants by making it degenerate; I injected the culture into a healthy mouse and obtained an adenocarcinoma in the buttock muscle. This was the first malignant tumor which I obtained through T-bacilli from healthy blood. That the tumor resulted from the T-bacilli was shown by the following

facts: the mouse developed an inflammation from the place of the injection along the lymph vessel on the right flank toward the buttock muscle; at that spot, a chronic inflammation in the muscle developed which then continued into glandular cancer tissue. Pathologists at Columbia University made the diagnosis of "a true neoplasm." (Cf. fig. 10, p. 70 and 71.)

Even the healthiest organism contains T-bacilli and has the tendency to putrid disintegration. *The disposition to cancer, then, is universal.* But as long as blood and tissues are strong in orgone, every developing T-bacillus is destroyed and eliminated before it can multiply and do damage. Wherein, then, does the very first damage consist? The answer to this question also provides the proof that the formation of cancer cells is a defense reaction of the organism against T-bacilli rather than the cancer disease itself.

When T-bacilli begin to form and to amass anywhere in the body, the organism reacts with *mild* but *chronic* inflammation. Occasionally, the accumulation of white blood cells alone can get rid of the T-bacilli. In other cases, however, the auto-infection with T-bacilli is too strong or the orgonotic defense of the organism too weak. The question is, what happens then? How does the affected tissue react in this case?

One answer can be derived from an experiment in the test tube. A certain sterile egg medium is inoculated with T-bacilli. They grow on this medium. But we find that *not only* T-bacilli grow. The medium had been examined minutely, at a magnification of at least 2000x, and neither T-bacilli nor PA-bions had been found. But now, after inoculation, we find not only the expected T-bacilli, but—to our greatest surprise—also a wealth of *mobile blue PA-bions*. That means, the inoculated T-bacilli not only have grown in the egg medium, but also *have caused*

the organic protein to disintegrate into blue PA-bions.

Exactly the same thing takes place in the healthy tissue of a mouse which we inoculate with T-bacilli in such dosage that the reaction is not immediate abscess formation and death, but a mild, chronic inflammation: *in the neighborhood of the inoculation, the tissue shows bionous disintegration.* If one dissects series of T-mice from the first day to about the tenth week, one can follow the development of the cancer cells from the PA-bions.

I repeated these two experiments many times and obtained always the same result, without, however, understanding it at first. And even when I began to understand it, the enormous significance of this fact escaped my attention for some time. In brief, *the T-bacilli, which are the product of a putrid disintegration of organic or living matter, stimulate in other organic or living matter the formation of blue bions.* This bion formation—considering the antagonistic action of blue PA-bions and T-bacilli—has the function of reacting *against* the T-bacilli. That is, *the blue PA-bions are a defense reaction against the T-infection.*

If there were no more to the process than this local formation of PA-bions, this local B-reaction, the T-bacilli would be of no further interest. In the blood of healthy individuals, one often sees the blood platelets—which are nothing but blue PA-bions—surrounded by dead T-bacilli. Occasionally, one sees leucocytes filled with T-bacilli. We must assume that this struggle of the PA-bions against the T-bacilli (i.e., the B-reaction) takes place all the time and everywhere in the healthy organism. Now, the weaker the orgone charge of the PA-bions, *the more* of them must be formed in order to get rid of the T-bacilli that are present. But the blue PA-bions develop into higher biological forms, protozoa, and, among them, into cancer cells. *The cancer cell is in reality a product of*

the many PA-bions which were formed from blood or tissue cells, as a defense against the local autoinfection with T-bacilli. A seemingly very complicated situation thus becomes quite simple.

I would like to mention here a seemingly far-fetched, but really pertinent fact: Humus is bionously disintegrated organic matter. The fertilization of humus is effected with substances derived from putrid disintegration of organic matter, mostly simple nitrogen compounds. This kind of "fertilization" is nothing but the stimulation of blue PA-bions in the humus through putrid material, that is, T-bacilli. The fact is striking that humus is sterile and has a sterilizing effect. This is due to the blue earth PA-bions. They can easily be produced by autoclaving earth in KCl.

The T-bacilli experiments open an occasional, though still vague, vista of a future chemical concept. Only one interesting fact shall be mentioned here. The putrid disintegration of protein substances results essentially in simple organic compounds (such as urea, scatol, indol), i.e., constituents of urine and feces. Old T-bacilli cultures have an acid and ammonia-like putrid odor. The odor of advanced cancer patients is very similar and quite typical. "Living putrefaction," then, is no mere simile, it is an actual fact.

There is a still obscure relationship between the T-bacilli and cyanide (CN), a constituent of potassium cyanide (KCN). This poison characteristically paralyzes cell respiration, as was shown by O. Warburg. Many of our T-mice died with typical manifestations of suffocation, such as hypervenous blood and respiratory paralysis. The connection between the T-bacilli and the suffocation metabolism of the cancer tissue is obvious. Here is a vast field of exploration for the biochemist.

Thus far, we have discussed only one direction in which the T-bacilli affect the organism: tissue damage \rightarrow T-bacilli \rightarrow

bionous tissue disintegration \rightarrow organization of protozoal cancer cells from the tissue PA-bions. This process runs from the T-bacillus to higher biological forms.

There is, however, also the converse process, consisting in the disintegration of the cancer cells into T-bacilli and in *intensified* putrefaction: Cancer cell \rightarrow T-bacilli \rightarrow general blood and tissue putrefaction and T-intoxication. The actually fatal process is not the growth of cancer cells but the *secondary T-disintegration*. While the tissue damage is at first localized and the T-bacilli small in number, the disintegration of the cancer tumor results in a gigantic acceleration and in a general spreading of the putrefaction in the body: *putrefaction of the blood, and T-bacilli-intoxication of the body fluid system*. Clinically, this is represented in the fact that cancer patients may get along fairly well for months, even years, until suddenly general decline, rapid cachexia and death set in. In contradistinction to the phase of tumor formation, this second phase, that of the disintegration of the cancer tumors into putrid masses, lasts only a few weeks. The formation of T-bacilli and putrefaction are a *cause* as well as a *result* of the cancer biopathy.

This distinction is of eminent practical significance. Once the stage of secondary putrid disintegration in tumors, tissues and blood has been reached, the T-bacilli are formed in such enormous quantities that any therapeutic attempts are doomed to failure. In the first phase, however, in which cancer tissue is being *formed*, orgone therapy is highly effective. More about this later.

The whole problem of therapy and prevention in cancer can now be reduced to a simple formulation: *The T-reaction of the organism, its orgone-weakness, has to be counteracted by the B-reaction, the strong organotic reaction of blood and tissues*. The fate of the patient depends entirely and exclusively on the relation of

the B-reaction to the T-reaction. Before discussing the practical possibilities here we must learn more about the effects of the orgone energy.

V. A NOTE ON THE PROBLEM OF HEREDITY.

The reader who has some familiarity with the cancer problem will raise a very pertinent question: *What about the heredity of cancer?* He will point out that it has been shown that there are strains of mice with an especially high incidence of cancer, and that in man cancer occurs more frequently in certain families than in others. I have had to explain on many occasions that we do not deny the *existence* of heredity. But the fact must be sharply emphasized that the theory of heredity does not answer the question as to what this heredity concretely consists of, in what biological functions it expresses itself. The mysterious "genes" neither explain anything theoretically nor are they of any help practically. Since its infancy, sex-economy has been prepared to encounter one day in a practical way those *mechanisms* of the heredity of characteristics and conditions about which the research on heredity has nothing to say. It is not a matter of "hereditary substances," but of plasm *functions*. In our cancer research, we came upon the question of heredity in a quite unexpected, but *simple* way. It provided an answer which is quite different from that in the case of character traits. Most pathological character traits can be ascribed unequivocally to the influence of early upbringing, resulting in identification and early sexual stasis. That is, this "heredity" of biopathic character traits is clearly a *postnatal* phenomenon; in other words, it is not heredity at all. The heredity of cancer, on the other hand, shows itself to be of a *prenatal* nature, although in an entirely different way than heredity research may think of.

In our laboratory, hundreds of white mice, healthy as well as cancerous, have been observed. We were struck by the infrequent occurrence of cancer in the young of our cancer mice. At first we were content with the not very relevant explanation that we were dealing with a strain which was not a specific cancer strain. Of course, we are speaking here only of mice which developed cancer spontaneously, and not as a result of experimental procedures.

The surprise came in those mice which originally were completely healthy and which, between the ages of 3 to 8 months, had been injected with T-bacilli. We were soon struck by the frequency with which *the young of these, originally healthy*, mice became sick and died at an early period, often with cancer tumors. On the other hand, control mice (which had not been given T-bacilli injections) never had cancerous or otherwise sick young. Autopsy and bacteriological examination of the cancerous young of T-mice showed exactly the same findings as in the T-mothers themselves: T-bacilli in the blood, putrid disintegration of the tissues in stomach, glands, and especially in the genitals. Mice who develop a spontaneous cancer tumor usually show no cancer manifestations in other organs (except possible metastases). Mice injected with T-bacilli, on the other hand, show cancer manifestations in almost all organs. This is easily understandable, since the spontaneous tumor derives from a local tissue damage while the tumors in the T-injected mice result from a general spread of the T-bacilli in the organism. Such T-mice often die of general carcinosis and T-intoxication without developing local tumors of any appreciable size. This seems even to be the rule and is explained by the fact that the injected T-bacilli are carried by the blood stream to all parts of the organism in great numbers.

Now we understand why the young of T-mice so often developed cancer prenatally when the mothers had been injected previous to their birth: *The injected T-bacilli get from the maternal blood stream into that of the embryo and produce cancer in the embryo.*

This fact throws light on a large sector of the problem of cancer heredity: *If an expectant mother has in her blood a sufficient number of sufficiently virulent T-bacilli, the embryo will of necessity become infected with the T-bacilli.* Whether the organism of the child can get rid of the T-bacilli or not depends primarily on the relation of the B-reaction to this early T-reaction.

The development of breast cancer in white mice is as yet not understood. The fact should be emphasized, however, that these mice do not lead a normal sex life. Either they are constantly separated from the males or breeding is artificially regulated. Some of our observations in T-injected male mice suggest that sexual stasis increases the T-reaction and decreases the B-reaction of the organism. Males which were kept in sexual abstinence showed a greater tendency to develop cancer, especially of the testicles, than males which were left together with females. Though these findings are highly suggestive and quite in accordance with general sex-economic findings, I would like to stress the fact that these special experiments need to be carried out on a much broader basis.

In human mothers, we have, in addition to the transmission of T-bacilli in the blood, other "hereditary" influences: *spasm of the uterus* and general biopathic *respiratory inhibition*. Nothing definite can be said about these factors at this time. But there can be no doubt that a severe respiratory disturbance in the mother must damage the tissue respiration in the embryo; the same is true of a chronic spasm of the uterus. But such prenatal influences

on the embryo are not hereditary factors in the sense of the gene-theorists. Rather, they are *social* factors. Strictly speaking, the maternal organism is nothing but the first "social factor" in the life of the unborn embryo.

The usual mechanistic and metaphysical hypothesis of heredity does not enable us to understand any prenatally acquired disturbances, let alone to manage them practically. The knowledge of the existence and the nature of the T-bacilli, of character structure and the function of pulsation in the parents, on the other hand, opens avenues of approach to the problem of heredity which may become of great theoretical as well as practical significance.

This excursion into the problem of heredity was made necessary by certain pertinent observations which are closely bound up with the orgone therapy of cancer. We have to familiarize ourselves more and more with the thought that, first, *cancer begins to lose its horror*, and, second, that *the prevention of cancer will prove easier than its cure*. For example, it is already possible to determine how great is the tendency of the maternal blood to disintegrate into T-bacilli, whether it contains free T-bacilli, etc. In such cases, orgone therapy of the mother could protect the embryo against the effects of T-bacilli. If necessary, the infant could be given orgone therapy. We do not know as yet whether the T-bacillus is specific for cancer only or whether it will produce other diseases when it takes effect in a different form and in different localizations. Here is an enormous field for investigation which will yield surprising findings. It will probably provide the explanation of infectious diseases as seemingly disparate as acute ptomaine poisoning and the acute stage of poliomyelitis. Though laboratory findings make this appear a reasonable assumption, it is, nevertheless, no more than an assumption.

VI. ORGONE THERAPY: ITS NATURE AND DEVELOPMENT.

We are now prepared to discuss the biophysical basis of orgone therapy. It can be reduced to a simple biological formula: *It furthers the B-reaction of the organism and decreases or eliminates the T-reaction.*

If the blood and tissues show a predominant T-reaction and we do not succeed in increasing the B-reaction, the orgone therapy has failed. Conversely, it has been successful if the T-reactions are replaced by B-reactions. The following is a schematic presentation of the two antagonistic reactions:

	B-REACTION	T-REACTION
1. <i>Total organism</i>	Elastically erect. Tonus good. Absence of spasms and clonisms. Feeling of strength. Capacity for pleasure.	Shrunken. Flaccid or hypertonic. Spasms and clonisms. Feeling of weakness. Incapacity for pleasure; pleasure anxiety.
2. <i>Skin</i>	Warm, ample blood supply; good turgor; rosy or tanned; capable of producing warm sweat.	Cold and clammy; poor blood supply; poor turgor; pale or livid; cold sweat.
3. <i>Musculature</i>	Relaxed, capable of alternating tension and relaxation; strong. No muscular armor. Lively peristalsis, no constipation or hemorrhoids.	Chronically tense or flaccid and atrophic. Often excessive fat. General muscular armor. Constipation, hemorrhoids, etc.
3a. <i>Facial expression</i>	Lively, variable.	Rigid, masklike.
4. <i>Blood</i>	B-reaction on autoclavation. Erythrocytes taut, pulsating; showing strong, wide orgone margin; slow disintegration in NaCl solution. No T-bacilli in culture.	T-reaction on autoclavation. Erythrocytes small or shrunken, not pulsating, showing T-spikes; weak, narrow orgone margin; rapid disintegration in NaCl solution. Culture shows staphylococci, streptococci or T-bacilli.
5. <i>Cardiovascular system</i>	Pulse regular, quiet and strong. Blood pressure normal.	Pulse irregular, abnormally fast or slow, weak, small. Blood pressure abnormally high or low.
6. <i>Tissues</i> (<i>epithelial cells, tissues obtained by biopsy, etc.</i>)	Vigorous turgor. No bion formation in KCl.	Poor turgor, shrinking. Bionous structure or rapid bionous disintegration in KCl.

nating the general T-reaction of the organism and of re-establishing the general B-reaction, that is, normal biological total functioning. If, for example, orgone therapy should succeed in destroying the local tumor and the T-bacilli in the blood; if, on the other hand, it were to achieve nothing beyond that, then we would have a good *symptomatic* treatment for cancer but we would not be entitled to speak of cancer *therapy*.

In character-analysis, we learned long ago not to call a neurosis "cured" when we had eliminated a headache or a compulsion symptom. We speak of "cure" only if we succeed in eliminating the "character neurosis," that is, the characterological and biophysiological basis of the local symptoms. This, also, is only possible by establishing orgasmic potency, that is, the capacity for full biological pulsation. True, this is a very strict criterion, but the only one in accordance with radical medical and social requirements. This principle governed our work even in the very first years of the Vienna Seminar for psychoanalytic therapy. We shall continue to adhere to it strictly, for we owe very much to it. Our work is not to be confused with all the superficial and illusory methods which call the elimination of a neurotic headache by bromides, or the extirpation of a local cancer tumor, a "cure."

I should like to state right here that we do not know as yet whether the orgone therapy of cancer will be the method of choice. True, we are already in a position to eliminate local tumors and to change the general T-reaction of the organism into a general B-reaction. But in the individual case, we do not know how long the B-reaction will be maintained, whether, sooner or later, it will not again be replaced by the T-reaction. In other words, we have not yet mastered the shrinking biopathy. In spite of this, the present publication is justified. It will take many years'

experience and extensive measures before we can call the orgone therapy of cancer *the* method of curing cancer and before we will find the limits of its efficacy. However, what has been achieved thus far goes far beyond what one could hope for, even only a few years back. For this reason, it deserves extensive presentation. I shall now relate how the experimental orgone therapy of 1943 developed from the first groping bion experiments in 1936.

The orgone therapy of cancer goes back to the early observation of the killing effect exerted by the blue PA-bions on various bacteria. This led me to observe the effect of various kinds of PA-bions on various forms of bacteria, microscopically and in the animal experiment. Microscopic examination showed the following: bacteria, when they came into proximity to vigorous blue bions, would show restless movements and would try to flee from the bions; if they came too close, they would remain as if paralyzed. The same was true of the T-bacilli. They would adhere to the blue bions motionlessly, or would conglomerate into immobile heaps around them ("agglutination"). The results of the animal experiments have been reported previously: All mice injected with T-bacilli died of acute T-intoxication or from various stages of cancer. All mice injected with PA-bions alone remained healthy. Most of the mice injected with PA plus T remained healthy.

These findings disclosed the curative effect of the blue bions in T-bacilli infection. Nothing was known of the possible direct effect of PA-bions on cancer tissue. At that stage of the work, nobody knew where the experiments would lead. I brought PA-bions together with cancer cells and observed them microscopically. The PA-bions surrounded the heaps of cancer cells and finally penetrated the cancer mass, destroying its structure. (*Cf.* fig. 15a, p. 78.)

Thus, the PA-bions had undoubtedly an

effect on the cancer cells. A physician, co-worker of the Institute, offered to persuade a surgeon to undertake an experiment on a patient who was dying of cancer. The surgeon gave her three intravenous injections of sterile PA-bions which had been obtained from the blood of a cancer patient. The patient reacted with a rise in temperature. When she died a week later, the autopsy revealed the following: the liver showed a hard cancer tumor the size of a fist. *In several places, it showed a softening to the depth of about 1 cm.* This finding struck the pathologist as unusual. From the point of view of our research, it was only an isolated and not too definite finding, but it was in accordance with the microscopic findings. (I knew that attempts had been made in several places in Europe to treat cancer with injections of streptococci. The bions, however, were sterile forms, obtained by autoclavation.)

I was confronted by two fundamentally different facts: 1. The PA-bions paralyzed the T-bacilli which are the basis of the cancer disease; 2. The PA-bions also destroyed cancer tissue directly. The first fact pointed in the direction of cancer prevention, the second in the direction of local cancer therapy. In the succeeding years, the first direction became increasingly the more important of the two.

It would have seemed logical and tempting to undertake further experiments with humans, e.g., by injecting them with cultures of PA-bions. However, a certain observation on the PA-bions militated against it: The PA-bions were nothing but a certain kind of living organism. Brought together with T-bacilli, they expended, in their fight against these bacilli, their biological energy. This was shown under the microscope in the fact that the PA-bions lost their blue radiation, and that their various forms degenerated into round black cocci, that is, simply, into staphylococci. Thus, the injection of bion

cultures in the human was out of the question.

Between the fall of 1937, when the T-bacilli were discovered, and the fall of 1939, when the orgone therapy experiments in mice were first started, there were a number of unrelated but suggestive findings. The blue PA-bions killed the T-bacilli which had been injected into mice. When I had the first culture of SAPA bions (in which the orgone radiation was discovered), I was confronted with the important question: *Is this orgone energy which is radiated by the sand bion cultures the same as the energy in the original PA-bions which I had injected into mice against the T-bacilli?* By now it has become a matter of course that the energy in the earth bions, grass bions, the SAPA bions, the erythrocytes, and the energy visible in the atmosphere are all one and the same form of energy. This identity of the energies in various substances and conditions has since been proved experimentally and has led to important theoretical formulations concerning living functioning. But then, six years ago, when I observed the first effects of this energy on cancer tissue, without as yet knowing that I was dealing with orgone energy, everything was uncertain. I was inclined to shrink from every new assumption which suggested itself that was at variance with traditional pathology. The observation that the blue color in the PA-bions had something to do with their killing effect on T-bacilli was unequivocal; yet, I could not have any idea that this blue was the specific color of the biological plasma energy. Only when, in 1939, the radiation of the SAPA bions was discovered, and with that the solar origin of the orgone was established, did I become more daring in my assumptions.

If I wanted to proceed at all, I had to make the hypothetical assumption that the blue color in the PA-bions represented the same energy as the radiation emitted

by the SAPA bions, that is, the energy *outside* the bion vesicles and outside the tube in which the cultures grew.

I had developed a small wart on my left cheek and found that this wart contained T-bacilli. I held the test tube containing the SAPA culture against the wart several times, each time for several minutes. While previously, microscopic examination had shown live T-bacilli, they were now found to be dead. The wart itself disappeared. This experiment—like others—showed that the *orgone energy was effective at a distance, through the glass of the tube*. Similarly, I found live T-bacilli in a small erosion on my tongue. I irradiated the erosion by placing a test tube containing a SAPA culture against it. The T-bacilli soon became immobile, and the erosion healed rapidly. I examined the vaginal epithelium of a woman suffering from leucorrhoea and found degeneration of the epithelium and great numbers of live T-bacilli. In addition, there were caudate protozoa with an ameboid motility, the so-called *trichomonas vaginalis*. When, under the microscope, these protozoa came into proximity with SAPA bions, they became immobile. I had the woman introduce a sterile SAPA test tube into the vagina for half a minute at a time. She soon complained about a burning sensation. I immediately re-examined the vaginal secretion and found to my surprise that there were no longer any live T-bacilli. While I was familiar with the rapid reddening of the skin on application of a SAPA test tube, I was nevertheless surprised by the rapidity of this reaction.

In May 1939, the work had to be interrupted as a result of the Norwegian newspaper campaign. The SAPA cultures were taken to New York City by an assistant. The work could not be continued until the middle of September, when the laboratory was re-established in Forest Hills. The first orgone therapy experiments in

mice consisted of injecting a solution of SAPA cultures into mice with spontaneous, rapidly growing cancer tumors. The first SAPA-injected mouse was from a Paris strain which had been brought to me by a student, a physician working in a pathology laboratory at Columbia University. The diagnosis was "mammary tumor." I must say that everybody in the laboratory was rather excited when this first mouse was injected. We were all conscious of the fact that should the tumor recede, this would be a tremendous event. For, never before in the history of cancer research had it been possible to reduce a cancer tumor or even to make it disappear.

The tumor was the size of a large bean and hard. On the second day it was softer, and a few days later only the size of a small pea. This was an enormous success, but past experiences warned me not to be overoptimistic.

The layman often has erroneous ideas about such discoveries: he thinks that a man thinks for a long time, finally has a brilliant idea and goes to work; the experiment succeeds, he reports it to the Academy of Sciences, and the Nobel prize is not long in coming. Hard reality is quite different: the discoverer gropes around in the dark for years, takes the wrong turn a hundred times, has to start in again and again; he is proclaimed crazy, his landlord refuses to renew his lease, ignorant physicians threaten to report him to the police; the police ask where he gets his money for his experiments, whether perhaps he is a spy; the Academy, the scientific "authorities," declare the discovery to be a fraud, or else something that has been known all along, or something that has already been disproved, and that the discoverer should not be allowed to stay in the country; thus, a whole laboratory with all the equipment, microscopes, cultures, mice, etc., has to be moved a number of times; all this costs much money, annoyance and sleepless nights; and, finally, the Nobel prize is given for "proper" ideas and findings, and not such "crazy" things as "orgone in sand bions."

My skepticism proved justified. True, the cancer tumor of this first mouse receded from the size of a large bean to that of a small pea. But after two weeks it *began to grow again* until it finally reached the size of a walnut. I did not know whether I should continue with the SAPA injections or not. In the meantime, some untreated cancer mice rapidly became cachectic and died. But *healthy* control mice which had been injected with SAPA bions also died and showed peculiar findings: the liver was enlarged and showed degeneration of the acini. True, those cancer mice which had received SAPA injections survived the untreated ones by many weeks and even months. But finally all of them died; in some, the tumors had receded, in others it had first receded or disappeared and then had grown larger again. This was depressing; yet, the fact had been established that *the orgone has an effect on cancer tumors*.

In the course of many months, during which over 100 mice were injected, the situation began to clarify itself. At first it remained completely obscure why tumors became again so much larger after having first almost disappeared. Only in a very few mice did the tumor disappear without growing again later.

We did not know in which way the SAPA bions destroyed the tumor tissue. Therefore, all mice which died or were killed were dissected and carefully examined. Did the SAPA bions get into the tumor with the blood stream and destroy the tissue in the same way in which they killed the moving cancer cells on the microscopic slide? The treated mice showed a very puzzling finding: *Neither in the blood nor in the tumor could a trace of the injected SAPA bions be found*.

This we did not understand. But we were struck by the fact that the tumors of the SAPA-treated mice were extremely hyperemic (filled with blood). As time went on, it became clear why the tumors,

after having become smaller, again grew in size: the secondary growth was due to this hyperemia. There was no doubt: *the blood had something to do with the destruction of the tumor*.

The examination of the blood showed the following: the erythrocytes of the treated mice were taut and biologically vigorous, while the blood of the untreated mice presented the typical picture of cancer: shrunken membrane of the erythrocytes, T-spikes, abundant T-bacilli in the blood and in the culture. The treated mice, on the other hand, showed few or no active T-bacilli in the blood. The striking difference in the form and activity of the erythrocytes suggested that not the SAPA bions, but the erythrocytes were the *immediate* factor in the destruction of the tumor. The SAPA bions transferred their organotic charge to the erythrocytes and perished themselves in this process. *The charged erythrocytes were the bearers of the therapeutic function* at the tumor which originally we had ascribed directly to the SAPA bions.

This assumption was correct and led to new and important observations: The organotically strongly charged blood is to be considered the real curative factor. From now on, we consistently applied this principle. Now, we could understand the anemia and cachexia in the untreated mice. True, the treated mice also died, but they never reached the degree of anemia and cachexia of the untreated mice. The explanation is the following: in the untreated mouse, the organism uses up the available biological energy of the erythrocytes in the struggle against the disease; this leads to cachexia. In the orgone-treated mice, the organism, receiving orgone energy from the outside, does not have to use up its own biological energy.

In dissecting several dozen untreated cancer mice, we found that in them, too, the tumor occasionally contained blood-

filled cavities. These cavities did not contain any organized or compact cancer tissue. Their content was a macroscopically brownish mass which consisted largely of detritus and T-bacilli. In the dark-field, at 3000x, one could see clearly that the erythrocytes, when they came into contact with cancer cells, not only caused them to disintegrate into T-bodies, but disintegrated themselves into T-bodies. As untreated cancer mice have orgone-weak blood, I did not know whether this T-disintegration of the erythrocytes was due to their orgone-weakness or to the struggle against the cancer cells. Later we found the same phenomenon also in the tumors of treated mice; here, too, the erythrocytes disintegrated into T-bacilli where they came into contact with cancer cells and caused their T-disintegration. (This can also be observed in the stained preparation). Now we knew that the T-disintegration of the erythrocytes is a result of their struggle against the cancer tissue, and not of orgone-weakness.

In this way, we discovered the attempt at natural self-cure of the organism. This became the guiding line in all future work: *The natural therapeutic factor against cancer can only be the blood.*

The reader should remember that at that time (Winter 1939-40) nobody had as yet any idea of the existence of the atmospheric orgone. Consequently, there were no orgone accumulators. The orgone therapy in cancer mice was carried out by way of injecting orgone-containing bions. We observed all the injected mice carefully every day. We felt that, while the injected bions destroyed the tumor, they also damaged the mice in some way. Personally, I had always had a strong aversion to the injection of foreign substances, be they drugs or sera, into a living organism. It was only too apparent that so many sedative drugs, while efficacious in alleviating pain, at the same time damaged the autonomic apparatus. In fact, the

anesthetic effect of the alkaloids (morphine, etc.) consists exactly in a depression of the vegetative sensibility of the organism. In other words, they have, biologically speaking, exactly the opposite effect of that which orgone therapy tries to achieve: they cause *depression*, and not *stimulation* of living functioning. This is a perennial medical problem: *Are there any drugs which will kill microbes, or pain, without injuring the life system?* Thus far, chemical research has not been able to produce them.

Healthy control mice showed disease symptoms after the injection of SAPA bions; cancer mice, though the tumor was destroyed by the injections, did nevertheless not quite recover. For this reason I tried even in those early stages of the work to get away from the method of injecting bions. At first, however, we saw no other way of administering orgone than by bion injections. But when it was found that the bions acted not directly, but *via the blood*, new ways of orgone application were found. These I shall only mention briefly. They were detours, no more than instructive transitional stages in the orgone therapy experiments and were completely given up later. They were important, however, in that they disclosed essential characteristics of the blood in its connection with the orgone and the malignant tumor.

The following indirect methods of orgone application were investigated:

1. The blood-congested tumors of orgone-treated cancer mice were tapped, the blood was withdrawn with sterile precautions and centrifuged. To the resulting serum, sterile SAPA bion culture was added, and it was left in the refrigerator for one day. Since fluids absorb orgone energy, we knew that the serum would become charged with the orgone from the bions. Then the serum was filtered, that is, the SAPA bions were withdrawn from it. This orgone-charged serum was in-

jected into the cancer mice. In the course of this experiment we could convince ourselves that the blood of cancer mice does not form any specific antibodies against the cancer cells. For the serum of untreated cancer mice did not show the least therapeutic effect. This is explained by the fact that the blood of organisms suffering from cancer is orgone-weak. The serum which had been treated with SAPA bions in the test tube, on the other hand, had a definite therapeutic effect, although it was not as pronounced as that of direct injection of SAPA bions.

2. Healthy rabbits were injected several times with SAPA cultures. When blood was withdrawn from them we found again that it no longer contained any SAPA bions. The rabbit blood was injected into mice, in two different ways. One group of cancer mice received injections of rabbit blood (0.2-0.5 cc.), diluted with KCl, every day for several weeks. The other group received injections of centrifuged blood, that is, orgone-charged serum. This method of indirect orgone application was also successful. Intravenous injection was more effective than subcutaneous injection, but there were several deaths due to the shock effect of the KCl.

3. Injections of orgone-charged rabbit blood or serum *directly into the tumor* were unsuccessful.

4. Injections with *human blood*. This was taken from the arm vein and SAPA bions were added to it in the test tube. Microscopic observation showed clearly how the erythrocytes collected eagerly around the SAPA bions, formed radiating orgone bridges and absorbed orgone. These observations were as instructive as exciting. The erythrocytes became more taut, the blue orgone margin became wider, the radiation (particularly when observed with a blue filter) more intense. Again two groups of cancer mice were injected with blood and serum respectively. The effect on the cancer tumor was pro-

nounced. However, the whole procedure was very time-consuming and laborious.

5. We also tried to make a "T-bacilli serum." Healthy rabbits were injected with very small doses of T-bacilli; after a week, blood was withdrawn and the serum injected into cancer mice. No satisfactory result could be observed, although microscopic observation showed the formation of blue orgone vesicles in the serum when T-bacilli were added. We soon gave up the idea of preparing a specific T-bacilli serum. Attempts to produce antibodies in the blood of mice or rabbits by injecting autoclaved T-bacilli were also unsuccessful.

Among these indirect methods of orgone application, the most effective was the injection of erythrocytes which had been organotically charged by SAPA bions. In this case, as with direct injection of SAPA bions, the tumor tissue disintegrated into dead T-bodies, the anemia improved, and the T-reaction of the blood on autoclaving was replaced by the B-reaction.

The table on page 44 summarizes the findings.

Eight of the 27 carefully examined control mice (actually we observed many more untreated cancer mice) died within the first week, that is, about two weeks after the discovery of the tumor at the animal farm. The breeder assured us that he examined all mice once a week, so that the manifest tumor at the time of its discovery could be no older than a week. These mice showed typical cancer symptoms (cachexia, T-reaction, tumor growth, putrid disintegration of the cancer tissue, etc.). In the second week, 5 cancer mice died, and after that, 2 each in the third to seventh week, and 1 each in the eighth to eleventh week. That is, the maximal life span of untreated cancer mice is about 10 to 12 weeks. The *average* life span, however, is much less (3.9 weeks), since most of the cancer mice die very soon after the appearance of the tumor.

This was the status of the orgone therapy experiments in mice in 1940. I shall not mention the numerous efforts which were made in an attempt to fill in gaps and in trying to achieve better results. Only one major difficulty should be mentioned which later on we encountered again in the orgone therapy experiments with humans: True, it was now possible to destroy tumors by charging the blood with orgone. But the fate of the treated mice depended primarily on *whether and in what manner the dead tumor material was eliminated from the body*. Many mice died not from the tumor nor from T-bacilli intoxication but—according to the saying, “operation successful, patient dead”—from clogged renal and lymph passages or from a gigantically enlarged liver and spleen. These are the organs which have to eliminate detritus from the organism. Especially typical was the clogging of the kidneys. The larger the tumor, the greater was this danger. The mice did not die from cachexia; at the time of death they were not emaciated and still had a smooth fur. They died from the results of the *elimination* of the cancer. This is a gigantic, as yet unsolved problem. If one destroys large tumors too rapidly, the excretory organs become clogged. If one destroys them slowly, other tumors are apt to grow. There is only one answer to the problem: *the tumor must not have grown beyond a certain size*. For this reason, our tests for an early cancer diagnosis from the blood (T-reaction, culture, etc.) are of great importance.

In July 1940 I discovered the atmospheric orgone. A few months later the construction of an orgone accumulator, which concentrates the atmospheric energy, succeeded. Various experiments showed that the atmospheric orgone showed the same characteristics as the orgone in the bions which we had injected into cancer mice. We gave up the injection method

and, instead, *kept cancer mice in the accumulator* for one half hour a day. The very first tests revealed an astoundingly rapid effect: the mice recuperated rapidly, the fur became smooth and shiny, the eyes lost their dullness, the whole organism became vigorous instead of contracted and bent, and the tumors ceased to grow or they even receded. At first, it seemed astounding that a simple cabinet, consisting of nothing but organic material outside and metal inside, should have such a pronounced biological effect. Later on, at a time when this effect had long since become a matter of fact to us, we saw this astonishment in many visitors to our laboratory. They looked for electric wires and complicated mechanical contraptions and could not understand that such a simple arrangement should be capable of influencing cancer.

Statistical studies showed that the results with atmospheric orgone were *better* than with bion injections. 37 cancer mice were treated in the orgone accumulator. The average life span of the bion-injected mice had been 9.1 weeks; that of the mice treated in the orgone accumulator was 11.1 weeks. The maximum life span with injection was 7 months after discovery of the tumor; with the orgone accumulator, it was about 9½ months. This represented an important step ahead. We had increased the prolongation of life from ¼ to ⅓ of the total life span. In the human, this would correspond to a life prolongation of about 20 years. (True, humans, unlike mice, suffer from severe emotional biopathies which complicate cancer tremendously).

We were glad not to have to introduce foreign substances into the organism any longer. In addition, the treatment no longer required much preparation and time-consuming labor. The mice were simply left to themselves in the accumulator, and we were free to do other work.

This opened a wide vista to a future cancer therapy in the human. If the orgone accumulator should prove effective and at the same time harmless to healthy tissue and healthy blood, one could let healthy as well as sick people use the accumulator in their own homes. In December 1940 the first orgone accumulator for humans was built. I shall describe what measures we took to determine whether or not the atmospheric orgone in the accumulator is in any way harmful to the *healthy* human.

I, myself, had already been studying orgone effects for two years in a Faraday cage with iron walls, which thus acted as an orgone accumulator, spending several hours a day in it. Not only did I not feel any disturbances, but felt a strong vitality. Some workers of the laboratory spent at least a half-hour a day in the accumulator. We had rabbits and mice live in the accumulator for many hours a day, over several months. Except for a certain restlessness, they showed no disturbances. Humans may show dizziness and slight nausea if they stay too long in concentrated orgone, but these disturbances disappear rapidly in the open air.

A special experiment revealed a fact which at first seemed peculiar. We had grass infusions in which protozoa grew abundantly between the second and fifth day. We now put grass infusions into a small orgone accumulator and found that *in these orgone-treated infusions no protozoa developed, or only a very few*. If, however, the protozoa and bacteria were fully developed and the normal grass structure essentially destroyed, the orgone did *not* have a killing effect on the protozoa. This was at first incomprehensible. The blood tests in the cancer mice showed unequivocally that the orgone treatment in the accumulator charged the blood and made it free of T-bacilli. If, however, we put a culture of T-bacilli in the accumulator, the killing effect was absent. This was analogous to the finding in the grass in-

fusion and was just as incomprehensible.

Finally, consideration led to the following conclusion: The SAPA bions, also, had not had a direct killing effect on cancer cells and T-bacilli, but an *indirect* effect by charging the erythrocytes and healthy tissues. Similarly, the orgone in the accumulator charged the healthy grass tissue, thus slowing up its disintegration into protozoa. When the grass had already disintegrated, when, in other words, there *was no healthy tissue* that could be charged, the killing effect on the protozoa was also absent. In this case, the orgone charged only the protozoa. As we see, the orgone experiments cannot be understood within the framework of mechanistic thinking. In order to eliminate protozoal or bacterial foreign bodies or to prevent their development, *healthy and vigorous organotic systems capable of being charged are necessary*. It is a basic law in orgone physics that *the stronger organotic system attracts the weaker one and withdraws its charge*. (This is exactly the opposite of the action of the electric charge in which the energy flows from the stronger to the weaker system.) The animal tissue or blood represents a far stronger organotic system than the protozoa, cancer cells or T-bacilli. This is why the latter are killed by the former. Under normal conditions, this takes place without orgone being supplied from the outside. But in the process of fighting against the cancer cells and the T-bacilli, the healthy tissues and the blood lose an increasing amount of their orgone; hence the anemia and loss of weight. *If, now, we supply the organism with repeated doses of concentrated orgone, the organism does not have to use up its own orgone*. Then, the anemia and cachexia do not appear or, if already present, are alleviated or eliminated.

The experiment with the infusions was an interesting and important confirmation of this concept of the effect of the orgone on tissues and blood. A great series of

important questions, however, still await an experimental solution.

In applying the atmospheric orgone, we ran into the same difficulties as those encountered in the experiments with the injection of bions. Many mice died from the clogging of the excretory organs, although they did not develop anemia or cachexia. This problem will be more extensively discussed in connection with the orgone therapy experiments in humans.

I shall now proceed to a presentation of the orgone therapy experiments in human cancer. I wish to repeat again that we are not dealing here with *final* results, but only with important observations which still contain many gaps, doubts and uncertainties.¹¹ The more we learn about all the effects of the orgone, the more secure becomes the foundation for a mastery of the cancer scourge, and the more helpers will join in the fight against it.

¹¹ *Translator's note:* Although the pressure of other work, unfortunately, keeps me from active participation in the cancer research, I have, nevertheless, been in constant touch with it during the past five years and can claim more than a superficial familiarity with it. On the basis of this, I may say that Dr. Reich is far too modest in the presentation of his findings. Every week, some cancer researcher bursts into print with a "great discovery"; every week one hears that the "cause" of cancer, or a "promising therapy" for cancer has been discovered. Yet, every single one of these discoveries is completely forgotten a week—or at most a few months—later. These discoveries are usually nothing but some chemical substance which either causes experimental cancer (although the *reason why* it does so remains undiscovered) or some chemical which is supposed to cure cancer (again without any intelligible reason). This, together with the fact that the mortality from cancer is by no means decreasing, but actually increasing, shows the complete futility of traditional, mechanistic cancer research.

Thus, when Dr. Reich points out that his findings are not final, this means only that he is a conscientious scientist. It should not obscure the fact that he *has* discovered the etiology of cancer and opened a way for its cure and prevention. No matter what the headlines are screaming these days, this is one of the greatest discoveries of the century, not to say of centuries—T. P. W.

VII. THE ORGONE ACCUMULATOR.

At this point, I have to interrupt my description of the development of the orgone therapy experiments in order to answer a question which the attentive reader is bound to ask: How is the concentration of the atmospheric orgone brought about, and how is it measured?

These questions cannot be answered here as extensively as they deserve. The orgone is a newly discovered form of energy, totally different from electricity and magnetism. Its study is the task of orgone physics in the field of inanimate nature. This study is as yet very incomplete. Though the reader may be acquainted with the concepts of electrophysics, he will have to realize that they are not applicable to the orgone. The new physical concepts deriving from the orgone experiments will have to be presented separately. What interests the reader in the present context is the mechanism of the accumulation of the energy and the methods of measuring it. At the risk of being misunderstood and misinterpreted by electrophysicists, I shall mention three basic facts which demonstrate the concentration of the atmospheric orgone in the orgone accumulator and which make the measurements possible.

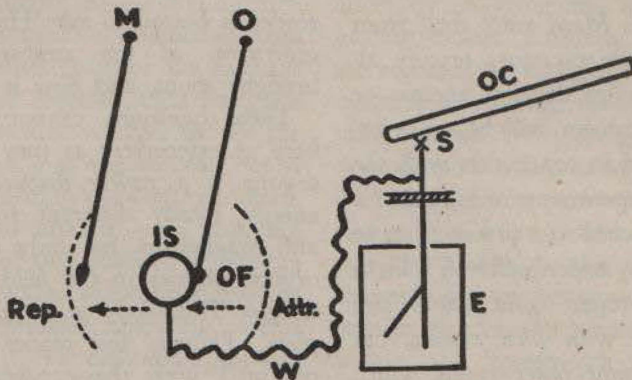
I. THE MECHANISM OF THE CONCENTRATION OF THE ATMOSPHERIC ORGONE

The orgone accumulator consists of an outer wall of organic material such as wood or celotex and an inner wall of sheet metal. This arrangement is sufficient to achieve an orgone concentration five times as great as the atmospheric concentration. The mechanism of this concentration is based on two facts:

a) *Organic material attracts orgone and absorbs it.* Conversely, orgone-containing organic material attracts small organic particles and holds them in a state of attraction.

b) *Metallic material, especially iron, also attracts orgone, but repels it again rapidly.* Conversely, orgone-containing metallic material repels metallic particles.

orgone charge of the rod is sufficiently strong (and the relative humidity of the air not over 50%), the cork will move toward the metal sphere and will adhere to



Demonstration of the orgonotic attraction of organic material and the repulsion of metallic material in the orgone energy field of a metal sphere.

- O: organic material.
- M: metallic material.
- OF: orgone energy field.
- IS: iron sphere.
- Attr.: attraction.
- Rep.: repulsion.
- E: electroscop (orgonometer), grounded or not grounded.
- W: wire connection.
- OC: orgone carrier (polysterene rod).
- S: spark to the tip of the electroscop.
- ←: direction of deflection.

These two basic orgone-physical facts can be experimentally demonstrated and reproduced at will in the manner illustrated above.

Under a glass hood which protects the arrangement from air currents, a metal sphere is set on a rubber or cork plate. On one side of the equator of the sphere, at a distance of about 2-3 mm, we suspend a small piece of cork, on the other side, at the same distance, a small piece of tin-foil. The metal sphere is connected by a wire with an electroscop.

We then charge a polysterene rod by stroking it once or twice, *without rubbing*, over our hair. The rod is then brought near the metal point of the electroscop which is connected with the sphere. If the

it for a shorter or longer period of time. This means: *the orgone energy in the rod has led to the formation of an orgone energy field (OF) around the metal sphere, in which organic material is attracted and held fast.* In connection with other experiments, this statement can be reversed: organic material attracts and absorbs orgone energy.

A non-charged polysterene rod does not influence a piece of tin foil. *An orgone-charged rod, however, will attract the tin foil and hold it fast.*

From this it follows: *Orgone energy and organic substances attract each other; so do orgone-charged organic and orgone-charged metallic substances.*

At the other side of the sphere we notice

what happens with the tinfoil when we approach the charged rod to the electroscope. We observe that the effect on the tin foil is different from that on the cork. The tin foil is *first attracted* toward the metal sphere but immediately *repelled* and *held at a distance*. That is, *two metallic substances in the orgone energy field repel each other*. From this it follows also that *metal attracts orgone, but, instead of absorbing it, as organic material does, it repels it*.

These findings are fundamentally new. They have a relation to what is called "friction electricity" and to the confused theory of "static electricity." These connections will be extensively dealt with elsewhere. This simple experiment demonstrates two basic functions of the orgone energy: *attraction* of organic substances and *repulsion* of metallic substances in the orgone energy field.

The implications of this experiment for the orgone accumulator are the following: The external wall of organic material attracts orgone energy from the atmosphere and absorbs it. The inner wall of iron also attracts orgone energy, *but immediately repels it again, both to the outside, that is, the organic material, and to the inside of the accumulator*. The orgone energy given off by the metal to the inside is attracted by the opposite metal wall which again repels it. Thus the orgone particles oscillate freely on the inside, back and forth between the parallel metal walls. This oscillation can be observed in the dark.¹² It is different, however, with the energy given off by the metal wall toward the outside. Here, the surrounding organic material takes up the energy and accumulates it. For this reason, *the direction of the stream of energy particles is always from the outside toward the inside*. This accounts for the fact that the concentration of the energy inside the accumulator

is about five times the atmospheric concentration. This can be measured with the static electroscope.

2. ELECTROSCOPIC MEASUREMENT OF THE ORGONE CONCENTRATION

We charge the electroscope with an organic substance (cellulose, polysterene, etc.) which we have charged by stroking it over our hair. The electroscope leaf becomes deflected. Then, slowly—the speed varying with the atmospheric orgone tension—the deflection decreases; the electroscope discharges. If now, the orgone concentration were the same inside and outside the accumulator, the speed of discharge would also be the same inside as outside. But this is not the case.

Furthermore, if the energy in the accumulator were of an electric nature, the electroscope should discharge more quickly inside than outside, because ionized air is conducting. The opposite is true, however: the electroscope discharges much *more slowly* inside than outside. *The relation between the speed of discharge on the inside to that on the outside is the yardstick of the concentration*. For example: the electroscope discharges the orgone energy at the rate of 1 scale division in 1 hour on the outside, and of 1 scale division in 4 hours on the inside. In that case, the concentration in the accumulator is 4 times that of the atmospheric concentration. This is confirmed by the biological effects within the accumulator: cancer mice, for example, recuperate in the accumulator but not in the atmospheric air.

3. THERMOMETRIC MEASUREMENT OF THE ORGONE CONCENTRATION

The concentration of orgone can also be measured thermometrically. The temperature above the top of the accumulator is always higher than that of the rest of the air and also higher than the inside of the accumulator (provided that no living

¹² Cf. *Internat. J. of Sex-economy and Orgone-Research*, 1, 1942, 129 f.

organism is in it). Similarly, the air above an accumulator which is buried in the soil is always many degrees warmer than the air above a similarly buried simple glass container.

The intricate details of these measurements are described in an as yet unpublished article. I shall have to ask the reader to postpone his objections and criticisms until I shall be able to present all the orgone-physical material.

VIII. ORGONOTIC CELL LUMINATION: THE THERAPEUTIC FACTOR.

Physical and biological phenomena show unequivocally that the orgone energy is *concentrated* within the orgone accumulator. Yet, this does not yet explain the therapeutic effect of the accumulator. We shall now try to get a clearer picture of this.

In the first few months of the therapeutic experiments with atmospheric orgone (early in 1941), not many characteristics of the orgone were known. True, it had been made visible, the temperature differences and the differences in electroscopic discharge had been investigated; in other words, the fact of the concentration in the accumulator was established. But the *mechanism of the therapeutic effect* was still obscure. Our preliminary hypothesis was that the concentrated orgone in the accumulator penetrated the naked body and thus charged tissues and blood. In the course of the ensuing two years, observations accumulated which provide a better explanation.

Individual, isolated facts have no scientific significance. It is a common procedure in science to give a certain term to unrelated facts, such as "static electricity" and then to believe that one has understood them. Or one invents an "interpretation" for each individual fact, without any correlation. It is a different thing when the *totality* of many individual

facts result spontaneously in *one* concept which is inescapable and necessary and which reduces the many diverse facts into one *functional unity*. If this *one* concept not only explains the functional connection of the diverse facts, if it not only makes superfluous a number of different interpretations and explanations, but, in addition, leads to *new* facts, then we are dealing with a *satisfactory* theory.

Many "practical" people consider theory formation a "philosophical pastime." In reality, theory formation is not a luxury, but a scientific tool comparable to the arrangement of the instruments before an operation. This arrangement is as decisive for the success of the operation as each individual instrument itself. The best surgeon would fail if the instrument for each manipulation first had to be looked for all over the room. As in the arrangement of tools, so one arrives in theory formation from a less satisfactory to a better *arrangement* of facts. Consequently, such theories can never form a finished system, but will always be incomplete and in need of improvement. This is also true of the following presentation of the therapeutic effect of the orgone accumulator.

The initial hypothesis that the orgone in the accumulator simply penetrates the organism left a number of facts unexplained. Many patients reacted to the orgone immediately; others needed a number of irradiations before they showed any reactions. Now, if the effect were due simply to a mechanical penetration of the organism with orgone particles, all organisms would react in the *same* way. The fact that this is not the case calls for an explanation.

The assumption that the organism is being penetrated by the orgone while the organism itself remains passive and does not participate in the process, was taken over from the process of irradiation with radium or X-rays. In this case, it is a matter of irradiation with non-biological,

that is, *body-alien* energy: the organism emits neither Xrays nor radium rays. The atmospheric orgone, on the other hand, represents a *body-own, specific biological energy*: the body continually takes it up from the sun and the air, contains it in all its cells and constantly radiates it. If, now, an organism is in the orgone accumulator, *two organotic systems establish a functional relationship with each other*. Today, this is an established fact, but two years ago we did not know it. In order to understand the functional relationship of two organotic systems, we have to go back to the observations made in bions which have been described earlier.

As we have seen, an erythrocyte and an earth bion each form an organotic system. Biophysically speaking, such a system consists of an *energy nucleus*, a *plasma periphery*, and an *orgone energy field* around the organism:

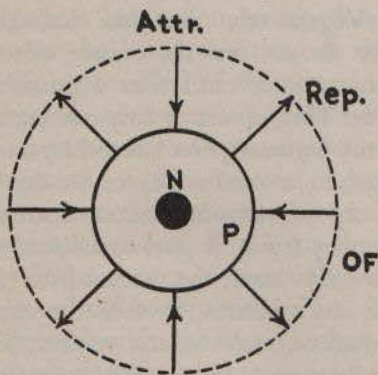


Diagram of living "organotic system"

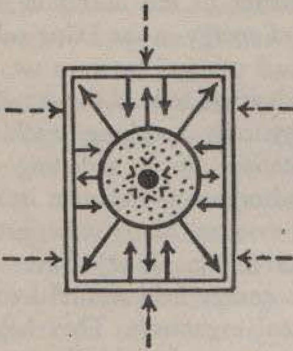
- N: biological nucleus.
- P: plasmatic periphery.
- OF: orgone energy field.
- Attr.: orgone charge.
- Rep.: orgone discharge.

When two organotic systems come close to each other, the two orgone energy fields establish contact. The immediate result of this organotic contact is mutual *excita-*

tion and attraction. This is expressed in the fact that the two organotic systems approach each other. For example, the erythrocytes group themselves around the heavier and less mobile earth bion. If they come close enough, a radiating bridge of orgone energy is formed. At this point, the biological nuclei of the organotic systems begin to radiate more strongly. We call this phenomenon "organotic lumination." It is the same phenomenon which traditional biology has observed in the process of cell division and has termed "mitogenetic radiation." All fundamental bio-energetic processes, like sexual excitation, orgasm, cell fusion and cell division are accompanied by a high bio-energetic excitation, i.e., by *organotic lumination*. It is a matter of the liberation of large amounts of energy in the living substance. The "sexual contact" between two organisms which strive toward the sexual act is, orgone-physically speaking, nothing but the formation of a radiating orgone bridge and organotic radiation in the two organotic systems. Many investigators (in this country, e.g., Burr) have demonstrated an energy field around living cells or metazoal organisms. They hold it to be an electromagnetic field. Orgone physics demonstrates the fact, however, that this energy field around the organism has nothing to do with electromagnetism: it is an *orgone energy field*, i.e., a field of specific biological energy. It functions at a distance, without contact of the material body surfaces. My experiments with the oscillograph and a recently constructed orgone field meter show not only that such an energy field exists, they also show that in different people it extends to different distances; according to observations to date, from a few centimeters to four meters. In addition, the orgone field varies in one and the same individual; it becomes wider and narrower, i.e., it expands and contracts. These functions of the energy field depend on the emotional state

of the organism. The field extends considerably in a state of organotic cell lumination.

In other words, as far disparate as may seem the connection between erythrocyte and earth bion on the one hand and that between the orgone accumulator and the organism in it on the other hand—it is the same phenomenon. With this difference: In the first case there is a radiating bridge only at the contact surfaces; in the case of the orgone accumulator, however, *the orgone energy field of the non-living organotic system completely envelops the energy field of the living organotic system.* This can be graphically presented in the following diagram:



Contact of the orgone energy field of the organism with that of the orgone accumulator (solid arrows). The dotted arrows indicate the attraction of the atmospheric orgone. Effect: Lumination of the organism.

What are the facts which substantiate this assumption? The main facts are the following:

1. The effects of the orgone accumulator are far weaker or even absent if its inner walls are at a greater distance from the organism than about 4-8 inches. Ignorance of this fact caused a whole series of therapeutic failures. The effect in mice was poor when they were treated in large accumulators built for humans; it was far better when we used small accumulators

of about 1 cubic foot. A small boy of four, suffering from bone cancer, reacted poorly compared with adults suffering from the same disease; we had used a large accumulator designed for adults. We often hear the objection that if there were such a thing as an orgone effect, electrophysicists who work in Faraday cages would have noticed it. The point is, a wire cage of many square meters is not a biologically effective orgone accumulator. I personally can stay far longer in the Faraday cage (which is about 2 x 3 meters) than in a therapeutic accumulator (which is about 2 x 2½ feet) without noticing any effect.

2. Vegetatively *lively* individuals feel the orgone effect in the accumulator much more quickly and intensely than vegetatively *sluggish* individuals. The former have a wider orgone energy field than the latter. Consequently, they establish a contact between their body energy field and the field of the metallic accumulator wall far more easily and quickly.

3. Vegetatively *sluggish* individuals usually do not feel the orgone effect in the accumulator until after a number of sessions. This admits of only one explanation: the organism first has to be passively charged to a certain degree so that the body orgone radiation becomes stronger, before they feel it. A physician friend who occasionally used the accumulator was unable for months to feel the typical sensations of prickling and warmth. Only when he began to use the accumulator more regularly did these sensations gradually appear. That is, at first his organism remained passive, but later it "reached out," as it were, toward the orgone field of the metal wall.

4. The inner metal walls of the accumulator are cold to the touch. However, if one holds one's palm at a distance of about 4 cm. one feels after a while a sensation of *prickling* and *warmth*. (The objective differences in temperature will be discussed elsewhere.) We must assume

that the sensation of warmth is the subjective result of the impact of the orgone particles on the skin. This fact is of great importance for an understanding of the sensation of warmth with orgone irradiation.

A few months ago, a phenomenon was discovered which has a decisive connection with the body lumination in the accumulator: *the body temperature increases in the accumulator*. This temperature rise is of different magnitude and occurs more or less rapidly in different people. If the body temperature before the irradiation is subfebrile (near the fever limit), it rises above this limit in the accumulator. That is, the orgone creates a mild fever.

Fever is known to be a basic reaction of excitation of the cells and the blood. Its nature has hitherto not been understood. The temperature rise in the accumulator points to an organotic lumination. Just as the contact of two bions results in an organotic lumination, so too does the contact of the blood and the cell system with the orgone field of the accumulator. The contact of the two orgone systems leads to an *orgone energy metabolism* in the organism; to this, the vivifying effect of the orgone therapy must be ascribed. The essential phases of the process are: energy-field contact, penetration, cell lumination and energy metabolism. They are identical with the typical phases of basic biological processes such as copulation and conjugation. That is, in orgone therapy we are dealing with processes of sexual energy in a strictly biophysical sense. This explains why so many patients who suffer from a standstill of their biological energy metabolism develop sexual excitation and sexual stasis under the influence of the orgone treatment. This aspect will be further discussed in connection with individual case histories.

The repeated luminations of the organism caused by the orgone accumulator

show themselves also in such findings as that the erythrocytes gradually show an increase in biological energy, thus becoming capable of radiating more energy and killing cancer cells and T-bacilli, things which previously, in an orgone-weak condition, they were not capable of doing. If fever is correctly conceived of as an increased bio-energetic activity of the organism, orgone therapy could also be called a natural fever therapy. From this standpoint, many therapeutic methods which have thus far been employed purely empirically, without being understood, become understandable. The malaria therapy against progressive paralysis which my teacher Wagner-Jauregg developed, is nothing but an artificial stimulation of strong cell lumination by way of injecting malaria parasites. The therapeutic factor consists in the cell lumination thus brought about. The "rum toddy" in colds and the hot compresses for pain also belong here. We are confronted by the task of comprehending the effect of many drugs from this standpoint. Thus it will be possible to distinguish the beneficial from the harmful drugs. A drug which, though it kills bacilli, damages at the same time the blood cells and plasma system instead of invigorating them, should not be tolerated, powerful profit interests notwithstanding. It can be nothing else but the organotic lumination in the organism which alleviates or eliminates pains of all kinds. (The rapid alleviation or elimination of pain in the orgone accumulator is an everyday observation.)

Based on the observations to date, I consider the cell lumination which the orgone accumulator brings about the real and essential therapeutic factor. This cell lumination has the same destructive effect on cancer cells and T-bacilli as the orgone radiation of the SAPA bions which we can observe under the microscope and which we have filmed. Further experiments with different arrangements of ma-

terials will, most likely, vastly increase the effectiveness of the orgone accumulator.¹⁸ It would be desirable to be able to shorten the individual treatment sessions and to effect a greater rise in body temperature.

IX. RESULTS OF THE EXPERIMENTAL ORGONE THERAPY IN HUMANS, 1941-1943.

The results of orgone therapy in human cancer, as presented here, are incomplete. I would have liked to postpone their publication until the observations were more complete. We felt, however, that the general endeavors to master the problem of cancer might receive a strong stimulus once the mechanism of the cancer biopathy and the basic question of the cancer cell formation were elucidated and the effects of the newly discovered orgone energy were made known.

The first cancer patients who were subjected to the orgone experiment were accepted by the Orgone and Cancer Research Laboratory only provided that their physicians had no objection to the experiment and provided that the relatives of the patient signed a statement to the effect that they had brought their relative because the physicians in charge considered the case hopeless and because they had heard of my cancer experiments in mice and humans; that they recognized that orgone therapy in cancer was still in an experimental stage; that I had not made any promise of cure and was undertaking these experiments without charge; that they had been told that the disease might result in abscesses or death regardless of the treatment, and realized that such an outcome could not be ascribed to the experiment.

I shall emphasize the disappointments and failures. It is most important for us to prevent the impression that we possess

¹⁸ Since this was written, an arrangement of materials has succeeded which allows a concentration in the accumulator 8 times that of the atmospheric orgone.

a cure-all, a means of "curing" cancer under all circumstances. If one is to develop the beneficial effects of the orgone, an understanding of the failures is indispensable. The following examples will illustrate the difficulties and failures.

Case M. F. A 57-year-old widow came to us with numerous tumors, localized mainly in the cranium and the bones of the arms. She was compulsively religious and suffered from hypochondria and masochistic complaining. 17 years previously, her uterus had been extirpated because of tumors. 2 years previously, she developed pains in the neck, the scalp and the lower back. She began to suffer from insomnia and lost her appetite. It was difficult to distinguish her hypochondriacal complaints from her complaints about acute cancer pains. Her skin was pale and livid, her hands and feet cold and clammy. She was able to walk only with support. The hemoglobin content of the blood was 33%. The blood tests for cancer were all positive: growth of T-bacilli, T-reaction on autoclavation, rapid shrinking of the erythrocytes in NaCl. The tumors at the cranium were palpable and hard. The diagnosis of cancer had been established at Memorial Hospital.

For 8 weeks, the patient came daily for orgone treatment. The hemoglobin content on the third day was 41%, on the sixth day 55%, on the eighth day 85%. It remained at that level for 4 weeks, then dropped to 78% and remained at about that level. The T-reactions remained positive for about 3 weeks. After 4 weeks there were no longer any T-bacilli in the blood, but the T-disintegration of the erythrocytes, which had been almost 100% at the start, was still about 35% after 7 weeks.

The tumors at the cranium became appreciably smaller and softer. The patient developed nose bleeds; the blood was of a brownish color and contained typical

tumor material. The pains decreased, sleep and appetite improved. The patient became fond of the orgone accumulator and wished to have one in her home so she would not have to make the long trip every day. I had to refuse her wish, because there were as yet too few observations of the effect of the orgone on human cancer.

After two months, the patient developed tensions in the deep adductor muscles of the thighs. She seemed to develop an aversion to the accumulator which at first I did not understand. This was at about the same time that another patient, whom I have described previously,¹⁴ reacted to the orgone radiation with sexual stasis. The same thing had occurred in this patient: the orgone accumulator had charged her sexually and she reacted to it with spasms of the adductor muscles. Her hypochondriasis became more acute. She had no cancer pains, but she became very petulant. Her relatives could not stand her behavior and sent her to a home for the aged. Thus, the orgone therapy experiment came to an end. Another series of Xray pictures showed a definite reduction and calcification of the tumors. The cancer therapy was complicated by the patient's neurosis. After a few months of definite improvement, the patient died. All that the orgone therapy was able to do was to prolong her life for a number of months and to reduce her pains. This patient, too, presented the picture of complete resignation in life. The relatives had noted this also. Her nephew told me one day, "She has nothing to live for." One had definitely the impression that the patient died because her "life instinct" had never functioned properly and her life system had shrunk as a result of a complete lack of joy in life.

Case C. K., 33 years. This patient was under treatment for a colostomy which

had been done for a cancer of the colon. The patient related that she had always been constipated, even as an infant. She also had always been anemic. During the summer of 1939, "dysentery" always set in at the time of the menstrual period; this had continued to date. During 1940, there were intestinal hemorrhages. For many months, the patient had been suffering from excruciating pains in the rectum, for which she constantly used suppositories; as they never worked for long, she also took codein tablets.

The patient first came to the laboratory on May 7, 1941. She was in a hopeless condition. Her cachexia was far advanced; in spite of being tall, she weighed only 115 lbs. It was immediately evident that she suffered from a severe sexual biopathy. Her expression was anxious. She suffered from anxiety dreams. Her husband had died 8 years previously. Since then she had lived in complete abstinence. During the marriage, also, she had had no sexual gratification, since her husband was always sick and "too weak to pay attention to that." Her colostomy increased her nervousness; she thought she would faint when she passed gas without being able to control it. Her insomnia had existed long before her cancer. In her anxiety states she had spasms in the throat and the anus and "thought she would die." Her case had been diagnosed as cancer by several private physicians and by the hospital.

The tests revealed the following: Hemoglobin 72%; on autoclavation 99% T-reaction, confirmed by Gram stain. The erythrocytes were pale, with narrow orgone margin. They degenerated slowly but with definite T-spike formation. Culture from the intestinal contents: T + + +, numerous rot bacteria, formed cancer cells, including ameboid forms.

Two days after the beginning of the orgone radiation, the hemoglobin in-

¹⁴ See footnote p. 1, I.

creased to 82% and stayed at that level. After about 2 weeks, the blood picture showed a definite improvement. In the intestinal contents, only very few fully developed cancer cells could be found, but there were masses of destroyed cancer cells and immobile T-bacilli. After 4 weeks, the autoclavation test of the blood revealed a T-reaction of only about 5% (as compared with the original 99%), that is, a B-reaction of 95%.

As early as the fifth irradiation, the pain decreased considerably. She managed a whole night with only one codein tablet, which she had never been able to do, and was able to sleep. After the 12th irradiation she stopped using rectal suppositories regularly, and in the succeeding 6 weeks she used them only twice. She also no longer took any codein. Her appetite improved, but she failed to gain weight.

Examination of the rectal discharge on May 29th showed the absence of formed cancer cells and the presence only of cancer detritus and immobile T-bacilli. The excretion was no longer gray, but brownish, which pointed to disintegrated blood from the tumor.

After the 12th irradiation, *itching of the anus* appeared. The patient perspired freely in the accumulator and was no longer pale. She continued to be free from pain, slept well, re-established social contacts, etc.

She continued the treatment until July 28, 1941, continued to be free from pain and to feel well. Then she stopped coming. In the middle of September she called on the telephone and said she still felt well, but that she could no longer come for treatment. I wrote the relatives that I would have to decline all responsibility for the patient's fate. It turned out that her neurosis kept her from coming. Since puberty, she had been suffering from a severe claustrophobia which recently had become intensified; this prevented her from taking the subway to

come to the laboratory. Her relationship with her relatives was extremely bad. I often had the impression that their intense unconscious hatred made them hope for an early death of the patient. They had no time for her and showed her so openly that she was a burden to them that she no longer dared to express the wish to be taken to the laboratory by car. I knew that she was lost but there was nothing I could do. The familial situation could not be changed, and I could not make up my mind to give the patient an accumulator for her home, because her physician showed a hostile attitude, even though on May 24th he had admitted the patient's improvement to her brother. At the beginning, he had threatened me with reporting me to the police and had refused to give her case history. During the summer of 1942, I heard that the patient had died a short time previously.

Her death was a clear case of shrinking death. The orgone treatment had prolonged her life for about a year and had greatly alleviated her condition. But her case showed again the extent to which the orgone therapy is dependent on social and familial circumstances.

Open questions in the orgone therapy of cancer. Orgone therapy will be able to eliminate a series of cancerous affections or to prevent their development, but by itself it will never be able to conquer the cancer scourge. Orgone therapy is only one of the necessary measures in the fight against the biopathies. Orgone can charge tissues and effect an expansion of the vital apparatus. But when the social milieu constantly forces the organism into contraction, resignation and shrinking, the application of orgone is like trying to fill a barrel without a bottom.

We have to distinguish the problem of the orgone application from that of necessary social measures. To the practising physician, the orgone therapy will be of first importance. But he must never lose

sight of the social causation of the biopathies, if he is going to treat the human organism as a product of biological *and* social factors.

Compared with the methods of radium and X-ray irradiation, the orgone therapy of cancer offers several advantages. True, X-ray irradiation is capable of inhibiting the growth of a tumor temporarily. But this method of treatment is accompanied by a general biological weakening of the organism. It impairs the appetite and produces nausea and vomiting. Its effect is only local; it does not affect the underlying shrinking biopathy. The results of local radium therapy are better, but they are also local and do not touch the biopathy. The surgical removal of a tumor, it is true, has a radical local effect, but it does not prevent the formation of metastases and also does not touch the general process.

Orgone therapy, on the other hand, offers the enormous advantages of applying a body-own energy and of reaching every part of the body. The orgonotic charging of the erythrocytes has, simultaneously, two most important effects: *expansion of the organism and development of the organism's own defense reactions against the T-bacilli intoxication.* For this reason, the usual result is that the appetite increases, the loss of weight is checked or is replaced by increase in weight; nausea and pains diminish or disappear and the biological blood reactions become more vigorous. The tumor is not destroyed immediately. What happens first is an invigoration of the blood. Only when the general biological invigoration has reached a certain degree does the attack of the blood on the tumor and the T-bacilli set in. For this reason, the excretion of liquefied tumor masses does not set in until several weeks after the beginning of the treatment. Similarly, the T-cultures in the blood do not become negative until after several weeks. In many

cases of biologically debilitated blood and severe anemia, the attack on the tumor is preceded by the formation of a great number of young erythrocytes, as can be observed microscopically. Breast tumors disappear in the course of 2 to 3 weeks.

Observation to date shows that the tumors always become soft, no matter what their localization. While this is highly gratifying in itself, the cancer therapy becomes complicated exactly by the *destruction* of the tumor in those cases where the products resulting from its disintegration cannot be absorbed or eliminated. We had encountered this problem before, in our mice. What happens is this: Orgonotically strong blood goes into the tumor; the tumor tissue disintegrates. Cavities develop which may even enlarge the tumor. These cavities contain a brownish, non-putrid liquid. This consists of enormous masses of inactive T-bacilli, as the microscopic study of the excretions shows. The fate of the patient depends largely on whether these enormous masses of disintegration products can be eliminated from the organism or not.

In one case of brain tumor the destruction of the tumor occurred as early as two weeks after the beginning of treatment. The eye symptoms and the intracranial pressure receded. But the detritus from the tumor filled and clogged the lymph glands of the neck and the patient died—according to the report of her physician—of *suffocation* due to glottis edema.

Another woman with a tumor of the stomach the size of an apple, also reacted rapidly to the orgone therapy. The tumor, which was palpable, became soft and became rapidly smaller. But after 8 weeks the kidneys became clogged: There was edema of the legs and the patient died of cardiac decompensation. In this particular case, the elimination of the products of disintegration through the intestines would have been possible in principle. But the patient suffered from chronic constipation. As a result of

this, the intestines could not manage the elimination and the organism attempted it by way of the blood stream.

Similarly, a third woman, with ovarian tumor, who had reacted to the orgone therapy with an improvement of her general condition and with a decrease in size and a softening of her tumors, died of kidney complications.

In a boy of five with an adrenal tumor and metastases in the spine, X-ray showed calcification of the bone defects after 4 weeks. The primary adrenal tumor was no longer palpable after 2 weeks' treatment. However, the dissolved tumor mass apparently filled the spinal canal and the boy suddenly developed a flaccid paralysis of the legs. He died later of enlargement and degeneration of the liver, apparently due to the process of elimination of the dissolved tumor mass.

Enlargement of the liver with degeneration of the liver cells and clogging of the kidneys seem to be the most frequent and typical sequelae of the destruction of the tumor unless the destroyed tumor mass finds a ready outlet to the outside (the body surface, through the intestines, the bladder, etc.). We have as yet no answer to this difficulty. To say that the tumor should not be allowed to grow to such a size that this complication is likely to happen is correct but unsatisfactory. It should be possible to find ways and means of dealing with these secondary manifestations in cases that come for treatment at an advanced stage. The fact should be remembered that *none* of our cases came to us shortly after the discovery of the tumor. They all had tried other methods for several years, and when they came to us, they had been given up as hopeless and were on the point of dying. That is, we do not know whether most of the tumors could not be eliminated without such secondary manifestations if the cases came to us *immediately after the discovery of the tumor*. Much smaller tumors, of course, would result in much less detritus, and the danger of the clogging

of the excretory passages would be much less.

A fact which needs special emphasis is that the biological strength of the blood *cannot* be judged by the hemoglobin content. We have seen cases with 80% hemoglobin who, nevertheless, gave a 100% T-reaction on autoclavation. In other words, the biological resistance of the blood, as indicated by the T-reaction and B-reaction, is essentially independent of the iron content of the blood.

I shall have to mention briefly a few *sex-economic aspects* of the orgone therapy in cancer; they are of utmost importance. We know that sexual resignation is in the background of the cancer shrinking biopathy. All patients show a striking *lack of libido*. The orgone therapy results in an alleviation of pain and the orgonotic charging of the blood system. In many cases, this leads to a re-awakening of sexual excitation. If the sexual repression and the armoring is very intensive, the patient does not perceive the sexual excitation. He expresses it in a manner which is comprehensible only to the sex-economist: acute anxiety, genital spasms, spasms in the pelvic and thigh musculature, or simply in flight from the "weird" orgone irradiation (this occurred in 2 cases). In other cases, where the sexual life was not altogether extinguished, where sexual intercourse still took place occasionally (although, of course, without orgasmic potency), access to the difficulties is somewhat easier. Here, the sexual disturbance is more often due to ignorance and takes the form of harmful practices and inhibitions.

There was, for example, a man with cancer of the rectum. When his general condition improved, he developed pain in testicles and sperm ducts. He ascribed these pains to the cancer. But recognition of their stasis character made it possible to eliminate them. His wife refused sexual intercourse. He was too ill to obtain gratification elsewhere, and he

would not have thought of masturbation. In a talk together with his brother, who was very understanding, he realized that his pains were due to sexual stasis and that no other way than masturbation was open to him. After a short time, he was again free from pain.

Another patient with cancer of the urinary bladder sporadically developed violent pains in the pelvis; these pains were of a different character from those caused by the tumor *before* the orgone treatment. I tried to clarify the sexual situation. It turned out that the man had not had sexual intercourse with his wife for the past 15 years, and no other sexual gratification for the past 5 years. Whether this sexual stasis had anything to do with the appearance of the bladder cancer I cannot say, but it is highly probable. I discussed the situation with him and he understood that he had to get rid of the sexual stasis. This eliminated the pains so rapidly that the connection could not be doubted for a moment.

All the more incomprehensible is a medical attitude which a reviewer expressed in connection with a similar case described in the first issue of our Journal: "One may reasonably object to the recommendation to practice masturbation in order to achieve relaxation of the genital apparatus." "Reasonably?" Why? There is, in fact, not a single rational argument against this measure. More than that, the pains and other stasis symptoms in the sexual apparatus in cancer patients deserve a great deal of attention, as these two cases—and many others—show very clearly.

By far the greatest obstacle to the orgone therapy of cancer is its general biopathic basis: the shrinking of the total autonomic life apparatus ("shrinking biopathy") goes to the roots of living functioning. The reader will be aware of the significance of the findings in the case described in a previous article ("The carcinomatous shrinking biopathy"): the organism underwent a process of shrinking *after* the local

tumors were eliminated. This finding shifted the whole problem from the local tumors to the general shrinking process. But here we no longer deal with biological problems alone, but predominantly with social and sex-economic problems. It is too early to say whether and to what extent orgone therapy can counteract the general tendency to shrinking. It will be essentially a question of whether and to what extent one can improve the general sex-economic way of living.

Up to now, I have only reported on the difficulties of the orgone therapy and the obstacles which stand in its way. I shall now proceed to the positive achievements. They are unequivocal and gratifying.

Case S. T., 42 years old. This patient came for treatment on April 30, 1941. In February, 1938, her left breast had been amputated for cancer. Two months after discharge from the hospital, tumors appeared below both knees. They were very painful and the patient could hardly walk, so that she kept to her bed most of the time. Even before her operation, she had suffered from "rheumatic" pains in her legs and the big toes had felt "numb." For years previous to the operation she had been suffering from pulling pains in the arms, fingertips and neck, from headaches, "dizzy spells" and chronic constipation. She had had five premature deliveries and three spontaneous abortions. Menstruation had ceased 6 months before she came, as a result of the X-ray treatment. The tumors at the knees grew slowly but steadily in size. The pains were always worse in bad weather. Her arms were so weak that she often would support one arm with the other in lifting some object. Since the operation, her left arm was swollen and painful.

We have here the typical history of a biopathy. Examination confirmed this. The whole musculature of the neck was hypertonic. The thorax was in chronic inspiratory position, expiration was

severely inhibited. The neck was held in a rigid attitude of spite. The abdominal musculature was rigid and could not be pressed in. The tumors at the knees were the size of a walnut.

Blood tests: Hemoglobin 80%; auto-clavation test and Gram stain showed a T-reaction of about 40%. T-cultures were + + +, with numerous rot bacteria. The erythrocytes were pale, with narrow orgone margin, but without T-spikes. They disintegrated in about 5 minutes.

Vaginal secretion: T-bacilli + + +, microscopically numerous rot bacteria and T-bacilli.

On May 4th, that is 4 days after the beginning of the treatment, she was able to walk better. The feeling of numbness in arms and legs disappeared. On May 6th, her physician found that the tumors had become smaller and advised her to continue the treatment. The patient wrote to her son about her striking improvement. She no longer kept to her bed but was up and around and did small errands. On May 7th, the tumor at the left knee had disappeared, that on the right knee was barely palpable. Her biological reactions in the accumulator became more intense, she began to perspire freely. That is, she developed vagotonic reactions. Her weight remained constant, at 173 lbs.

Xrays: When the patient came to us (April 30th) her bones showed numerous small shadows, particularly in the pelvis. On June 20th, the Xrays showed a far-reaching disappearance of these shadows, particularly in the pelvic bones. The findings at the knees were *negative*.

The patient continued the orgone treatment until December 1941. During that time, she was practically free from pain, no longer took morphine preparations, did not lose weight, and did her housework. At the time of this writing, in January 1943, she is still well. It is impossible to say when the disease process will again set in. She had the orgone

treatment for only about half a year and does not have an accumulator in her home.

Case F. H., 45 years old, came to the laboratory on April 19, 1941. A year before, he had developed a pulling pain in the chest and choking sensations. He was unable to take solid food, and even liquids only with difficulty, by the teaspoonful. In the course of a year, he had lost 25 lbs. He suffered from a diaphragmatic tic ("hiccups"), insomnia, and tired very easily. The *emotional* nature of this case has been described previously.¹⁵ The diagnosis of his physician was *inoperable carcinoma of the esophagus*, almost complete obstruction, as shown in the Xray. The epigastrium was tense, the patient suffered from severe constipation. The thorax did not move properly with respiration. The weight was 144 lbs.

Blood tests: Hemoglobin 70%. T-culture + + +, T-reaction 95%. Erythrocytes with T-spikes immediately disintegrated bionously, but changed into small erythrocytes with homogenous plasm.

There was an immediate and strong reaction to the orgone radiation: warm perspiration, redness of the skin and sensation of heaviness in the head after 20 minutes.

On April 28th, the hemoglobin was 85% and remained at this level during the following months. During the same time, the patient gained about 5 lbs. and became able to swallow soft foods without difficulty. On May 9th, the *T-reaction* was no more than 10%. The choking sensations disappeared, the patient slept well and was able to work without getting easily fatigued. The skin became tanned. The patient was very much relieved and grateful. Although in this case, too, a relapse is possible, the fact is remarkable that today, in January 1943, the patient is still well and working. The orgone therapy lasted only about 12 weeks.

¹⁵ *Internat. J. of Sex-economy and Orgone-Research*, 1, 1942, 135.

Summary: 13 cases of cancer diagnosed at hospitals and previously treated with Xrays, and 2 cases diagnosed by myself were treated and observed. All were in advanced stages of cancer cachexia. In all of the cases, the pain was greatly alleviated and the use of morphine preparations reduced or eliminated. In all cases, a decrease in the size of the tumors and an improvement of the general condition was observed. Breast tumors disappeared in all cases.

In 4 cases, calcification of bone defects was shown by Xrays. In most of the cases, destroyed tumor substance was eliminated. In 3 cases, the orgone therapy did not prolong life. In 6 cases, it prolonged life by about 5 to 12 months and made the last few months of life much more tolerable. In 6 cases, the process of shrinking was stopped. In 6 cases, patients became able to work again. Five of the inoperable cases, otherwise doomed to an early death, are alive today and in good or at least tolerably good condition.

These results are encouraging and oblige us to continue the work, even if they are far from satisfactory. However, compared with the condition of the patients previous to the institution of the orgone therapy, the results are even *astonishingly good*. The problem of the elimination of the destroyed tumor masses remains essentially unsolved.

These results not only confirm the fundamental correctness of the bion research, but they also form the point of intersection at which the T-mice experiments, the orgone blood tests, the formula of tension and charge, and the findings of orgone biophysics were shown to be correct and of practical significance.

As far as orgone *therapy* of cancer is concerned, it has reached the point where it deserves to be taken out of the experimental stage and to be put on a large-scale practical basis. As far as the *prevention* of cancer is concerned, that is a

more complicated problem, both technically and from the point of view of organization. We shall now consider this problem.

X. CANCER BIOPATHY AS A PROBLEM IN SEXUAL SOCIOLOGY.

It will take years of intensive clinical study before we have a picture of the magnitude of the ravages which the emotional pest causes in the life system. This fact is all the more impressive in that the disturbed sex-economy in these cancer patients continues to be completely overlooked, no matter how obvious it is. Observation to date leads to the following general conclusions:

Deprived of the possibility of natural sexual functioning, the potential cancer patients develop a general character attitude of resignation. At first, there are only local and more or less harmless "disturbances" such as peptic ulcer or perhaps only gastric hyperacidity, hemorrhoids, a spasm in the throat, genital deadness, menstrual disturbances, and such. To an increasing extent, the chronic disturbance of biological functioning undermines respiration and pulsation in the tissues. Gradually they begin to undergo a slow process of disintegration in the direction of putrefaction. T-bacilli develop and accelerate the process, which is still a chronic process, stretched over years. Finally, protozoa begin to develop and a tumor becomes palpable or visible.

No matter how early the diagnosis of the local cancer tumor is made, it is *always too late*, because in the meantime the biopathy has already done its work of destruction in the organism. The task of cancer therapy, therefore, is to influence the *general disturbance of functioning in the biosystem*, the furtherance of the B-reaction of the organism. Considering all things involved, this means: *As long as education and social conditions are going*

to produce resignation and muscular armoring en masse, so long is any radical elimination of the cancer scourge out of the question. True, one will be able to eliminate a few more tumors and to save a few more lives. But one should not harbor the dangerous illusion that one will ever be able to vanquish cancer with chemicals, the knife, or the orgone alone.

I know the strong tendency toward illusions only too well from personal experience. When I saw the effects of the orgone radiation on the cancer tumors in mice, I heaved a sigh of relief. Finally, I told myself, an avenue of approach to cancer therapy is opened; now we can begin to cure cancer and perhaps even prevent it. Secretly, something in me was delighted at the prospect of finally getting away from the "cursed sex problem" and at being able to escape into the sex-free atmosphere of organic pathology. But I was wrong. *The facts did not let themselves be cheated.* They soon deprived me of the illusion of having found an easy way out.

Great tasks cannot be solved in easy ways. The difficulty of the path reflects only the difficulty of the task: I could not get away from the "cursed" sex-economy, and I have reason to be grateful to the facts for this.

These cancer patients brought again to my consciousness, in the sharpest focus, what I had learned to see for the past 24 years: *the pestilence of the sexual disturbances.* No matter how I tried to get away from it, the fact remained: *Cancer is living putrefaction of the tissues due to the pleasure starvation of the organism.* That this extremely simple fact had hitherto been overlooked was not alone due to inadequate research methods or the traditional errors of biology. I had hit upon it only because I had to be consistent as a sex-economist and had to follow the results of the sexual disturbances no matter where the search was going to

lead. What has really prevented this discovery from being made long ago is the prevailing concept of life, the moralism, the sexual crippling of our children and adolescents, the moralistic prejudices in medicine and education, in brief, our blindness toward life and our fear of it, attributes which for thousands of years have been handed down from generation to generation. We have outlawed the most important life function, have given it the stamp of sin and crime and have denied it any social protection. We have tolerated, and still tolerate, the domination of the deadly enemies of natural love life, pornography, sexual gossip and defamation, sexual compulsion and medieval sexual laws. We still tolerate smutty phantasies—be it in a moralistic-hypocritical way or in an open sadistic-pornographic way—to determine how our children should be brought up and whom we should love and embrace. We have lost confidence in the natural laws of life and now we have to pay the price for it.

Things being as they are, one has to marvel again and again at the vitality and power of resistance of the organism. One really has to marvel that the human organism does not perish much more quickly, considering the ravages of mechanism and mysticism to which it is subjected. Just this strength of the vital powers is our hope. If a maltreated organism takes decades before developing local malignant growths, then today's cancer terror without end can be changed into the end of the cancer terror. This is possible only, however, if we approach the task without any illusions and without taking in any way into account the neurotic ideologies of a sick humanity.

In a recent article,¹⁶ one of our co-workers compared the mortality figures of biopathic diseases with those of non-

¹⁶ Cf. Wm. F. Thorburn, "Mechanistic medicine and the biopathies." *Internat. J. of Sex-economy and Orgone-Research*, 1, 1942, 257-258.

biopathic diseases. These figures have such important implications that they bear repeating. They show that, while the percentage of *non-biopathic* diseases (such as pneumonia, diphtheria, etc.) showed a considerable decline between 1921 and 1940, the percentage figures for the *biopathic* diseases (insanity, cardiovascular disease, cancer, suicide, criminality, etc.) increased considerably during the same period:

1930	2,135	17.2
1935	2,180	16.7
1941	2,188	16.2

These figures show not only that the biopathies are *fundamentally* different from the non-biopathic diseases, but also that they are *not understood*. Mechanistic medicine, lacking a sex-economic orientation, has no access to the biopathies. *Biopathies are diseases due to disturbances of the biological pulsation of the autonomic life apparatus.* They have essentially a *social* causation and are, basically, diseases resulting from *sexual stasis*. Their chief characteristic is the disturbed economy of the biological energy, in brief, *orgastic impotence*, which makes biologically correct pulsation of the autonomic system impossible and thus reduces the organotic potency of the organism. Their frequency is steadily increasing.¹⁷ The situation is alarming and calls for study as well as for relief.

Deaths, chief causes, New York State per 100,000 population

NON-BIOPATHIC DISEASES

Year	Pulm. Tuber.		Pneumonia		Diphtheria	
	D.	Rate	D.	%	D.	%
1921	9,503	88.6	10,645	99.3	1,702	15.9
1925	9,162	78.9	13,571	116.8	1,001	8.6
1930	8,146	64.6	12,908	102.4	656	5.3
1935	6,847	52.4	11,018	84.4	102	0.8
1940	5,793	42.9	6,143	45.5	15	.01

BIOPATHIC DISEASES

Year	Cardiovascular		Cancer	
	Number	%	Number	%
1921	36,594	341.4	11,163	104.1
1925	43,370	373.3	13,201	113.6
1930	48,487	384.5	15,144	121.8
1935	55,109	422.1	18,600	142.5
1940	64,987	481.3	21,384	158.4

Insane in New York State

Year	Males	Females	Total	% per
				100,000 Pop.
1920	19,515	21,265	40,780	390.0
1925	22,667	23,858	46,525	413.6
1930	28,674	27,737	56,411	444.0
1935	36,124	33,943	70,067	493.0
1941	45,870	43,393	89,263	664.2

Convictions for Crime

1920	40,691
1925	77,202
1930	175,530
1935	363,743
1940	1,155,986

Suicides

	Number	%
1920	1,442	13.5
1925	1,664	14.3

Sex-economy and orgone biophysics offer some important insights which can be of help here. Not in the way in which one might like to think of it: we have not discovered some chemical cure-all which, if used on a mass scale, would suddenly wipe the scourges of the biopathies from the face of the earth. It is far from being that simple. The fight against the biopathies will be one of the most arduous tasks with which humanity was ever confronted. I do not hesitate to contend that no previous revolution nor such achievements as the conquest of the plagues of

¹⁷ *Translator's note:* The fact of this increase of certain diseases has been obvious for some time past to such groups as insurance companies, internists and psychosomatically interested psychiatrists. Indeed, it has been pointed out in the literature of the past ten years with an impotent and bewildered repetitiousness and emphasis. But the best "explanations" offered were the "high pressure of modern city living" or this or that unconscious "conflict" or "complex." The reason why it has never been *understood* is obvious from this article.—T. P. W.

the Middle-Ages can compare with this task in magnitude, depth and danger. The solution of this task will probably require the greatest revolution in thought and action which man has ever had to achieve. Obviously, it will not be the achievement of individuals, but of *society*.

The biopathies are an endemic disease of the population of the earth. The statistics just cited speak an unequivocal language. We cannot entertain the hope that the elimination of the biopathies will take place rapidly, easily or without dangers; the necessary knowledge is still lacking, or, to the extent to which it exists, it is not sufficiently organized, and there are all too many deeply rooted erroneous doctrines. We are only at the beginning of our insights into the gigantic disaster under which humanity has been suffering for thousands of years and to which at present it seems almost to succumb. This disaster cannot be comprehended, and even less, mastered, by placebos, ideas, political slogans, or by prayers. On the contrary, all and any of these things will only deepen it. The first prerequisites are: to adhere to insights which have been gained; to develop and protect truth under *all circumstances*; the courage to comprehend the gigantic magnitude of the social misery; and confidence in natural living functioning. It is an essential part of this misery that the natural living does not get its due, that it is feared and always suppressed. And yet, it is the only real hope. *And it is based on the natural sexual function of the animal species "man."* There is no escape from this fact, and it is good that there is no longer any escape from it.

The chief of the Theresienhospital in Düsseldorf, Lönne,¹⁸ said in 1937: "We have to reckon with the fact that in Germany about 15,000 women a year die of cancer of the uterus and the vagina

¹⁸ Lönne, Friedrich, *Wirksame Krebsbekämpfung*, 1937.

and about 3500 or 4000 of cancer of the breast. In more than 12,000 of the 15,000, it is a cancer of the cervix of the uterus. . . ."

The frequency of cancer of the genital organs and the breasts far exceeds the frequency of cancer in the other organs. That alone points unmistakably to the *sex-biopathic* nature of cancer. Taken in conjunction with the prevailing sexual frigidity in women, these cancer statistics only express what sex-economic clinical experience has taught us long since about the disturbances of the sexual function. But what interests us here is exactly the link between sexual pathology and cancer statistics. It shows an important fact: *The local cancer affection is a result of a disturbed sex-economy of the organism. Consequently, a radical fight against cancer requires a radical change in the sexual hygiene of the total population.*

While the predilection of cancer for the *sexual* organs logically leads to conclusions which are in accordance with sex-economic principles, leading cancer specialists make less logical statements on the subject. Lönne, for example, writes (*loc. cit.*):

"Scientific cancer research of today is inclined to assume, in addition to local causes for the development of cancer, a second, general factor, weakness of the antiblastic system.¹⁹ In our *practical* fight against cancer we have to adhere to the theory of the *local* origin of cancer. For, if there *were* a general disease *previous* to the manifest appearance of the cancer tumor, even the best operation or the best kind of irradiation would be only a partial solution, and a dubious solution at that. In that case, physician as well as patient would lose their confidence in the curability

¹⁹ This "antiblastic system" was only a word indicating a system, principle or function which had an effect against ("anti") the formation of tumors ("blastoma"). It never had any concrete content. In our "B-reaction," the "organotic potency" of the organism, it becomes concretely understandable and capable of therapeutic influencing.

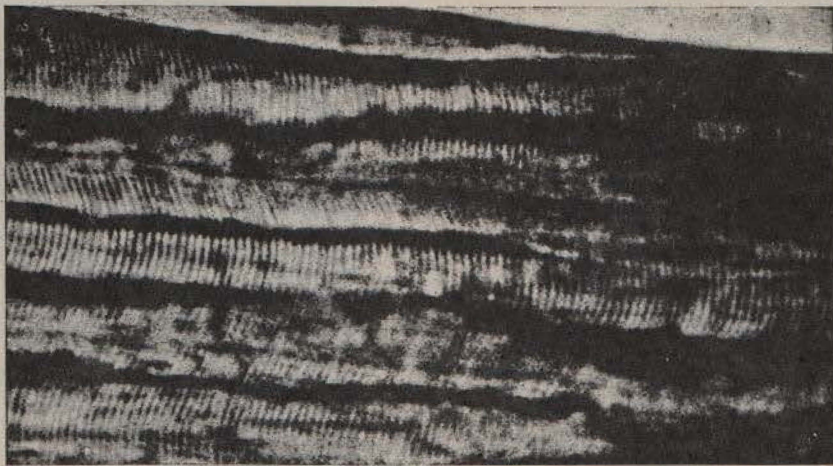


FIG. 1. *Healthy muscle tissue* (human). Striated, regular structure; no vesicles. Alive, in physiological NaCl solution. Approximately 1000x.

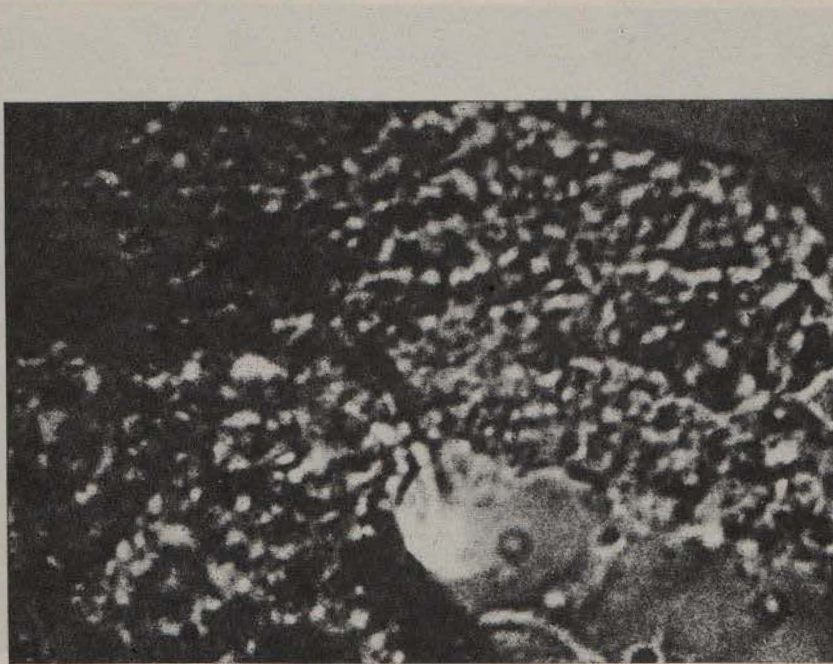


FIG. 2. *Cancerous muscle tissue* (human uterus; hysterectomy). Vesicular (bionous) structure. At the right margin, protozoal organization. Alive, in physiological NaCl solution. Approximately 1000x.

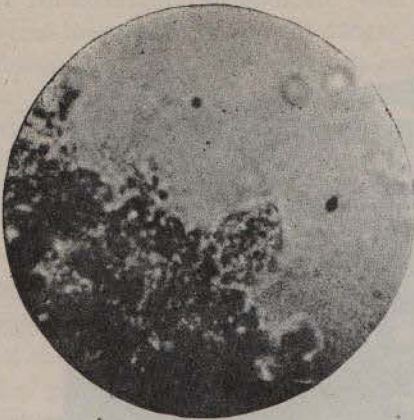


FIG. 3a. Marginal formation in the process of organization. In bionously disintegrating grass. Approximately 700x.

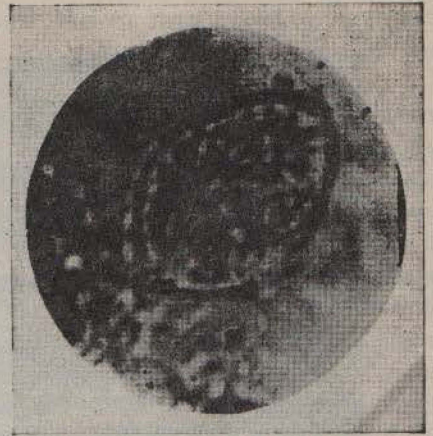


FIG. 3b. Organized heap of bion vesicles. Approximately 1500x.

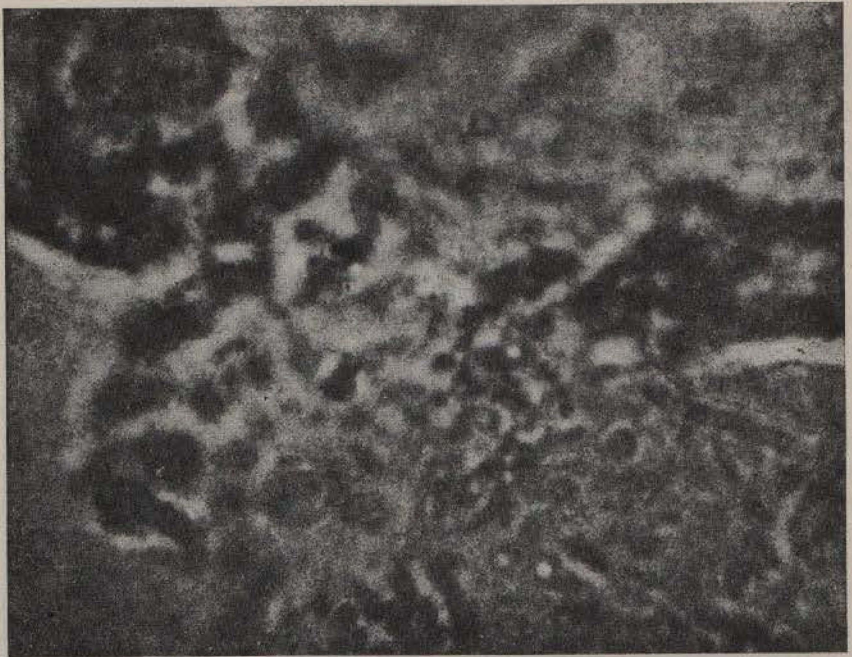


FIG. 4. *Epithelial cells from breast cancer.* Alive, in physiological NaCl solution, 1 hour after operation. Healthy, structureless epithelial cells (upper and lower right). Strip of bionously disintegrated epithelium (center of right margin toward center and from there downward). *Heaps of cancer cells in the process of formation* (left margin). Approximately 1000x.



FIG. 5a. Precancerous changes (x) in the epithelial cells of a wart; in KCl.



FIG. 5b. A proliferation (x) from an epithelial cell of the same wart.

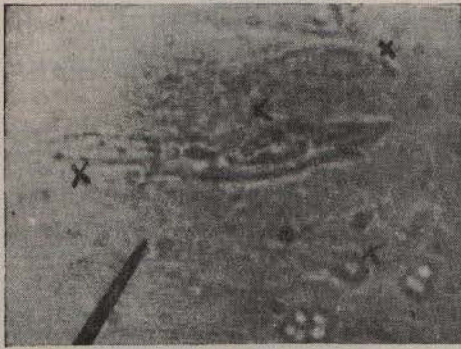


FIG. 6. Development of strongly chromatic spindle forms (x) within an epithelial cell (arrow) from the vaginal secretion of a woman suspect of cancer (Ca II).



FIG. 7. Cancer of the fibula. Tissue with vesicular structure, containing a heap of cancer cells in an advanced stage of organization. Approximately 1000x.



FIG. 8a. Protozoal (bionous) marginal vesicle in disintegrated grass (dark).

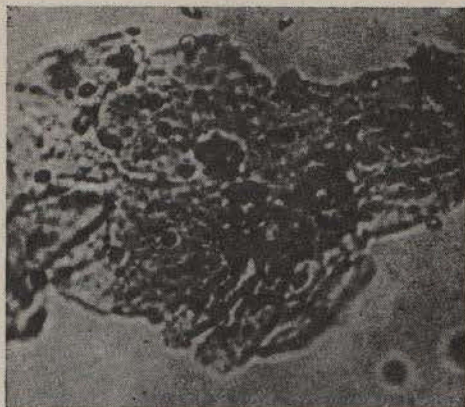


FIG. 8b. Precancerous cervix epithelium cells, with T-bodies and intensely blue vesicles.



FIG. 8c. A precancerous spindle formation (x) in cancerous cervix epithelium.



FIG. 8e. Maturing cancer cells (x) in cancerous cervix epithelium.



FIG. 8d. Isolated spindle-shaped cancer cell from vaginal secretion (Ca III).

FIG. 8A-E. EPITHELIAL CANCER CELLS IN THE PROCESS OF FORMATION.

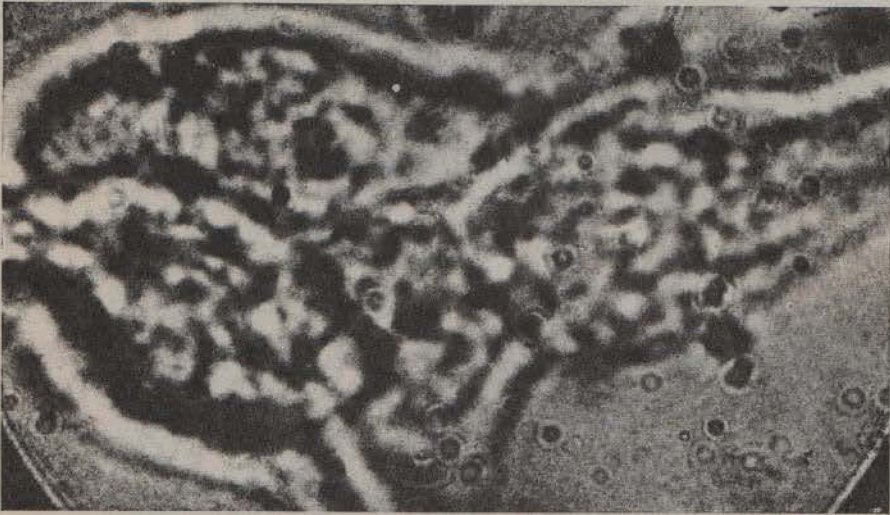


FIG. 9. Three mature cancer cells from human tumor. Filmed on 16 mm film at about 2300x, then enlarged. The club shape is typical, and an important characteristic of living cancer cells.

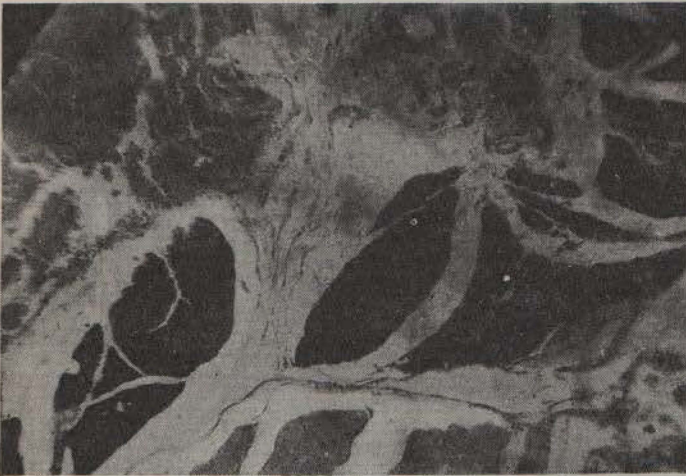


FIG. 9a. Metastases in the subcutaneous tissue of the neck.
T-mouse (Ca III).



FIG. 10a. Cancer of the gluteal muscle in mouse, developed after injection of T-bacilli from disintegrated blood of healthy human (10 Ge T).

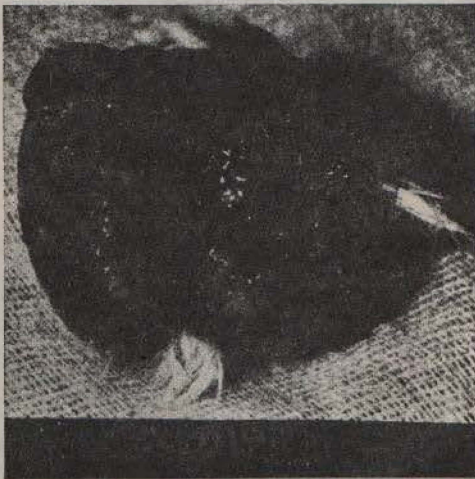


FIG. 10b. The same tumor, removed.

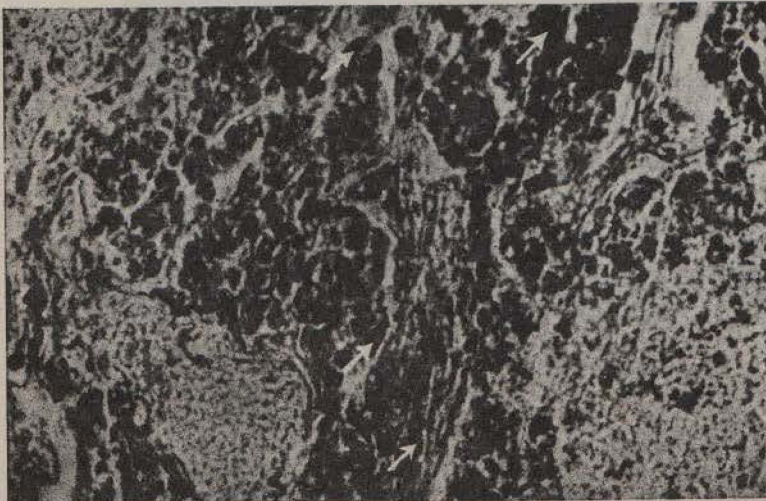


FIG. 10c. Stained section of same tumor, from the boundary between healthy muscle and tissue showing chronic inflammation. The arrows point to individual large, strongly stained cancer cells.

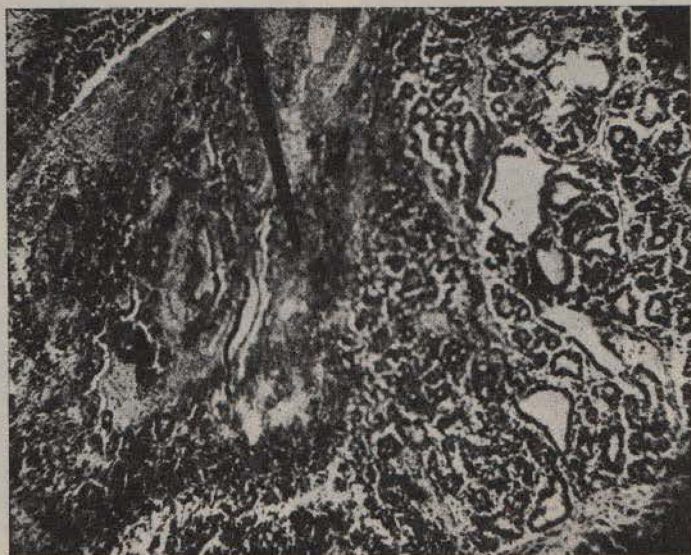


FIG. 10d. Another section of the same tumor, showing formation of cysts. Arrow points to inflammation tissue at the borderline between musculature and adenocarcinoma.

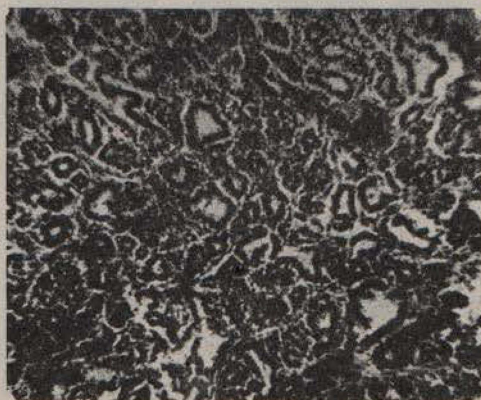


FIG. 10e. Another section of the same tumor. Fully developed adenocarcinoma in the muscle.

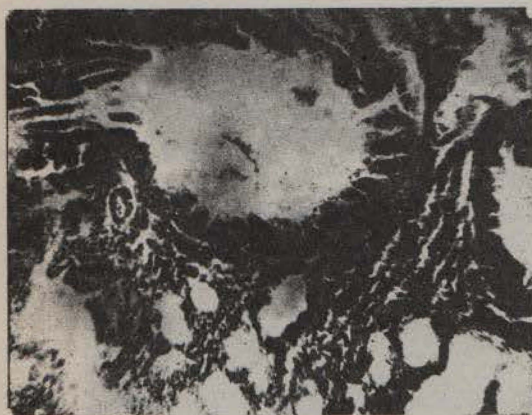


FIG. 11a. Cancer cell metastases in the lung of a T-mouse. Hematoxylin-eosin. Approximately 300x.

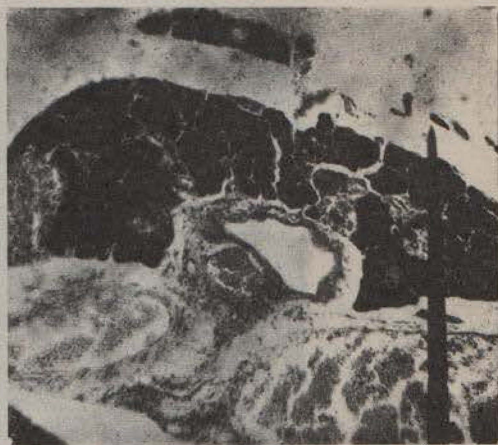


FIG. 11b. Cancer cell metastases in the subcutaneous tissue of a cancer mouse. Individual spindle cells (arrow). Hematoxylin-eosin. Approximately 300x.



FIG. 11c. The same metastatic cells in masses, free, in the peritoneum of a T-mouse. Hematoxylin-eosin. Approximately 300x.

FIG. 10A-E, AND FIG. 11A-C. EXPERIMENTAL T-BACILLI CANCER IN MICE.

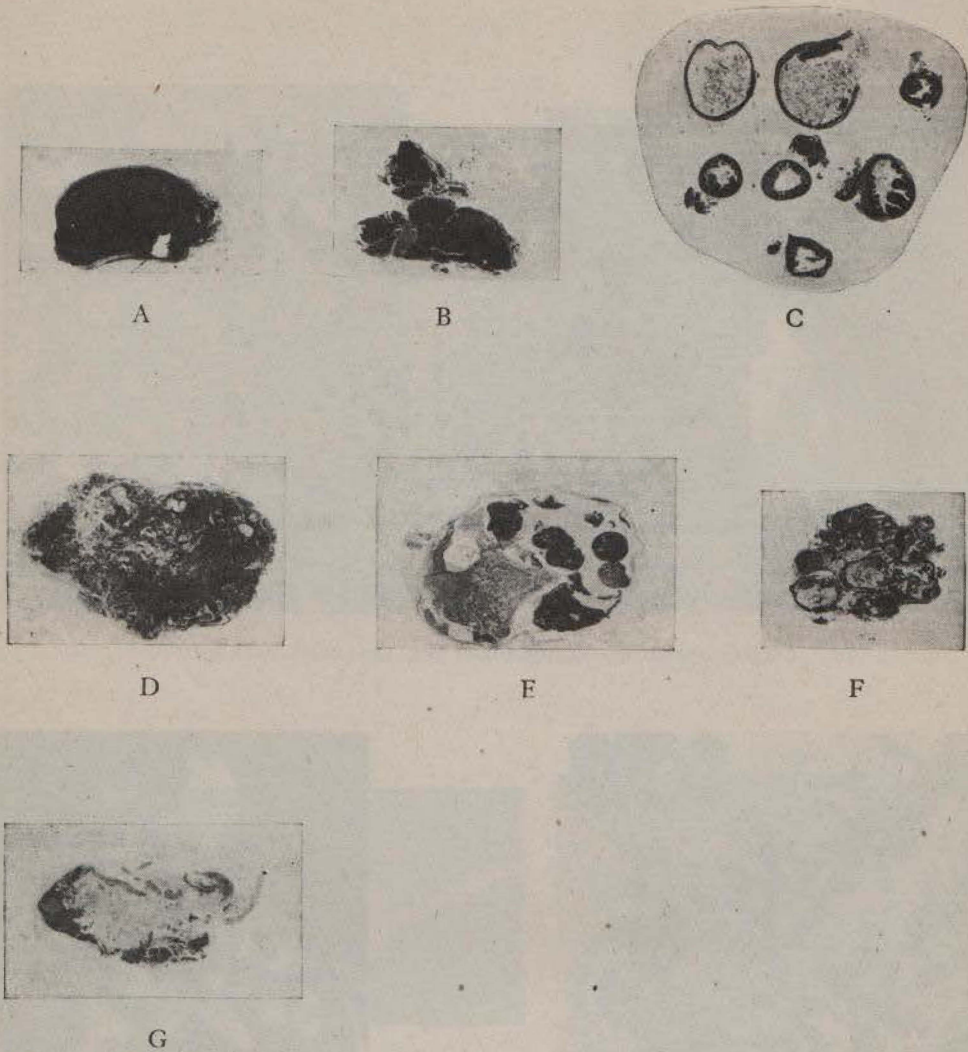


FIG. 12A-G. CANCER TUMORS IN MICE, TREATED AND UNTREATED.

HEMATOXYLIN-EOSIN, 2X NATURAL SIZE.

A and B: Compact, hard, breast tumors from two untreated mice.

C: Sections from stomach and duodenum of a T-mouse (artificial cancer). Atrophic gastric mucosa; polypous cancerous growths; cancerous cell masses in the peritoneum.

D: Tumor from an untreated mouse, in the process of putrid disintegration.

E: Tumor from an orgone-treated mouse. Large, empty cavities, previously filled with blood. Detritus, consisting of dead T-bacilli (left). Substitution by connective tissue (center). Residual cancer masses (center and right).

F: Tumor from an orgone-treated mouse. Large, empty cavities, previously filled with blood; now partly filled with cancer tissue, partly with detritus consisting of T-bacilli.

G: Tumor from an orgone-treated, cured mouse. Only little cancer tissue, disintegrated. Formation of connective tissue (lower part); sterile detritus (center).

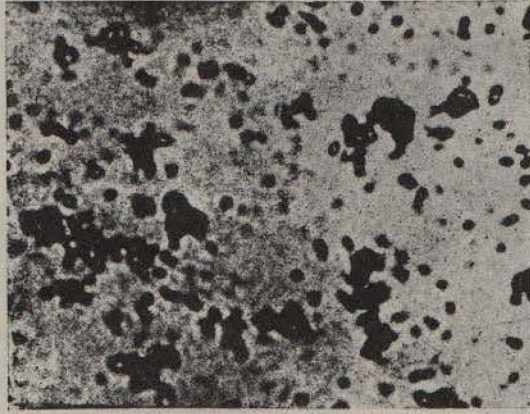


FIG. 13a. Coal bions, from coal dust heated to incandescence and made to swell in bouillon + KCl.



FIG. 13b. Cancer cell model experiment Nr. 14. Substance of egg medium penetrated by coal bions. Approximately 300x.



FIG. 13c. Same as Fig. 13b, at approximately 2000x.

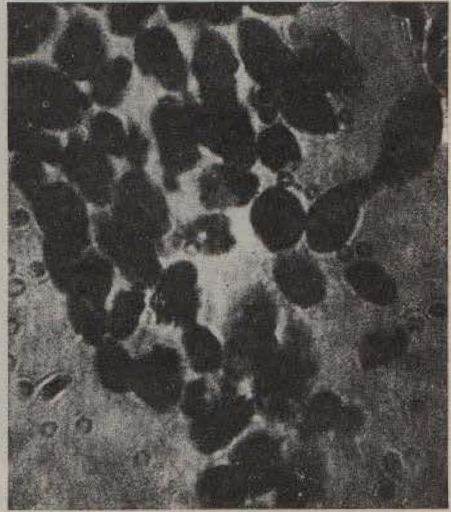


FIG. 13d. Bion cells, live (left) and Gram stained (right).



FIG. 13e. Tumor produced in a healthy mouse by the injection of these bion cells.

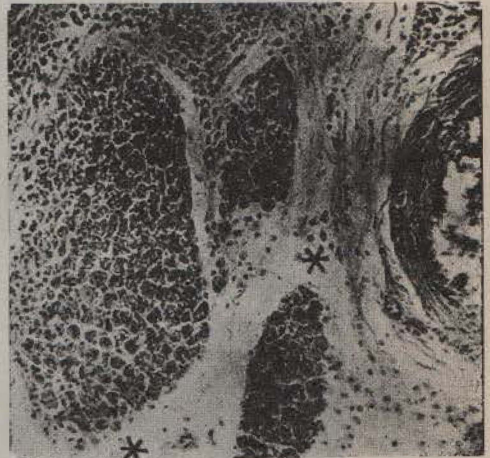


FIG. 13f. Peritoneal metastases of these bion cells. Stained section.

FIG. 13A-F. EXPERIMENTAL CHARCOAL BION CANCER.



FIG. 14a. Healthy epithelium, gastric glands, mouse.

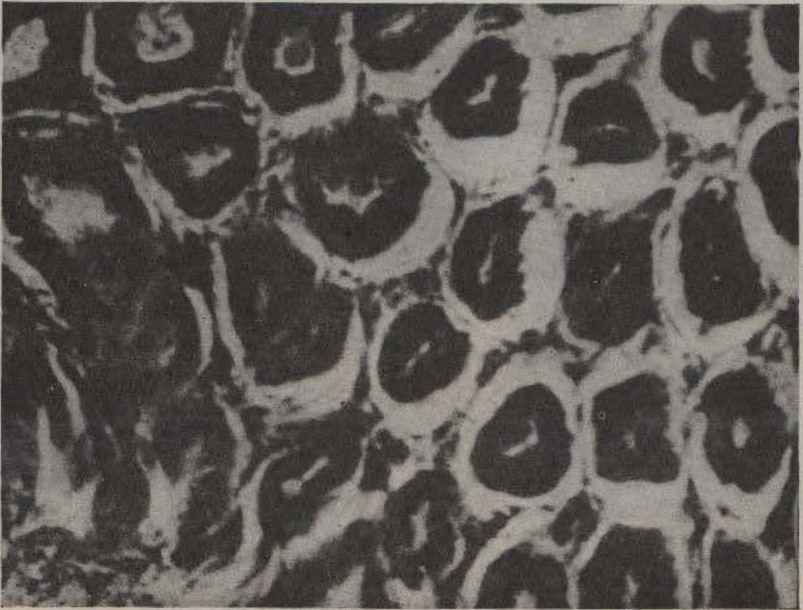


FIG. 14b. Shrinking and carcinomatous degeneration of gastric epithelium (Ca II and III). T-mouse. (Cross section.)



FIG. 14c. Carcinomatous changes (dark parts) in the intestinal gland cells in T-mouse, corresponding to the club-shaped formations in the living tissue (Ca II and III). Hematoxylin-eosin. (Longitudinal section.)



FIG. 14d. Putrid disintegration of gastric mucosa (Ca V). T-mouse.

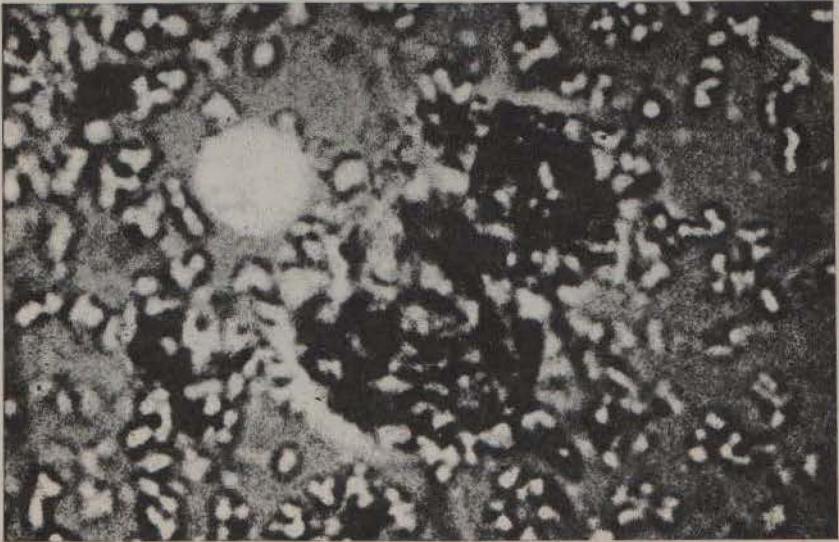


FIG. 15a. Blue PA bions in the process of interpenetrating and disintegrating heaps of cancer cells (dark, center). Live preparation. Movie film.

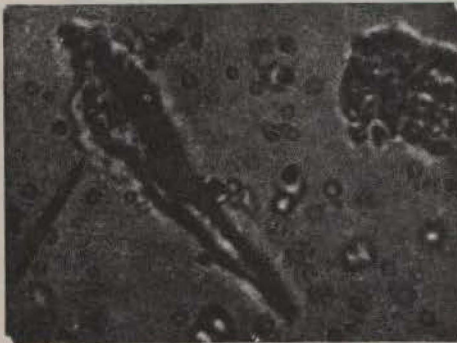


FIG. 15b. A spindle-shaped precancerous cell-formation (arrow) from vaginal secretion and a SAPA bion (upper right).

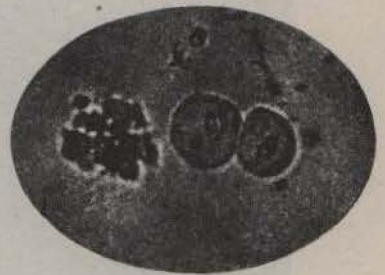


FIG. 15c. A SAPA bion has caused two ameboid, oblong, mobile cancer cells to assume spherical shape and has immobilized them.

FIG. 15A-C. BIONS IN CONTACT WITH CANCER CELLS.

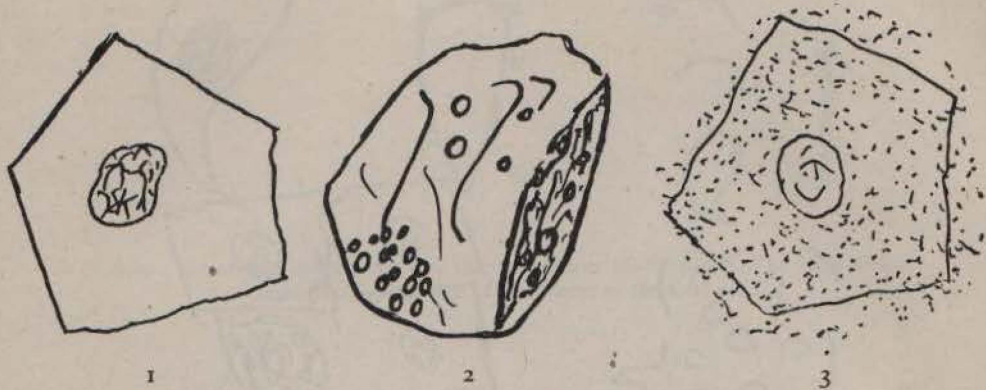


FIG. 16. Healthy and precancerous epithelial cells.

1. Healthy epithelial cell (no structure).
2. Epithelial cell disintegrating into blue bions; spindle formation with intense blue glimmer at the right margin: *precancerous stage* (Ca I).
3. Epithelial cell disintegrating into T-bacilli which are also seen outside of the cell (Ca I).

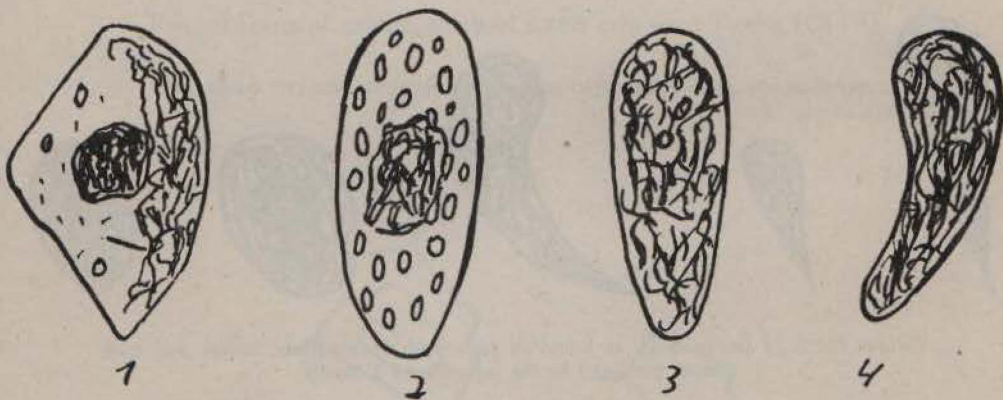
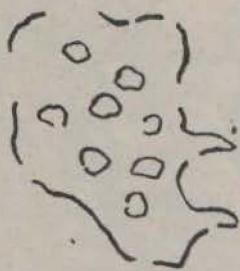
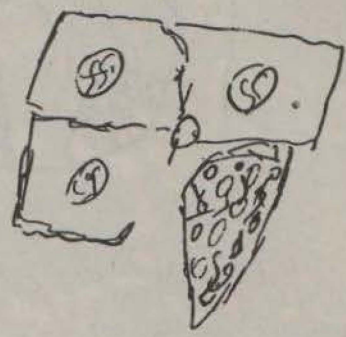


FIG. 17. Stages in the transformation of an epithelial cell into a cancer cell (Ca II).

1. Part of the cell shows a blue striated structure.
2. The cell assumes an oblong shape; blue bions develop.
3. The blue bions flow together and form a dense, striated structure.
4. The cell assumes club shape.



A typical form of pre-cancerous epithelial cells.

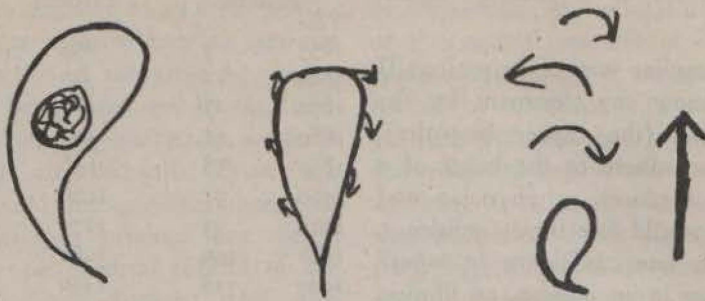


Four epithelial cells, one of them cancerous. From the renal tubule of a T-mouse. Drawn from life.



Various forms of cancer cells, as found in mice with spontaneous tumors and with tumors produced by the injection of T-bacilli.

FIG. 18. Cancer cells in the stage of maturing (Ca III).



Alive. The arrows indicate the jerk-like movements of the plasm. The large arrow indicates the direction of movement of the total cell.



Dead. Assumption of spherical shape and disintegration.

FIG. 19. Forms of mature, ameboid cancer cells from T-mice (Ca IV).

FIG. 16-19. TYPICAL PRECANCEROUS AND CANCEROUS CELL FORMATIONS.

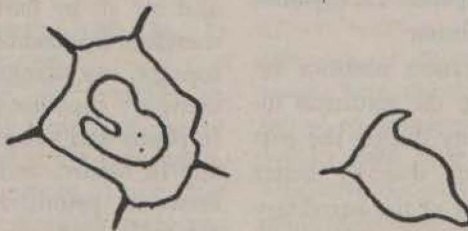


FIG. 20. Deformed erythrocytes as seen in the blood of advanced cancer patients. Bion formation in the center, T-spike formation at the membrane. ("Sympatheticotonia" of the erythrocytes.)

of cancer, for we all are ignorant of any effective treatment of a possibly existent *general disease*."

Indeed a peculiar way of reasoning: If we do not know any treatment for the *general disease* (the cancer biopathy), then we must adhere to the belief of a *local* origin of cancer, or physician and patient alike would lose their confidence. We may ask, lose confidence in *what*? The confidence in an illusion, an illusion which *blocks* any approach to the understanding and the possible eradication of the cancer biopathy. This argumentation of Lönne is the same as that of many psychiatrists: they deny the social origin of sexual repression and the sex-biopathic nature of neuroses and psychoses, only because by stating these facts they would get into conflict with many social institutions and would be *compelled to answer publicly for unpopular facts*. Such behavior has nothing to do with science. It is dictated by interests of material existence, and nothing else.

The reader will now understand why I introduced this article with the case of a patient with cancer shrinking biopathy who had no demonstrable tumors, and why, throughout this article, the main emphasis is on the biopathic *background* and not on the local tumor.

In the literature on cancer statistics the contention is made that the statistical increase in cancer mortality during the past decades is an artifact, due to better diagnosis. In the interest of the hereditary theory of cancer such facts are denied as that primitive peoples with a relatively natural sex life are relatively free from cancer and that the increase in the mortality figures represents an *actual increase* of cancer morbidity.

The following is a statistical table of cancer mortality in Norway from 1853 to 1925 (according to Gade):

Year	Cancer deaths per 100,000 population	Number of physicians in the country	Percentage of death certificates made out by physicians
1853	7	295	20.4
1860	12	330	28.8
1870	27	410	38.5
1880	42	551	50.0
1890	58	658	55.4
1900	91	1066	82.7
1910	93	1177	88.3
1920	105	1281	92.4
1925	118	1496	98.5

The interpretation of such figures by the heredity theorists is to be understood on the following basis: The theory of heredity does not recognize any effects of the social environment. The theory of the heredity of acquired characteristics, although correct, still is not recognized. There is every reason to doubt the rational and scientific character of the theory of heredity. On the other hand, there can be no doubt that in all considerations of heredity there is a strong emotional element at work. The irrational function of the mystical theory of heredity is that of excluding the influence of the social environment, thus giving the inherited characteristics a supernatural, eternal quality. According to this concept, all hereditary diseases are determined once and for all by hereditary factors and are therefore inaccessible. According to such a concept, any changes in the social environment are superfluous; cancer is seen even in plants and animals, that is, quite generally in nature, and there is no difference between primitive peoples who live naturally and the mechanized civilized people. Cancer is considered to be due to an "embryonic malformation." On the basis of this erroneous hereditary thinking there can be no genuine increase in cancer mortality but only an artificial, apparent one. This "apparent" increase is being explained by saying that, as a result of an increase in the number of physicians and of better diagnostic methods, more

cancer tumors are diagnosed than previously.

The hidden meaning of all these hereditary arguments is the attempt to save the erroneous theory of the rigid hereditary factors from being destroyed by the functional theory of the interaction between plasma and environment. True, the mechanistic and metaphysical theory of heredity does not produce one single positive idea for medical control of the so-called hereditary diseases; true, such thinking leads in a straight line to the mysticism of the hereditary *Übermensch* and *Untermensch*, that is, to the thinking of the emotional pest; but we should not be surprised by this, for this is the conservative function of the theory of heredity into which the work of Darwin, De Vries, Freud and others thus far has made only a dent. The theory of heredity is not a science but an ethical alibi.

For these reasons, it is difficult to evaluate such sham-statistics as the ones quoted above. While the argument of better diagnosis may be valid for older statistics, it certainly does not hold for such recent statistics as those of the years between 1921 and 1940. There has been little improvement in cancer diagnosis in this period, and yet there was, in the same period, in the State of New York, for example, an increase of cancer mortality from 104.1 to 158.4 per 100,000 population.

The argument that the increase in mortality is a statistical artifact or due to the increase in the average life expectancy, becomes invalid, furthermore, if one *does not isolate the cancer biopathy from the other biopathies*, but looks at it in connection with the parallel increase of cardiovascular biopathy, of the schizophrenias, criminality and suicide. If one does this, and if one comprehends the common sex-economic and social background of the sexual biopathies of all kinds, such formulae and alibis go up in smoke. Then we are confronted with the

naked fact of the murderous effects of the emotional pestilence and of the ignorance of physicians and educators in matters of the natural sex life of children and adolescents. No sin of omission ever committed by medicine and education can compare with this mass production of sex-starvation diseases. It was not the fault of medicine or education that hundreds of thousands died of the plague or of puerperal fever. One did not know the micro-organisms which caused them. But the murderous biopathies are, in the last analysis, socially caused by the irrational reactions of sex-pathological people. The avoidance or moralistic treatment of sexual problems is an intentional, though most frequently unconscious, attitude on the part of physicians and educators. The resistance of these social groups to the fight against the sexual biopathies proves the correctness of this statement.

As frightening as the truth of the matter is, it has its hopeful counterpart. Once one has understood that there are biopathic diseases which are at one and the same time *causes and results* of social ills, the picture becomes simpler. True, there is not any single individual who could function as "savior," as the masses of people would wish it to be. But the constant deepening of the misery will achieve what no individual could achieve: *The masses themselves, who suffer so much, biopathically and socially, will be forced to think rationally and to regain contact with their basic biological being.* This revolutionary change, most likely, is going to be one of the essential results of the emotional pestilence of the 20th century. There are already a number of unmistakable signs of this change:

Ten or twenty years ago, the sexuality of the child and the infant was taboo, in science as well as in the lay world. It no longer is to the same extent, and it will be so less and less. Sexual misery has become too obvious in its widespread occur-

rence. The attempts to get at the misery—still unofficial rather than official—are becoming increasingly numerous and insistent. It is as yet not part of any political program. But, for the first time in the history of humanity, the political programs themselves are being scrutinized as to their usefulness and rationality. The question is already being asked whether politics itself is not a disease of the body social. The consciousness of the natural life demands is becoming clearer and clearer, not as a demand or dream of individuals but as an achievement of society.

The reader will ask what these general social questions have to do with the cancer scourge. The answer is: everything. The main goal of this presentation is to show that cancer, as a special form of biopathy, is inseparable from the problem of sexuality as well as from the social structure of our society. More than that, cancer has remained an unsolved riddle only because neither its *sexual* nor its *social* origin has been taken into consideration. One hears the question, "What does organic pathology have to do with sociology?" One no longer asks, as one did 12 years ago in Europe, what the sexual life of the masses has to do with sociology. Here, sex-economy has fundamentally influenced thinking. Today, every progressive psychiatrist knows that sexuality and sociality cannot be treated apart from each other. The time may not be too far off when *organic pathology*, in judging a tissue lesion, will take into account its *sexual and social* causation. Man is a biosexual *and* social organism, and develops disturbances in the functioning of his tissues just as he develops disturbances in his emotional life.

Many people who know the statistics concerning the increase of cancer will have asked themselves *why* it is that cancer increases in this manner. Years ago, the psychiatrists were confronted with a similar question when they found that,

compared with hysteria and compulsive symptoms, there was a steady increase of the *character neuroses*. In that case, the answer was this: Before the turn of the century, the sexual repressions and armorings were quite complete. Correspondingly, there were only circumscribed severe breakthroughs of neurotic symptoms, such as hysterical attacks. At that time, the completely armored individual was the "normal individual." Since that time, the sexual demands have broken through more and more, asking to be recognized and to be gratified. The circumscribed symptom neuroses were more and more replaced by the general character neurosis: *increased vital demands came into conflict with old, rigid forms of life, with irrational dogmata and inner neurotic inhibitions.*

The prevention of the biopathies, cancer included, leads back to the cardinal problem of sexual mass hygiene: *the sexual problem of children and adolescents*. The conflict of the adolescent of our times is greater and more acute than that of the adolescent of 1890. The adolescent of 50 years ago was resigned. The adolescent of today is *demanding*, and rightly so.

After the first world war, parents and authorities were horrified when youths of 18 or 20 of both sexes went on trips unchaperoned. "Bobbed hair" and "a job" were considered signs of moral degeneration among girls. Chaos and the end of the world seemed in sight. Lindsey lost his position because he understood the struggle for a love life among the 18-year-olds, even though he did not approve of it. Now we have the second world war. Now the 14- and 15-year-olds are about to fight for their sexual rights. Since nobody helps them, since they are threatened from all sides and since, in spite of their physical maturity, they are not structurally mature, this change takes place in chaotic forms which makes society call out the police. In another 20 years, the love life

of adolescents will be as much a matter of course as is today that of the unmarried 20-year-olds, or the bobbed hair and the working of the girls. Twenty years ago, nobody would have dared to propose sexual enlightenment in the schools. Today there is a violent fight on for it. In still another twenty years, the 15-year-olds will have won their natural sexual rights, and the children *under 14* will enter the arena. Again, blindness and prejudice will do incalculable harm, instead of the children being helped. But finally the children will win out. One can only wish that this revolution in the life of our children might come into the hands of *healthy* physicians and educators instead of remaining in the hands of reactionary bodies, that it would be carried out in a *positive* instead of a destructive way.

What must be achieved is that so-called public opinion cease to hobble along far behind revolutionary happenings, still adhering to outmoded beliefs and methods. Unless the educators, physicians and social workers, on the contrary, have the courage to be ahead of the happenings and to create the prerequisites for a natural and gratifying love life (instead of sexual criminality, perversions and pornography), the chaos and mass misery will only be all the greater. As long as adolescents are treated as criminals and psychopaths merely because they follow their natural need for love, the problem of "juvenile delinquency" will continue to grow and will remain insoluble. Sexual criminality cannot be vanquished by compulsive morality, but only by the generous opening of all possibilities for natural satisfaction in love. Compulsive morality and sexual criminality are functionally identical; they create each other. It is to be hoped and expected that the institutions which are based on sexual suppression will bow to the events. It is to be hoped that those who are lost and resigned will not interfere when healthy physicians and

educators will help youth. *Youth itself will, from its own organizations, create the responsible organs, which will, in a self-regulatory manner, solve the social and sexual problems of youth.*

Here, and only here, is the avenue of approach to an attack on the biopathies, be they criminality, mental disease, hypertension or cancer. *Organisms which are being made conscious of their sexual needs by the social development of new forms of life but lack the means of discharging their sexual energy in full natural gratification, must of necessity become disorganized, must fall ill biopathically, become antisocial or criminal.* That this is actually occurring is a tremendous *advance*, even though it is *painful* and momentarily *dangerous*. To fight against it means only to increase the existing misery or to create new misery.

Of course the reactionary and mystic will find proof in this of the dangers of "immorality" and will ask for a return to the old, resigned way of living. In fact, they do it all the time; but they have nothing positive to contribute to the problem of human suffering. No matter what they say: Biosocial development cannot be turned back. All that can be done is to let the development take place in less painful and less dangerous ways.

What applies to the increase in biopathies in general also applies to the cancer biopathy. The total social development has begun to replace the old ways of sexual living by new ones. Around the turn of the century, a woman of 35 was a matron. Today she is a young woman expecting to get a great deal out of life. The same is true of the man of 40 or 50. But medicine and education have not kept pace with this social development. *People's structural capacity to achieve fulfilment in life remains far behind their knowledge and their needs. Therefore, the stasis of biological energy in the human organism is far greater than it was 20 or 40 years*

ago. A frigid woman of 1900, who stayed at home doing her housework, did not have a job and no outside contacts with men, was much less endangered than she is today, where she takes an increasing part in social life. She does so as a result of industrial development as well as a result of the present war. No doubt we will have to expect even far more revolutionary changes in the life of the woman. Nobody—except Fascists—will demand her return “to the hearth.” And even Fascism becomes impotent here.

If, now, the human organism is exposed to an ever greater differential between life demands and possibilities of gratification, it is clear that the *stasis of the biological energy increases* in the same proportion. The greater the stasis the more severe the damage, emotional and physical, to the organism. Cancer is the most significant somatic expression of the biophysiological effect of the sexual stasis, schizophrenia the most significant emotional expression. It is not by accident, but entirely logical, that Massachusetts, that state which, in the middle of the 20th century, has the most stringent laws against contraception, and enforces them, also has one of the highest cancer death rates of any state in the country.²⁰ Society will have to learn to take cancer as a sex-starvation disease seriously.

The tremendous increase of the biopathies, then, is the simple expression of the discrepancy between the will to a sexual life and the incapacity for a sexual life. The will to life has increased tremendously but the capacity for life (sexual potency, responsibility, self-regulation, etc.) has not grown. The way out of this dilemma cannot be a renewed suppression of the will to life, but only the establishment of a structural capacity for life which keeps pace with the life demands. This is primarily a social and edu-

cational task. Medicine can play only a mediating role here. It goes without saying that the establishment of the full capacity for life and pleasure will require the elimination of age-old institutions and laws which are at variance with it. If, then, adolescents establish *natural, satisfactory* love relationships *before* reaching the “legal” age, and there is, at the same time, an age-old law which exposes them to the reform school, that is, to antisociality—then it is the age-old law, and not the natural sexuality of the adolescents, which has to be eliminated. This one example will show anybody with what reactionary forces such an attempt will inevitably and violently clash. But who believes that the fight for a “new world order” which is being longed for everywhere, will be fought in words, and not in terms of such concrete life problems? It is just the profound and revolutionary character of these life problems which has led our world into chaos, which urgently calls for an answer and which made it impossible for those who are calling for a new order to name the problems concretely. This new order is not going to be established by political “ideas” and phrases, but only by the *solution of concrete tasks*.

XI. ORGONON: A PLAN FOR THE PREVENTION OF CANCER.

Up until the summer of 1942, I had refused to let patients keep orgone accumulators in their own homes, although the suggestion had been made by a number of friends. My refusal had various reasons. It was unclear in what form—purely from the legal standpoint—the accumulators should be released for public use. As business is not in my line, I did not want to become an entrepreneur. To leave the construction and distribution of the accumulators to business people would have meant delivering the orgone research to the very practices which today govern

²⁰ “Whats and Whys of Cancer.” Massachusetts Department of Public Health, 1939.

the pharmaceutical industry. I have neither the time nor the inclination to engage in any competitive struggle. On the other hand, I had applied for a patent, with the explicit notification to the Patent Office and all co-workers that the patent had the exclusive purpose of protecting the discovery against exploitation and profiteering. Orgone can be had like water or air and is present in infinite quantities. It is taken up by the body like air. All that is necessary to bring it to the consumer is a mechanism for *concentrating* it; this is what the accumulator does. Arrangements must be made so that even the poorest people can avail themselves of the concentrated orgone.

One will ask why I do not simply "present the world" with the discovery. I have asked myself this question. Since I personally do not care for the economic exploitation of the discovery, I could easily have enjoyed the ephemeral fame that comes from such a donation. But it is not merely a personal problem. *I have to consider the future of orgone research.* Thus far, no social institution has considered it necessary to offer our Institute that economic support which any average, or below-average, experimental work in the chemical field obtains without any difficulty. In addition, orgone research had been made to feel the narrowmindedness and the irrationalism of the conventional officials of science. In Scandinavia, they almost succeeded in smashing it when they began to get an inkling of the fact that a dangerous opponent and competitor of mechanism and mysticism in natural science began to grow in the form of a functional orgone physics. This running amok of science in Norway in 1937 and 1938 was a powerful warning. I had to rid myself of any naiveté. To expect aid from social institutions which owe their existence to the *lack* of knowledge, is fatal. Would Edison have expected material support for his construction of the

incandescent bulb from the manufacturers of gas lamps? The atmospheric orgone is the electric bulb as compared with the gas lamps of the chemical drugs.

I am still impressed by the fact that Madame Curie did not have sufficient money to buy radium for her researches, that, out of commiseration, as it were, she had to be presented with radium, while at the same time the profiteers were making millions from radium. I am too familiar with the "ethics" of the business mind, and with the dependence of routine science on it, not to have learned caution and foresight.

Since, thus, selling as well as donation of the discovery were as much out of the question as its personal exploitation, there did not seem to be any possible form for the practical utilization of the orgone. As happens so often in such situations, the spontaneous course of events led to a solution. This is what I shall describe now.

For the past few years, I have enjoyed the friendship of a Maine guide, now 70 years old. I have a cabin in the Maine woods where I have set up a laboratory for the study of the atmospheric orgone. Since this work cannot be carried out in New York during the summer months due to the high relative humidity, the work in orgone physics is carried out in Maine.

In February 1942, I heard from my friend's family that he was suffering from cancer of the prostate and was at a hospital for Xray treatment. The tumor had been discovered a few months before, and in November 1941 the physicians had thought that he would not live longer than 6 months or at best a year.

This news was a hard blow. We had come close to each other when I told him about the nature of the bions. This simple man disclosed a spontaneously acquired knowledge of the living with which no academic biology or physics can compete. I asked him whether he wanted to see the

life energy in the bions under the microscope. I was flabbergasted when my friend, even before looking into the microscope, gave me a correct description of the bions. For decades, he had been observing the growth of seeds and the character of the humus with the unerring instinct of somebody who has always lived close to nature. There are, he said, very small vesicles ("bubbles") everywhere. From these, everything develops that is "life." They were so small, he said, that they could not be seen with the naked eye. Yet, the moss on the rocks developed from them: the rock, always exposed to the weather, "softens up" on the surface and forms these life bubbles. He said he had often tried to talk about this with academic tourists, but had only met with a peculiar smile. Nevertheless, he said, he was sure he was right. I had to admit that he was right, for how could moss "germs" "strike root" in the rock?

When I showed him the vesicles, of which he had had an inkling, in the microscope and told him they were magnified 4000x, he felt shaken. It was, as he said, "the greatest experience of his life." He had never thought that one day it would be granted him to see these vesicles in which he had so firmly believed and of which he had always thought when he tried to imagine in a concrete form all the growth, the flowering and the fertility of the soil about him.

The first two summers, I had told him nothing about the atmospheric orgone because I was afraid it might spoil our relationship. Later it turned out that he, too, because of the same fear, had kept a well-guarded secret from me.

When I went to Maine in the summer of 1942, I found him in a cachectic condition. He had lost much weight, was stooped, hardly able to do any work, had no appetite, and felt hopeless. He knew that his days were numbered; a physician had told him so. He admitted that he did

not carry his fate lightly; that, on the contrary, he rebelled violently. He said he did not want to die, for this world of woods, mountains and lakes in which he had spent almost 70 years, was too beautiful. He could not imagine that soon he would no longer enjoy any of it. He loved his lonely woods in which he had fought hard for his existence for many decades.

The Xray treatment had alleviated his worst pains temporarily, but now they returned. He had no money, for he had always been a poor businessman. The family was desperate. Death within a short time was certain; the physicians had left no glimmer of a hope. He did not want to go back to the hospital. He had felt miserable there and had rebelled against everything. He was not only a poor businessman but also a bad patient. Living close to nature, he had had difficulty in adapting to the "values" of culture and civilization. He knew too much about nature, love and life, war and business to have developed the otherwise so highly esteemed "resignation to fate." He was deeply religious in the *good* sense of the word, but he had only contempt for the church business. For this reason he was considered in his parts a renegade, not without, however, enjoying the highest esteem and respect of his neighbors. I always felt that under the proper economic conditions he could have become an outstanding natural scientist. How many great talents are lost in this way!

When I asked him one day whether he believed in God, he said: "Of course, he is everywhere, in me and all around us. Just look over there," and he pointed across the lake to the blue against the distant mountains. "I call it *Life*, but people would laugh at me, so I don't like to talk about it."

In other words, this woodsman also knew of the existence of the biological energy in the atmosphere.

For weeks now I had been deliberating

with his family how it might be possible to get him to use an orgone accumulator. He was extremely suspicious of any medicine and had a good deal of stubbornness in him. Thus it was a very difficult task.

When he confided his secret to me and called the blue in the atmosphere "life," I also told him my secret. I told him that he was right, that what he called "life" was indeed the biological energy which I had discovered and termed "orgone." I told him that one could concentrate it and make it visible in the form of lightning-like phenomena, that the Northern Lights were also a manifestation of the orgone. One night I showed him the orgone radiation in the organoscope. He saw it immediately and gave a correct description, without any of the pseudo-scientific compulsive doubts which our mechanistic or mystical academicians develop in the same case in order to maintain their academic dignity. We persuaded him to build an orgone accumulator himself and to try it. Very cautiously and suspiciously he went to work. It seemed to us to take far too much time, because he was getting visibly weaker. But finally the accumulator was finished. He sat in it and reported with great pleasure that he had felt a prickling sensation in his hands. But he could not be induced to use the accumulator *regularly*. Finally I found out that he kept fighting the admission that he was ill. A friendly talk availed little. Then, with a spell of bad weather, severe pains set in and he became practically unable to move; there were burning pains in the urethra and he was about to give up.

Great effort on my part and his strong will to life induced him now to use the accumulator twice a day for an hour. After a few days, the pains ceased. Microscopic examination of the urine showed disintegrating cancer cells and numerous, but immobile T-bacilli. He became able to get up, to eat with appetite and to go

around. I made him promise to take it easy for at least a year, not to consider the fact that he was sick a disgrace, and to give his organism a chance to recover.

The effects of the accumulator, together with my psychotherapeutic efforts, were successful. I was able to follow this improvement over several weeks. He came to visit me in my cabin and asked me about that energy which he called "life." He had an excellent spontaneous grasp of all the things I had elaborated by experiment. When I finally returned to New York, I was convinced that he would soon stop using the accumulator regularly. But I was wrong. He became fond of the accumulator, admitted that for the time being it had saved his life and reported that he felt much better. He no longer had any pain, gained 7 lbs. in 2 months and felt "rejuvenated." For a period, he excreted a brownish liquid, that is, destroyed tumor substance.

According to his physicians, he should have died long since. At the time of this writing, in January 1943, he is alive and feeling well on the whole. Whatever his fate is going to be, he enjoys the power of that which he called "God" and "Life."

He is Herman O. Templeton and is now the manager of the nucleus of "Orgonon," the Orgone Institute Laboratories which are being established in Franklin County, Maine.

This I shall now briefly describe. It is as yet *only a plan*. Its realization does not depend on our Institute alone. We do not know how long it will be before the social authorities will realize the dangers to human existence of the sexual biopathies. We do not know how long this war will last and how long it will prevent social endeavors. At any rate, the Orgone Institute has taken several decisive steps in the direction of the prevention of the biopathies. I leave it to the reader to judge whether our efforts deserve public support. By that I mean not just recognition

and praise, but *tangible* social and material support.

Templeton was the first cancer patient who had an orgone accumulator constantly in his own home. This made a great deal of difference. The patients who came to the laboratory for their orgone treatment were, every day, on their way "to the doctor." Our friend is his own doctor. He can use the accumulator whenever he pleases. When he develops pain, he need not wait for the appointed hour with the physician, he can avail himself of the orgone radiation immediately. He does not have to travel—as he otherwise would have to—50 miles to the physician. Instead of using the accumulator once a day, he can use it as many times as he wants to. He has the leisure to become acquainted with the radiation, to make friends with it, as it were. The accumulator is not a piece of "laboratory equipment." The patient can show it to his friends and acquaintances, can let one or the other try it, discuss the phenomena and get his own observations confirmed. That is, he is not just the passive object of the treatment, but he is active. He learns to think about the energy which so greatly helped him and to do something with it. He becomes a new kind of social worker who, independent of his physician, acquaints his own environment with the subject. Incidentally, he saves a good deal of money which otherwise would go for travel to the hospital or the physician, for drugs, etc.

These medical and social effects of the "*orgone accumulator in the home*" are the basis of the plan for Orgonon. Our patient offered spontaneously to take over the construction of the orgone accumulators. If everything goes its logical way, the demand for accumulators will in time increase considerably. A place was needed where the workshops could be set up. In order to get the place and to build the workshops we needed money. The orgone

research requires very large amounts of money which we workers of the Institute cannot provide and which are provided by nobody else. Thus the small amounts that would come in from the orgone accumulators should, in time, not only cover the costs of their manufacture, but, if possible, the whole research work. When the public becomes increasingly well informed about the orgone, it will readily contribute to the orgone research. In return, it will get the contribution of the orgone accumulator to public health.

Thus, instead of selling the patent for the orgone accumulator or exploiting it, we arrived at the plan of letting it work for *the orgone research*. This is possible only in the form of a *public non-profit institution*. The U. S. Patent Office has been notified of this plan.

The Institute has bought a piece of farm property in Maine which consists of 150 acres and cost \$4000.00. This amount of money was loaned to us by a student of the Institute, without interest. The property contains some old structures which can provide the material for the most necessary buildings. Templeton, who is not only a guide but also an experienced carpenter and builder, took over the administration of the buildings.

Orgonon is situated at an altitude of 1600 feet in a dry, sunny climate. Thus it lends itself excellently to experimental orgone research. As time goes on, all of the biophysical work can be transferred there. It would be a great relief finally to overcome the handicap of a city laboratory crowded with instruments and apparatus. Orgonon may well become the home of orgone-physical life research which now has been wandering from country to country for fifteen years. It may be said that it deserves some quiet and permanence.

The orgone accumulators built in Orgonon remain the unsalable property of the Orgone Institute, that is, there is

no private ownership either on the part of the discoverer or the consumer. Profiteering is thus excluded. The accumulator is rented from the Institute the way one rents telephones, and the consumer pays a monthly contribution, the amount being agreed upon according to the consumer's circumstances. All income goes to the "Orgone Research Fund" which in turn pays all expenses.

The orgone accumulator promises to become an important or even indispensable weapon in the fight for public health. It effects a vagotonic reaction of the organism and an organotic charging of the blood which increase the resistance to disease. If this war, as is most likely, is going to be of long duration, diseases of the autonomic life system, which are inaccessible to chemical treatment, will increase enormously. The orgone accumulator thus will be an indispensable weapon in the fight against diseases which consist in decreased defense functions of the organism. I do not doubt that the first reaction to the novelty and simplicity of the apparatus will be overcome, or that the authorities will grant the priority for the purchase of machines.

It seems as if the war had pushed the interest in cancer into the background. I would like to emphasize the following: *It is not a matter of cancer* alone even though the orgone energy first proved its value in this disease. Rather, it is, quite generally, a matter of the *charging of the organism with biological energy*, something which the orgone has finally made possible. Incidentally, experiments with directing the energy through flexible tubes have demonstrated an interesting and important property of the orgone: small wounds heal surprisingly quickly and easily if they are directly "shot at" with orgone. We hope for the opportunity of testing this property of the orgone on a large scale in a military hospital. Such an experiment would show the immediate

usefulness of the orgone in war medicine.

On the other hand, this war is not going to last forever. The prevention of cancer is a task which may be postponed but it will still be with us. The plan of our Institute for an experimental cancer prevention is based on the following: *Cancer prevention can be based only on the principle of increasing the organotic potency of the organism long before the development of T-bacilli or even cancer cells. It is a matter of preventing the shrinking of the life apparatus and of the progression to putrefaction.* This task has two aspects, biophysical and social.

The biophysical task consists in the direct application of orgone with the orgone accumulator. The wider, social task consists in the mastery of the sexual biopathies in children and adolescents, that is, in the elimination of those processes in the organism which lead not only to cancer, but to *any* kind of biopathy. It goes without saying that the social task is the much more comprehensive and difficult one. Our European co-workers are deeply engrossed in this task.

In comparison with this task, the biophysical task of direct orgone application is much simpler and easier. At the start, it would be possible only on a small experimental scale, in one of two ways:

a) As more and more orgone accumulators are being used, a check is kept on the development of cancer among the orgone consumers. This will give a picture of the possibilities of cancer prevention. Of course, the emotional factor, the shrinking of the life apparatus due to resignation, is an imponderable, and can only be eliminated by the necessary social measures. Let us assume that beginning from a certain date 5000 accumulators are in use. If, within 3 to 5 years, these 5000 consumers should develop considerably less cancer than the control group or no cancer at all, this part of the task would be done.

b) A district containing, say, 10,000 inhabitants would be provided with an "accumulator in every home." The incidence of cancer in this district would be checked by social workers. Comparison with other districts would, within 2 to 5 years, show definite indications as to the possibilities of a general cancer prevention.

This plan may seem phantastic to many a reader. But if it is possible to mobilize

whole populations of a planet for war purposes, it certainly should be possible to mobilize a district with 10,000 inhabitants for the purpose of a decisive experiment. I am fully conscious of all the circumstances which will create difficulties in such a plan. But the execution of such a plan *is* possible; it is even indispensable.

Concluded January 1943.