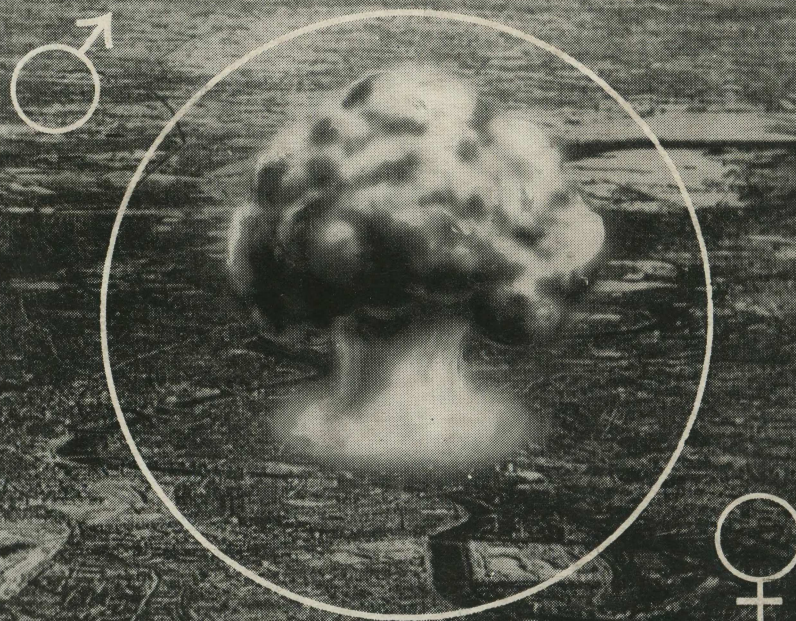


THE
SEXUAL
CYCLE
OF
HUMAN
WARFARE
NORMAN
WALTER

THE SEXUAL CYCLE OF HUMAN WARFARE



THE
MITRE
PRESS

NORMAN WALTER

THIS BOOK IS DYNAMITE

It cannot fail to startle, for it opens wide a new approach to war—that problem of headlong urgency in our Atomic Age. Sweeping aside conventional and outworn theories of the cause of international strife, the Author reveals to us that war is neither more nor less than a Titanic Sexual Act. War, he maintains, stands in the same biological relationship to the vast organic body of society as sexual activity to the body of the individual. Like the individual sexual urge, war, too, is cyclic, periodic. And like the individual urge, it is marked by a gathering mental tension that bursts into physical eruption. Were this revolutionary conception no more than a daring freak of thought, it would still command our attention for its stark originality of design. But it is more than that; it is a closely reasoned scientific argument that must either be refuted or accepted. One thing is certain in these dangerous times: it cannot be ignored. As we read these pages, we have a sense of rending veils, of shifting phantasmagoria, a presentiment that here at last we emerge upon a terrifying but epoch-making truth. The question remains: Can we adjust ourselves to this sweeping new conception—adjust ourselves in time? Or must the hydrogen bomb, and the insensate self-destruction of mankind, add their own dread postscript to the grim prophetic argument of this book?

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THE SEXUAL CYCLE OF HUMAN WARFARE

*We're here because
We're here because
We're here because
We're here . . .*

ARMY MARCHING SONG

'It has to be remembered that the characteristic of an impulsive or instinctive action is that it is done for a purpose of which the doer is unaware.'

SIR ARTHUR KEITH:
A New Theory of Human Evolution

THE SEXUAL CYCLE OF HUMAN WARFARE

*Being a New Theory of the Cause
of War and an Inquiry into the
Possibility of War-Prediction*

by
NORMAN WALTER

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TO
THE MEMORY OF
GWLADYS

P R E F A C E

AS the title of this work suggests, we put forward here the somewhat unusual theory that war is *a collective sexual movement from the larger body of the warring group*. We should like to say that we have been driven to this conclusion, against a great deal of internal resistance, as the only means of making sense of the world-situation as it exists today. To support our viewpoint, we have built up a scientific argument which depends only upon such biological and psychological concepts as already meet with wide acceptance.

A glance at the list of contents will show that our endeavour has been to advance from the simple to the complex. There can be no real understanding of this theory without some knowledge of those psycho-biological mechanisms which, by operating in the individual, operate also in society.

Nevertheless, it would be well if the reader were to begin with the chapter headed "Political Deductions." That will inform him of the general scope of this work. Then, with perhaps a quickened interest, he may feel inclined to retrace the argument from the beginning, along the original line of reasoning which led to our conclusion. The theory itself hinges round the diagrams in Figures 3, 6 and 8, and on the portions of the text in which these diagrams are explained. Although some technical expressions have been unavoidable, these have been reduced to a minimum, and they should certainly not place the central theme of this work beyond the grasp of the average educated layman. Biological and psychological knowledge is remarkably widespread nowadays. And indeed, whatever difficulty may be found in the comprehending of this theory will arise less from the complexity of its terms than from the strange and disturbing pattern of the whole.

N. I. McN. W.

October, 1948.

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CHAPTER I

SEXUALITY STARTS INSIDE THE CELL

I N his essay *Biology and Sociology*, Julian Huxley makes the following very significant statement:

“Man is an organism descended from lower organisms; his communities are composed of units bound together for mutual good in a division of labour in the same way as are the cells of a metazoan: he can no more escape the effects of his terrestrial environment than can other organisms. There is therefore reason to suppose that the processes of evolution in man and man's societies on the one hand, and in lower organisms on the other, must have something important and indeed fundamental in common which if we could but unravel would help us in the study of both.”

Since it is of the essence of this thesis to show that the important and fundamental common denominator of man and man's societies on the one hand, and of lower organisms on the other, is neither more nor less than the cell itself, we cannot do better than call upon another distinguished biological worker to refresh the reader's mind on certain elementary matters relating to the cell:

“All organisms may be said to arise from bodies of protoplasm with single nuclei. Each of these is described as a single *cell*. In the lowest organisms with nuclei, the Protista, growth of this cell is followed by its division, together with that of its nucleus, by mitosis, and the separation of the daughter cells. The organism thus remains unicellular and every mitosis is an act of reproduction, but instead of one individual begetting another, one individual so far as we can see simply becomes two . . .

“Elsewhere, division of the cell into two compartments takes place at the same time as division of the nucleus. The daughter cells may be separated by non-living secretions of

the cell with a connective or cementing function, or by differentiated parts of their own cytoplasm. The organism developing in this way is said to be multicellular. It reproduces by the separation of either single cells or groups of cells from the main body.

"Sexual reproduction is known in all groups of living organisms with nuclei. In the Flagellata it has only been established in three genera (cf. M. Robertson, 1929) and in the Protista as a whole it is difficult as yet to estimate its importance. Elsewhere, however, whether normally or in some modification, it is an essential part of the life-cycle of nearly all species.

"Sexual reproduction consists superficially in the formation and separation from the rest of the organism of single cells, the germ-cells or *gametes* (constituted by the whole organism in the Protista, and by a specialized part of it, in the higher plants and animals) and their subsequent fusion in pairs to give new cells, known as *zygotes*.

"Its essential genetic characteristics are two. The first was seen by Oscar Hertwig (in 1875) to consist in the fusion of the nuclei of the two gametes. Since they carry the same number of chromosomes, the product has a double or *diploid* number. This is fertilization. The second was predicted by Weismann (in 1887). It consists in a compensating process of reduction or *meiosis*. In a *mother-cell* two nuclear divisions follow one another rapidly while the chromosomes only divide once, so that four nuclei are formed, to each of which a halved or haploid number of chromosomes is distributed."¹

A fact stated clearly in the above passage, and one of the utmost importance to our whole argument of war-causation, is the prevalence of the sexual process. As Goldschmidt says:²

"It is not so long ago that entire groups of organisms were held to be of such simple organization that they were

¹ Darlington, C. D., *Recent Advances in Cytology*, London, 1937.

² Goldschmidt, *Mechanism and Physiology of Sex Determination*, London, 1923, pp. 1, 2.

only capable of reproduction by simple binary fission. With increasing knowledge the number of such organisms has gradually diminished, and now in the animal world (and in the following chapters we are only concerned with this section of living organisms) there is scarcely an example of which we can say with certainty that its only method of reproduction is asexual. Early or late, there comes, for all animal organisms, a moment when a sexual act of some kind takes place."

We see, then, that the sexual process is an exceedingly widespread phenomenon. This fact should be held clearly in the reader's mind, because we intend to associate it in an unfamiliar fashion with the warlike disruption of our own communities. We are not here concerned with the genetical utility of sexuality. That utility is already understood. Our interest lies in the mechanically disruptive aspects of sexuality on the multicellular and social levels of integration. At the lowest level of integration, the level of the single cell, the sexual process consists in a pairing and interchange of genic substance between homologous chromosomes derived from two distinct chromosomal sets. The pairing and interchange of genic substance between homologous chromosomes, therefore, is the *fundamental* mechanism of sexuality. *All other manifestations of sexuality occurring on higher levels of integration may be said to serve this fundamental mechanism.*

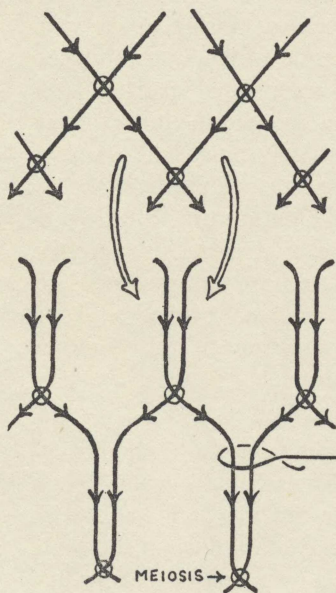
In order that chromosomal pairing and genic interchange may take place, it is clearly necessary that two distinct sets of chromosomes be brought together in space. Now, the bringing together of two chromosomal sets is not in itself a sexual act at the level of the chromosome. It is to be regarded instead as a *preparation* for the subsequent chromosomal pairing which constitutes the fundamental sexual process. The bringing together of two distinct sets of chromosomes is normally the function of specialized sexual cells, or gametes. The union of these gametes is called a zygote. The zygote is normally diploid in its chromosomes since it is formed by the union of two haploid chromosomal sets. In certain primitive organisms, chromosomal pairing

takes place immediately after the conjugation of gametes to form a zygote. And after this pairing and genetical reshuffling, new haploid cells are separated out without delay to lead an isolated existence. Such organisms are therefore haploid throughout their life-cycle, except for the brief periods when they come together in diploid zygotes. In other organisms (in the human individual, as one example), the union of gametes to form a zygote is *not* followed immediately by chromosomal sexuality. On the contrary, the two sets of chromosomes, yoked within a single nucleus, may continue to live and divide sexlessly into daughter cells for many years before any sexual pairing of the chromosomes takes place. From conception (union of sperm and ovum) to puberty in the human individual, for example, the cells divide sexlessly: only at puberty does the sexual pairing of chromosomes occur, followed by the formation of new recombined sexual cells. When, however, chromosomal pairing does eventually take place, it results in the production of fresh gametes which more or less immediately unite with gametes from other individuals, and so re-commence the living cycle. Organisms which behave in this fashion are diploid throughout their life-cycle, except for those brief periods when their haploid gametes have been formed and are still unmated. It should be noted that although chromosomal pairing need not follow immediately after the conjugation of the gametes, chromosomal pairing itself leads invariably to the *immediate* disjunction of new haploid individuals.

A fact of great importance emerges from the foregoing explanation. Haploid organisms differ essentially from diploid in that their chromosomal sets live out the periods between genetical recombination in isolation. In diploids, on the other hand, the sexless period is occupied by a neutral partnership of two distinct haploid chromosomal sets. The human somatic cell is just such a neutral partnership. From the time that the human individual is conceived, until he himself forms new gametes at sexual maturity, the partnership of his chromosomes remains sexually neutral and intact. Regarded in this light, diploidy is essentially the yoking together in space, in

pairs, of hitherto isolated vegetative nuclei. Figure 1 will make this clearer.

It will be seen immediately that one advantage of diploidy over haploidy is that each haploid set of chromosomes, on reaching the pairing condition, finds ready beside it, probably in the same nucleus, another haploid set with which to pair. An isolated haploid set, on the other hand, on reaching this condition, might find no partner near, and would thus be unable to reap the benefits of genetical recombination. In fine, diploidy, by turning the phase of sexless division into a partnership, introduces a new measure of security and exactitude into the sexual process.



HAPLOIDY.

1. Circles represent chromosomal pairing and genic interchange.

2. Each line represents the track in space and time of a single haploid set of chromosomes.

DIPLOIDY.

Haploid life-lines are here grouped spatially in pairs during the vegetative or asexual periods of development.

The conjugation of haploid gametes to form a diploid cell is not in itself a sexual process at the level of the chromosome, but is a preparation for the subsequent chromosomal pairing at meiosis.

FIG. 1.

If we regard the diploid nucleus as a *partnership* of two haploid nuclei, we can abstract the haploid nucleus as the true unit of the diploid organism. This same abstraction will hold

good on higher levels of integration. In fact, the haploid nucleus runs through multicellular bodies and societies in the same way that an unbroken thread may traverse the length and breadth of a complex tapestry. Our own society itself is simply a particular arrangement of haploid life-lines, created the better to preserve and recombine the haploid germ-tract. The haploid life-line is the real citizen and unit of mankind. Beside it, our bodies and communities are phantasmal, mere groupings and intersections of its strands. We shall show that even so massive a phenomenon as war is subordinate to the movement of these microscopic threads.

CHAPTER II

THE AGGREGATION OF LIVING MATTER

AGGREGATION is a process whereby living individuals, previously separate and independent, are held together to form larger individuals. The means of holding the subordinate units together may be chiefly physical, as in the case of the non-living connective functions between the cells of certain metazoan bodies; or they may be mainly psychical, as in the communities of the social Hymenoptera and mankind.

Writing on this subject, Julian Huxley puts it thus:

“Over and over again in evolution does the process of aggregation appear. It is an advantage, for at one jump it lands life on a new level of size, with new possibilities of division of labour and specialization. It appears in the aggregation of Protozoa to form the colonial ancestor of all higher many-celled forms. It appears again on this new level in the aggregation of hydroid polyps, of polyzoa, of ascidians, and especially in the beautiful floating Siphonophora, in which the polyp-like units (themselves historically aggregates of cells) have become so subordinate in relation to the whole that they can often scarcely be recognized as individuals, and the individuality of the aggregate is much more marked than that of its components. It appears in a new way in the Termites and in the social Hymenoptera—ants, bees and wasps. Here the bonds uniting the members of the aggregate are not physical but mental, their sense impressions and instincts; but the principle is identical throughout. Finally, in man we have not merely aggregation of physical individuals held together by mental bonds, but aggregation of minds as well as of physical individuals.”¹

¹ Julian Huxley, *Progress, Biological and Other*, reprinted in *Essays of a Biologist*, London, 1939.

Writing on the same subject of aggregation, Trotter makes the following highly significant remarks: ¹

“The animal kingdom presents two relatively sudden and very striking advances in complexity and in the size of the unit upon which natural selection acts unmodified. These advances consist in the aggregation of units which were previously independent and exposed to the full normal action of natural selection, and the two instances are, of course, the passage from the unicellular to the multicellular, and from the solitary to the social.

“It is obvious that in the multicellular organism individual cells lose some of the capacities of the unicellular—*reproductive capacity is regulated and limited*, nutrition is no longer possible in the old simple way, and response to stimuli comes only in certain channels. In return for these sacrifices we may say, metaphorically, that the action of natural selection was withdrawn from within the commune. Unfitness of a given cell or group of cells can be eliminated only through its effect upon the whole organism. The latter is less sensitive to the vagaries of a single cell than is the organism of which the single cell is the whole. It would seem, therefore, that there is now allowed a greater range of variability for the individual cells, and perhaps, therefore, an increased richness of the material to be selected from. Variations, moreover, which were not immediately favourable would now have a chance of surviving.

“Looked at in this way, multicellularity presents itself as an escape from the rigour of natural selection, which for the unicellular organism had narrowed competition to so desperate a struggle that any variation outside the straitest limits was fatal, for even though it might be favourable in one respect, it would, in so small a kingdom, involve a loss in another. The only way, therefore, for further advantageous elaboration to occur was by the enlargement of the competing unit. Various species of multicellular organisms

¹ Trotter, W., *Instincts of the Herd in Peace and War*, London, 1919, pp. 18-20. (The italics are our own: Author).

might in time be supposed in turn to reach the limit of their powers. Competition would be at its maximum, smaller and smaller variations would be capable of producing serious results. In the species where these conditions prevail an enlargement of the unit is imminent if progress is to occur. It is no longer possible by increases of physical complexity and the apparently inevitable sequence is the appearance of gregariousness. The necessity and inevitableness of the change are shown by its scattered development in very widely separated regions (for example, in insects and in mammals) just as, we may suspect, multicellularity appeared . . .

“A study of bees and ants shows at once how fundamental the importance of gregariousness may become. The individual in such communities is completely incapable, often physically, of existing apart from the community, and this fact at once gives rise to the suspicion that even in communities less closely knit than those of the ant and bee, the individual may in fact be more dependent on communal life than appears at first sight.”

The foregoing passages by two distinguished biologists make clear the meaning of the term “aggregation” in its normal scientific sense. In the present thesis, however, we intend to place a somewhat different connotation on the term by treating the cell as the unit of *all* aggregation. We have seen that the biologist distinguishes *two* principal stages in animal aggregation: first, the aggregation of cells into multicellular animals; and second, the aggregation of multicellular animals into communities. In the second case, he fixes his attention upon the whole multicellular animal as the unit of the community, *and allows the fact of its multicellularity to be temporarily eclipsed*. This way of looking at animal societies is of course the obvious and natural one; it is perfectly legitimate, and is indeed absolutely necessary in order to distinguish certain aspects of social behaviour. It does, however, tend to conceal another and equally important aspect of the social group. In our own view of animal societies we intend to focus our attention upon the *multicellularity* of their mem-

bers. That is to say, we shall regard the *whole* society as an aggregation of microscopic cells, *partitioned* into metazoan individuals. This trick of thought enables us to recognize that the cell, by influencing the behaviour of the intermediate individual, also influences the behaviour of the community as a whole. It enables us to regard the human group as being not so much *like* a multicellular body, *but as actually being a multicellular body in its own right*. And it leads directly to the possibility that the causation of certain large collective movements in human society may be sought for at a level of integration lower than that of the human individual. Nevertheless, this abstraction of the cellular unit in our society is only valid, like an optical section, as a method of disclosing one particular aspect of reality.

As far as possible, we shall employ the term "aggregate" in place of "individual" throughout. Thus, the metazoa will be referred to as *first-grade aggregates (of cells)*, and their communities as *second-grade aggregates (of cells)*. This is not because we wish to minimise the importance of individuality on supra-cellular levels of integration, but because the theory of war outlined in this thesis rests upon the abstraction of the cellular element contained in these higher levels. And the employment of the term "aggregate" will serve to keep this abstraction no less firmly before our own eyes than before the reader's.

It is advisable to mention here that biologists are by no means unanimous in regarding the metazoan as an *aggregate* of cells. According to the *organismal theory*, the emphasis is placed on the living mass as a whole, rather than on the constituent cells. As Sharp puts it: ¹

"According to this general interpretation, ontogenesis is a function primarily of the organism as a whole and consists in the growth and progressive internal differentiation of a single protoplasmic individual, this differentiation often, but not always, involving the septation of the living mass into subordinate semi-independent parts, the cells.

¹ Sharp, L. W., *Introduction to Cytology*, 1934, pp. 21, 22.

Since the septation is rarely complete, all the parts remain in connection and the whole continues to act as a unit. Hence development is not primarily the establishment of an association of multiplying elementary units to form a new whole, but rather the resolution of one persistent whole into newly formed metabolic units: it should be thought of not as primarily a multiplication and co-operation of cells but rather as the differentiation of growing protoplasm ”.

For the purpose of our argument, however, it is immaterial whether we regard the metazoa, and their communities, as aggregates of cells or as single protoplasmic entities in which septation into cells and metazoan individuals has occurred. In either case, the “ whole ” contains a multiplicity of *nuclei*, and it is essentially in the relation of the sexual behaviour of the nucleus to the behaviour of the protoplasmic “ whole ” that our own preoccupation lies. In passing, it is of interest to note that a consistent application of the organismal theory to the *phylogenesis* of a *social* species would approach our own device of regarding the social animal as a septation of the larger protoplasmic mass of society.

It is no part of the present enquiry to discuss the *general* relation of the soma to the germ-plasm, or to treat of its appearance at the unicellular (or non-cellular) level. The views in this connection held generally among biologists are adequate for our present purposes. Our concern here lies in the relationship of the soma to the process of aggregation on the one hand, and to the sexual process on the other. This relationship can be most suitably discussed by proceeding at once to a consideration of the first-grade aggregate of cells.

CHAPTER III

SEXUAL DISRUPTION OF MULTICELLULAR BODIES

FIRST-GRADE cellular aggregates are formed when the two daughter-cells, produced by the division of a mother-cell, do not completely sever their connection with each other, but remain together. This process, once started, can lead by repeated cellular division to the building up of very large aggregates indeed. Since we are about to deal with the disruptive effect of sexuality on cellular aggregation, the reader should try to understand that one very important difference between a multicellular body on the one hand, and a scattered population of single cells on the other, lies in *the way they occupy space*. A diagram will make this clearer.

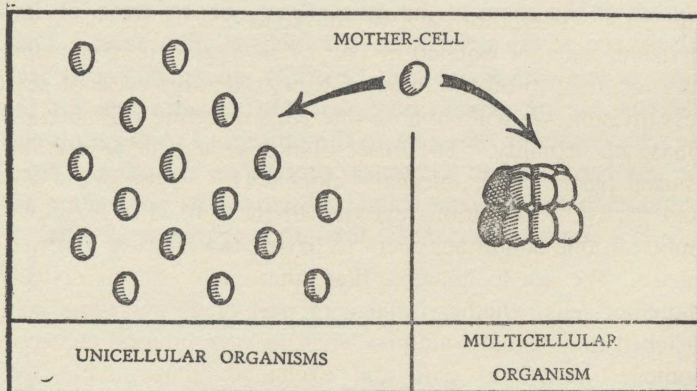


FIG. 2.

In Figure 2, we start at the top of the diagram with a single mother-cell which produces by division sixteen daughter-cells. To the right of the page, the daughter-cells remain con-

nected to form an aggregate. To the left of the page, they have separated after division to form a cloud of independent single cells. By lumping together the scattered cells on the left, we clearly get the aggregate shown on the right. By scattering the aggregate shown on the right, we get the cloud of single independent cells shown on the left. We see, then, that one important difference between the two formations of cells lies in *the way they occupy space*.

We can now consider how sexuality in the cell affects the aggregation of cells. But before we do so, we must recall two important characteristics of the sexual process. The first is, that sexuality in the cell tends to come in cycles. The second is, that it normally requires the interchange of genes between individual cells of the same species which *are not genetically identical*.

Let us turn again to Fig. 2. Every one of the single cells in the cloud on the left of the page is descended from the same mother-cell. The same is true of the cells aggregated on the right. Up to this stage we will suppose that the division of cells has been sexless; that is to say, there has been no pairing of chromosomes and no interchange of genes between the cells. Therefore each of the sixteen cells produced by division, whether isolated or part of an aggregate, is genetically identical to all the others. Now, after this cycle of sexless division, we will suppose that each daughter-cell enters a phase of sexuality. The onset of this sexual phase may be caused partly by an internal "clockwork" in the cell itself, and partly by conditions external to the cell. For example, unfavourable conditions seem to hasten the onset of a sexual phase. We are to imagine, then, that each of the sixteen daughter-cells, whether isolated or part of an aggregate, has reached that sexual condition when its own internal chromosomes "want" to pair and exchange genes with the chromosomes of another cell. We remember here that the sexual interchange of genes can only normally take place between two cells which are *not* genetically identical, which are not directly descended, that is to say, from the same mother-cell. Therefore the sixteen daughter-cells on our

diagram, all of which *are* genetically identical, cannot pair with one another, but must search for sexual partners from other cell-families.

These sixteen daughter-cells are arranged in two different ways on our diagram.

Let us first consider the cloud of isolated cells on the left of the page. These cells are able to move about quite independently. While they have been dividing sexlessly, they have also been straying apart from one another, and in their wanderings they have come into proximity with cells from other families than their own. The onset of the sexual phase, therefore, finds them scattered over a wide area and close to alien cells, some of which, being in the same sexual condition as themselves, are both ripe and eligible for an exchange of genic substance. Sexual dissemination in the isolated cells is thus very conveniently achieved by the wanderings of the cells themselves during their period of sexless division.

But what happens in the case of the aggregated cells on the right of the page? Here, the onset of the sexual phase finds the sixteen daughter-cells joined together. They cannot pair with one another, for all are descended from the same mother-cell and are genetically identical. Therefore they are compelled to forage for sexual partners beyond the limits of the aggregate. It is very important to understand that this very act of foraging *must lead automatically to the disruption and dispersal of the aggregate*. Of course, no substance is destroyed by the scattering: only the aggregate, *as an aggregate*, is destroyed by sexuality. So we can lay it down as an axiom that *sexuality is fundamentally disruptive of cellular aggregation*. Unless the reader is absolutely clear in his mind as to why this should be so, he is advised to re-read the foregoing paragraphs, for this axiom admits the *widest* application. We shall see that it applies also to cellular aggregation on a higher level of complexity in the form of the human group, and the disruption of that group by war. Indeed, this axiom forms the keynote of our theory of war.

Now, small, short-lived colonies of cells, which were formed only to be dissolved by the onset of sexuality in their

member-cells, probably appeared very early in evolution. They represent a stage through which our own many-celled bodies have evolved. Even today, however, organisms exist which have not advanced beyond this low level of cellular integration. Mr. Baker has written the following lucid passage on this subject:¹

“It seems very probable that long before there were any many-celled animals in the usual sense of the term, some single-celled animals changed their mode of life in that the two daughter-cells formed by division did not separate completely, but remained together. This habit was further perfected until many divisions passed without separation into component cells, so that quite a large colony was formed. At the present day there are colonies of single-celled organisms of this sort. Each cell derives benefit from its closeness to the other cells and yet is not so dependent on the other cells that it could not live without them. It is difficult to say whether this group of cells is to be regarded as a colony of single-celled animals, or as a single many-celled animal. It is probable that many-celled animals evolved in this way from single-celled ancestors.

“In the most specialized of these colonies of single-celled animals, certain cells are set aside as germ-cells. In less specialized ones, all the cells have the power of becoming germ-cells, *and occasionally the whole colony breaks up into a number of gametes*, each of which fuses with another, generally from another colony, and the process of colony-formation by division without separation starts again.”

As we have said, there exist even today primitive colonies of cells (the colony is known in some cases as a *coenobium*) in which all the member-cells enter into the sexual condition and scatter away from one another. The algae *Pandorina* and *Eudorina* may be cited as examples of this type of cell-colony. Figure 3 gives a schematic representation of its life-cycle.

¹ Baker, J. R., *Sex in Man and Animals*, London, 1926, pp. 19, 20. (The italics are our own: Author).

A study of this life-cycle makes it clear that an aggregate in which all the member-cells have the power to become sexual cells can only last as long as the *agamogony* (phase of sexless division) of the species. For example, suppose that the cells of the aggregate divide sexlessly for a period of four weeks, then become gametes which fuse with other gametes,

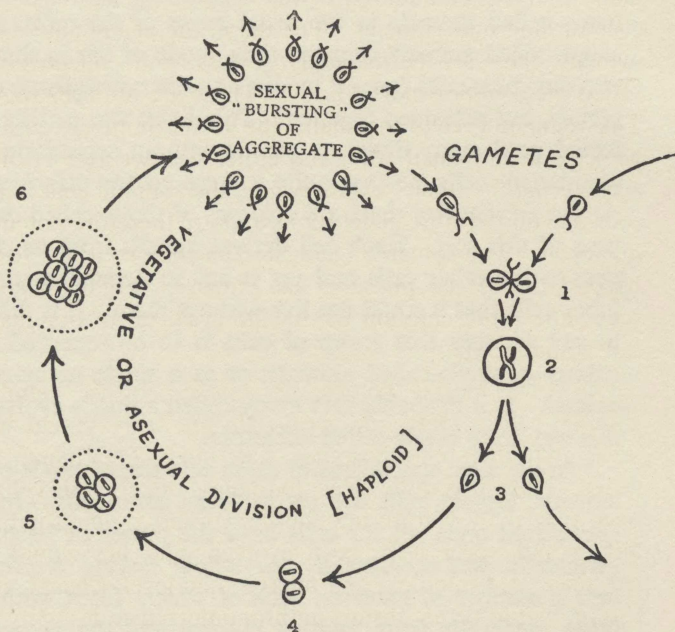


FIG. 3.—Generalized life-cycle of an aggregate of haploid cells in which sexual disruption is complete. 1, conjugation of gametes from different colonies. 2, diploid zygote. Sexual pairing of the chromosomes and genetical recombination. 3, reduction division of the zygote restores haploid condition. 4, 5, 6, growth of haploid aggregate. 7, sexual phase of aggregate. All cells become gametes, leading to total sexual disruption of the aggregate.

and then again divide sexlessly for another four weeks, repeating this cycle over and over again: it is quite obvious that any particular aggregate cannot last longer than the four weeks of the *agamogony* before being scattered into individual gametes. It is equally clear that in so short a time Nature

cannot develop the aggregate as a *whole* into a complex or highly integrated individual. But the possession of an integrated multicellular body enables a species to invade and survive in new and hitherto inaccessible habitats and surroundings, and is therefore favoured by natural selection. So Nature has got round the difficulty by preventing some (normally the greater number) of the cells of the aggregate from ever turning into gametes. For these, the agamogony is permanent; they are permanently sexless, and collectively are called the *soma* or mortal body. These are the cells that die. The remaining cells (normally the lesser number) turn into gametes in the usual way, and either wander away from, or are *expelled* by, their sexless sisters, the somatic cells. These cells live on in future generations and are therefore potentially immortal. The somatic aggregate can thus continue to exist beyond the sexual phase of its gametes. Figure 4 gives a schematic representation of the life-cycle of an organism of this somatic type.

Our own mortal bodies, of course, consist mainly of somatic cells. Only our germ-cells are truly sexual in the sense that their chromosomes pair and interchange their genes. Now, it is quite clear that unless our somatic cells had been turned by Nature into sterile workers, human individuality could never have been evolved, and life would have remained at a mindless and microscopic level. Clearly, therefore, it would be an absurd anthropomorphism to "pity" the somatic cells because of the frustration of their sexuality. This is an important point, for we shall see Nature repeating this process on a higher level of integration in the case of the ants and bees and termites by preventing large numbers of individual insects from ever becoming sexual individuals. The motive here is the same as in the cell-colony, to save the community or aggregate from disruption. If the worker bee were not as sexless and somatic as our own body-cells, the larger individuality of the hive could not exist. It is therefore absurd to deplore, as some scientists do, the sexless condition of the worker bee. Since much of the disruption and bloodshed of our own society is caused by individual sexuality, by

our lack of any social soma, human sentiment and pity are not only wasted but impertinent when levelled at the perfect somatic commune of the bee.

To continue. In our discussion of the conflict between the centrifugal action of sexuality and the centripetal action of aggregation, we have tacitly been dealing with haploid cells.

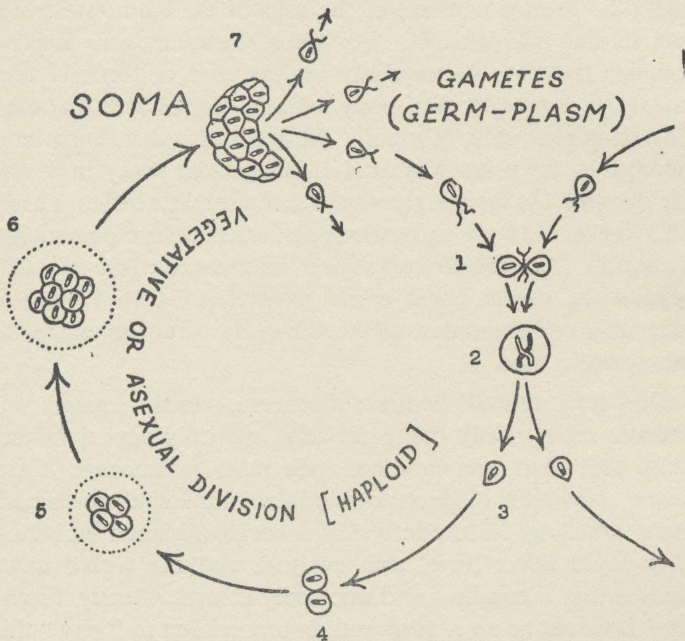


FIG. 4.—Generalized life-cycle of an aggregate of haploid cells in which somatic differentiation takes place, and in which sexual disruption is therefore partial. 1, conjugation of gametes from different colonies. 2, diploid zygote. Sexual pairing of the chromosomes and genetical recombination. 3, reduction division of the zygote restores haploid condition. 4, 5, 6, growth of haploid aggregate. 7, sexual phase of aggregate. Sexuality is here restricted to the gametic cells; the remainder of the colony—the soma—therefore suffers no disruption.

The sexual pairing of the chromosomes takes place between haploid sets of chromosomes. In the case of an aggregate of haploid cells, therefore, chromosomal pairing can only take place beyond the confines of the aggregate. A gamete from

one colony fuses with a gamete from another (in the middle of no-man's-land, as it were) to form a diploid zygote. Within this zygote, the chromosomes of the two conjugants pair immediately and re-shuffle their nuclear contents. The new, recombined nuclei then separate and build up further haploid aggregates by sexless division.

In the case of an aggregate of *diploid* cells the process is rather different. Here we start with two haploid gametes, which conjugate to form a diploid zygote. So far, the process is the same as for the haploid aggregate. But within this zygote the sexual pairing of chromosomes does *not* immediately take place. Instead, the zygote proceeds by sexless division to build up an aggregate in which every diploid cell contains an exact copy of the two haploid sets of chromosomes which entered into the original zygote. Thus far no sexual pairing has taken place between the two haploid sets of chromosomes. They have remained sexually neutral in every nucleus of the aggregate. Eventually, however, there comes the onset of the sexual phase in all the aggregated cells. But these cells are diploid: in each of them there are *two* haploid chromosomal sets, which only now for the first time pair sexually with one another *inside* the nucleus. So far so good: but the two haploid sets of chromosomes, having completed their interchange of genic substance, and having thereby become two quite different sets, are now driven apart from each other by a physical repulsion. This is in order that they may form fresh zygotes with haploid cells from other colonies of the same species, and so build up new diploid aggregates by sexless division. Now, it is obvious that the recombined haploid cells, by separating from one another and wandering off to form new zygotes with alien cells, must necessarily disrupt their aggregate as a whole. And so we say that sexuality is just as disruptive of the diploid aggregate as it is of the haploid. Figure 5 shows the life-cycle of a diploid aggregate in which total sexual disruption takes place. The reader should note that in the diploid aggregate, unlike the haploid, gametes are formed immediately *after* chromosomal pairing inside the diploid nucleus.

In the diploid as in the haploid aggregate, entire sexual dissolution is prevented by restricting sexuality to a limited number of cells. In the somatic (sexless) cells, the neutral partnership formed at the conjugation of the haploid gametes is extended throughout the life of the aggregate as a whole. Pairing of chromosomes never takes place in the somatic nuclei, but is confined entirely to the germinal nuclei. We are not here concerned with the chemical or other means by which sexuality is repressed in the somatic cells: the fact that it *is* repressed is sufficient for our present argument.

If the reader finds any difficulty in grasping the relationship of diploid to haploid aggregates, it may be of help if he pictures the diploid aggregate as consisting of two haploid aggregates, one of which is so perfectly superimposed or "registered" upon the other that the outlines of all its cells are lost in the corresponding outlines of the other, and there results an organism in which all the cells are diploid. Now let him trace simultaneously in his mind's eye the life-cycle of both haploid aggregates. The "stereoscopic" combination of the two life-cycles will give him, very roughly, the life-cycle of a diploid aggregate.

We come now to a rather curious speculation. We have supposed that the pairing of chromosomes takes place within all the cells of the primitive diploid colony, and is followed by the sexual disruption of the aggregate as a whole. Although the complement of genes is identical in every diploid cell, the haploid sets resulting from the random sexual re-shuffling of this complement will not be identical throughout the aggregate. In one cell, the genes will be shuffled in one way; in the next cell, they may be shuffled in another way. Remembering this, let us picture the diploid aggregate at the stage when it has just broken up into a cloud of recombined haploid gametes. Since these gametes result from a purely random re-shuffling, they are not all genetically identical. So it may in some cases be possible for them to produce useful new varieties by fusing with one another. All the same, they will find greater scope for variation by fusing with gametes from other aggregates; and in all the higher diploid

organisms this is what occurs. But let us for a moment suppose that the diploid aggregate is at that low stage of evolution when the externalization of its gametes has not yet been perfected. In other words, some of its gametes *fuse with one another*, while others search far afield for zygotic partners.

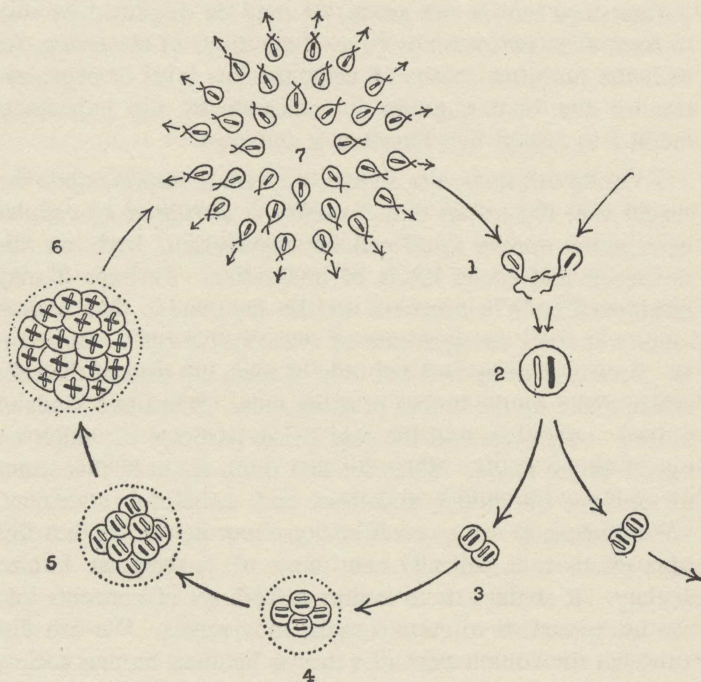


FIG. 5.—Generalized life-cycle of an aggregate of diploid cells in which sexual disruption is complete. 1, exogamous conjunction of haploid gametes. 2, haploid gametes unite to form a single diploid cell (zygote). The chromosomes derived from the two gametes do NOT pair sexually or exchange genes at this stage (cf. Fig. 3), but form a sexually neutral partnership which is preserved throughout the subsequent divisions of the zygote to build up an aggregate of diploid cells. 3, 4, 5, vegetative or asexual division: each diploid cell is a sexually neutral partnership and an exact replica of the original zygote at stage 2. 6, sexual (chiasma) pairing of the chromosomes originally derived from the exogamous conjugation of gametes at stage 1 now takes place for the first time in every nucleus of the diploid aggregate. Having exchanged substance with one another, the recombined chromosomes break their diploid partnership and separate into new haploid gametes ready for the next conjugation. 7, the exogamous movement of the haploid gametes leads to the total disruption of the aggregate.

There is a curious parallel between this hypothetical state of affairs and what happens on a higher level of integration in the case of human society. In the human group, the recombined offspring produced by the pairing and reduction of the parental "zygote" may either (normally) enter into new partnerships *within* the group, or may be dispersed by war to form alien partnerships *beyond the limits of the group*. As with the primitive colony of cells, the low level of organization of the human group is indicated by the haphazard method by which hybridization is achieved.

To bring this section to an end, we wish to impress upon the reader that the axiom that *sexuality is disruptive of cellular aggregation* applies to *all* cellular aggregation, both on the metazoan and social levels of integration. Perhaps it may not immediately be apparent to the lay reader that *human society is itself an aggregate of microscopic cells*. But so it is. Society is composed not only of men, but also of the cells which make up the bodies of those men. It has two kinds of citizen: ourselves, and the tiny living particles of which we ourselves are made. When we first think about it, this seems an obvious but rather pointless and unhelpful statement. Nevertheless, if we go on thinking about it, we see that this idea offers us a radically new way of looking at human society. It enables us to import a fresh set of concepts into the interpretation of certain social movements. We can discard the threadbare analogies drawn between human society and metazoan bodies. We can say that our society *is*, in the most literal sense of the words, a multicellular body. It only dawns upon us very slowly that the cell, by acting in ourselves, *is also acting in society*. Men behave as they do largely because their cells behave as they do. But since the normal man is virtually unaware of his multicellular constitution, it is only natural that he should regard his social behaviour as originating in his own thoughts, and as being therefore so completely autonomous as to sever him from the rest of animate Nature and its pettifogging limitations. It is startling to find that he consents to love, sleep, eat and defecate at all; but doubtless he does these things in regularly

recurrent fits of divine caprice, and not by any means through necessity.

That, however, is by the way. We have seen that sexuality is fundamentally disruptive of *all* cellular aggregation. We have noted in passing that human society is itself, in the last analysis, a multicellular aggregate. With these two thoughts fresh in our minds, it may be useful to see how they can be brought to bear on that collective movement known as war. This, of course, is anticipating our own argument. It cannot be helped. It is even desirable that we should come at our conclusions repeatedly in the course of the argument, each time from a slightly different angle. A new theory, however sound, practical and down-to-earth it may be, always appears wildly improbable at first. We have to assume that the reader is unaccustomed to thinking of war as a collective sexual movement, and that in any case, to begin with, he will most certainly not wish to think of it like that. There is an initial resistance to be overcome. To remove that resistance, it will be more effective if we make a repetition of our conclusions, administer them in small doses, as it were, each dose adding to the effect of the last. A single large dose, on the other hand, is only too likely to glide off the reader's mind like water off the back of the proverbial duck.

Let us, then, consider a war between two human collectivities as being simply *a movement of concrete multicellular bodies in space*. For the moment, we shall leave right out of the picture the mental attributes of these moving bodies, including their own account of the motive of their movement. That is to say, we shall *abstract* from all the infinitely complex phenomena of the warlike situation *only the multicellular constitution of the human beings engaged in war, and their movements in space*. Obviously, we shall be excluding an enormous amount from the picture, and retaining very little. But the little we retain we can be sure about, as being beyond dispute. The reader may object that this abstraction is not likely to be of any use as throwing light on the causes of war. His objection may be based on his belief that the causes of war go no deeper than the ideas in men's minds or

the purely psychological pattern of their behaviour. It is quite possible that he is right. But, supposing that our abstraction of cytological categories and their movements, causes war to *look* like a collective sexual process, how will this fit in with the idea that war has only mental causes? We can answer this question in three ways. In the first place, we might say that the apparent resemblance of war to a collective sexual movement, disclosed by our abstraction, is only a chimera, which disappears as soon as we allow other factors to come back into the picture. Or we can say that it is possible for there to be two quite distinct and unconnected grades of reality in the warlike situation. That is to say, regarded simply as a movement of multicellular bodies in space, war might legitimately be described as a large-scale sexual phenomenon. On the other hand, regarded in terms of ideas or mental behaviour, it might with equal force be described as an ideological or psychological phenomenon. And we might say that there was no connection between the two grades of reality. This, however, would be most unsatisfactory. It would leave us wondering whether we must attach more importance to the biological or to the psychological level of reality. The third and most satisfying line of thought is to regard the two grades of reality *as running parallel*, the mental conforming to the physical, the psychological to the biological. That would mean that when we regarded war as a *collective* sexual movement, we could at the same time admit all the mental complexity which goes with it, down to the last detail, by treating that complexity as epiphenomenal to the underlying biological pattern. We are already accustomed to this way of thought in the case of *individual* sexuality, where we treat its psychological aspects as running more or less parallel to and serving biological requirements.

But, in order to abstract the movements of concrete multicellular bodies from all the other details of the warlike situation, we have, so to speak, to place ourselves mentally *outside* that situation. We have to regard human war in the same mood of detachment and objectivity that we might bring to bear on a study of the social behaviour of an ant-heap. That

is to say, we have for the moment to regard war as a *silent* phenomenon, as one in which we can count on no help from explanations by the living entities concerned. Only afterwards, having made what we can out of the movements of multicellular bodies alone, shall we allow normal explanations of war to slip back into the picture and take their place in the pattern of the whole. This way of looking at war is bound to appear presumptuous. But we are so appallingly ignorant of the inner causes of war, and so openly proclaim our ignorance, that a new line of thought is not to be despised, however improbable it may seem. The whole difficulty in this matter is that we ourselves, as individuals, are fatally engrossed in the details of the warlike situation. We cannot see the wood for the trees. And we are so made by Nature that we seldom think about war without prejudice and passion. It is therefore more than ever necessary for us, even though it may be only for a moment, to place ourselves *outside* the warlike situation, to study it from without.

To continue. Let us see how far abstraction will take us. In the first place, the human members of warring collectivities can be divided into four categories as regards their purely multicellular constitution:

- A. Those consisting of somatic cells, and containing active microgametes (spermatozoa).
- B. Those consisting of somatic cells, and containing active macrogametes (ova).
- C. Those consisting of somatic cells, in which the production of gametes has either ceased or is on the wane.
- D. Those consisting of somatic cells, in which the production of gametes has not yet begun.

Now, if we consider the movements in war of these four categories, we are left with two significant and indisputable facts common to the majority of warlike situations:

1. The most extensive movements beyond the limits of the collectivity are carried out by Category A, viz., those bodies of somatic cells containing active microgametes. The other three categories, viz., those

consisting almost entirely of somatic cells, or containing active macrogametes, remain relatively stationary in war.

2. The movement of Category A is followed in many cases by the union of its microgametes with the macrogametes of alien collectivities.

If we confine our attention solely to this cellular abstraction, it cannot be denied that war, in a number of *fundamental* particulars, resembles sexual systems with which biological science is already familiar. For example, a scientist from Mars, acquainted with the body of this science, but knowing nothing of our current explanations of war, would unhesitatingly describe these phenomena as sexual, and attribute them to whatever factors impose genetical recombination on living organisms. And if we ourselves were to regard them in the same frame of mind that we employ when studying the reproductive mechanisms of, let us say, a polyp, we should come to the same conclusion, on the basis of the cellular categories and their movements alone. Or again, if we could cause ourselves in imagination to shrink, like Alice in Wonderland, so that we assumed the functions of our own cells, war would appear plainly as a collective sexual process, and political and ideological concepts would lie right outside our universe, as attributes only of our multicellular society as a whole.

But here the reader interposes: "Let us grant that, within the absurdly narrow limits of this abstraction, war resembles a collective sexual process. But man is more than a mere collectivity of cells. If we give due weight to the sovereignty of the human mind, to its politico-economic systems and motives and ideologies, the sexual components and resemblances of war totally disappear".

But do they disappear? They may disappear *from our minds*. Indeed, it is clear that they have never hitherto appeared there. But they certainly do not disappear from the warlike situation itself, as scalpel and microscope can infallibly testify. That this resemblance of war to a collective sexual process may be concealed and overlaid we do not attempt to deny. Were it manifest, this work would be superfluous. But no amount of sophistry can argue our cellular

categories and their movements *out* of the warlike situation. And these categories are general to every war, in every clime and epoch, as no political, economic or ideological factor is general. In every war that ever was, abstraction discloses a resemblance between the movement of these categories and a large-scale sexual movement of the group.

"Very well," the reader interrupts: "I admit that these cellular categories and their movements remain present in the warlike situation itself, and that their abstraction creates an appearance of collective sexuality. But the waging of war is not determined on the cellular plane of integration, but on the plane of social behaviour. Its causation is to be found in the province of politics, economics, ideology, individual and group psychology, and related systems. That is to say, two main patterns are present in the warlike situation: the cellular and the sociological. The appearance of sexuality, created by your artificial abstraction of the cellular pattern, is entirely meaningless and adventitious."

But surely, it is remarkable enough if we can, by any abstraction or method of thought, cause war to assume the appearance of a collective sexual act. Admittedly, the idea is disturbing and repellent that while we perform our individual duties in war, we may, *without being at all aware of the fact*, be forming part of a large-scale sexual movement of the group. But we can scarcely dismiss that larger pattern as meaningless and adventitious. Sexual mechanisms are too primary and important for that. Not only have they been with us since the beginning of our evolution, but our own bodies, the very two sexes of our species, have been created in conformity with their needs. It is obvious that these biological mechanisms are far nearer to us, more intimately woven into our being, more ancient and *fundamental*, than any political or ideological factor. And so, when we find that it is possible, by any means, to cause war to take on the appearance of a collective sexual act, we have, metaphoric-ally speaking, to sit up and take notice.

Now, modern biological science regards the sexual process (in its essence, a cytological phenomenon) as being instru-

mental to the survival of complex organisms in a constantly changing environment. The fact that sexual mechanisms are to be found in almost all the higher forms of life, suggests that for them at least sexuality may be an ineluctable necessity, a necessity which, in the case of man, would remain present whatever changes the sociological system might undergo. If that is so, only those individual and social patterns of behaviour which deferred to such a necessity would be tolerated by natural selection, while those in direct opposition to it would automatically be eliminated. In a creature such as man, endowed with great responsive versatility, we might expect to find a wide range of individual and social behaviour having a common end in, but, by its very diversity, masking, the genetical recombination of the cell. That human warfare leads to the physical intercrossing of whole ethnic groups, and hence to genetical recombination on a Titanic scale, is a constant, universal and indisputable historic fact. Remembering that this recombination is a biological necessity for our species, indeed for all forms of life, it is difficult to regard it as the merely adventitious outcome of sociological determinants. On the contrary, it is far more consonant with our present state of knowledge to regard the whole ephemeral array of politico-economic and religious incitements to war as epiphenomena of this recurring and *collective* recombination of the human cell.

To make this concept clearer, a parallel may be drawn between individual sexuality and collective sexuality in the form of war. The modern geneticist has no hesitation in regarding the psychological concomitants of individual sexuality as ultimately serving the process of chromosomal pairing in the cell. To regard genetical recombination as the adventitious outcome of the complex mental behaviour by which it is achieved, would seem to him absurd. And yet, in the case of human warfare, we treat its one invariable genetical result—physical hybridization—as though it were entirely adventitious and unconnected with the causes of war. We produce one superficial explanation of war after another, only to discard them all in the end as unsatisfactory.

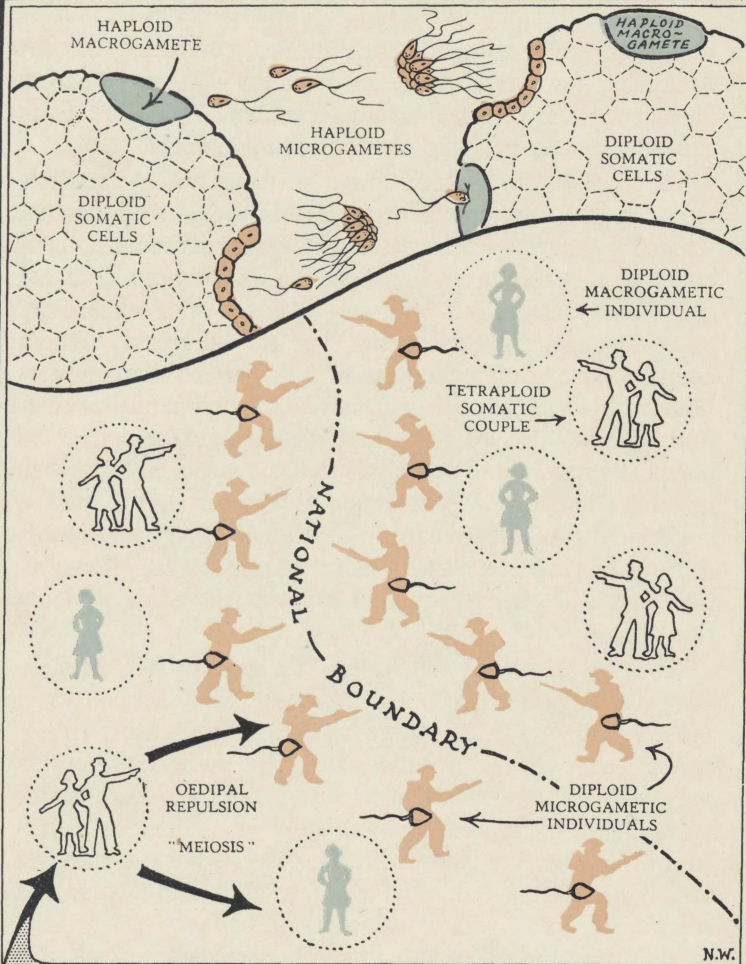
The one really massive biological result of war — genetical recombination — we neglect completely. We feel that this mechanism, which has largely made us what we are, is insufficiently important to be a cause of war. That, perhaps, is because we are obsessed with the idea that the true cause of war must present itself spontaneously to our minds. It is difficult for us to understand that we may wage war for a reason of *which we are not even aware*. But indeed, Nature is no more concerned with supplying us with reasons than she is with supplying reasons to a pollinating plant. She simply endows us with a form of compulsive behaviour which leads to genetical recombination on a collective scale, and leaves the matter at that. The system works very well, because we do, in point of fact, continue to make war without being able to find any *rational* explanation for the act. This inability does not deter us in the least, which in itself is very strange, although we seldom find it so. Now, in the case of individual sexuality, rationalization came long before the biological explanation. But the biological mechanism itself existed from the beginning. In the case of that collective sexual movement which we know as war, we are still in a fog of wild and random reasoning. Only dimly do we begin to see how this phenomenon also may be in harmony with the discoveries of modern science; and how certain features of our collective no less than of our individual behaviour may have been selected to serve the recombination of our cells.

The most impressive aspect of modern warfare is its monstrous Juggernaut inevitability; its capacity for crushing and flattening every excrescent remonstrance, all rational and humanitarian protest, beneath the blind indifferent will of the majority; and its insensibility to individual death and suffering so only that its collective purposes be achieved. Indeed, it has seemed to many that demons work unseen beneath its surface. Certain it is that the full directive will and energy of the process reside not in this puppet-manikin or that, or in any single group of men, but in the racial Leviathan as a whole: a monster greater than any summation of its members. In the frame of our hypothesis, it is

as though the germ-tract of the species, combining and recombining, for ever shuttling its deathless weft-thread across its undying warp, were scattering the mortal bodies of its carriers like unsubstantial chaff about their world.

To conclude this section, we wish to draw the reader's attention to Figure 6, which graphically compares the sexual "bursting" of the microgametes of an hermaphroditic cell-colony (after pairing and reduction in the diploid germinal cells) with the warlike "bursting" of a human collectivity (after the pairing and "reduction" of its "tetraploid" human couples). Obviously, the parallel is imperfect in many particulars. Nevertheless, it will serve as a first crude association of ideas. Each human individual should, of course, be pictured simply as an aggregate of cells, as belonging to one or other of the categories already mentioned; and the whole collectivity should be regarded as a larger aggregate of *the same microscopic particles*. All "human outlines," and all that goes with them, should be momentarily excluded from the picture.

Now, before we go any further, we have to be absolutely clear on one point. No one is more painfully conscious than ourselves of how naïve and absurd this diagram must appear to the reader on a first examination. His immediate reaction may well be to shut the book and exclaim: "No more of this rubbish!" On the face of it, it *does* seem ridiculous to picture the soldiers of two warring groups as a kind of larger microgametes. The reader will "know" in his own mind that wars are caused by the most complex factors, by a conflict of ideologies, by an economic struggle for existence, by sadistic and other psychological impulses and urges, and so on and so forth. No item of this stupendous complexity appears on our diagram. Then again, the reader will picture all the complex organization which goes with modern war, the General Staffs, the armament factories, the civil defence services, and so on endlessly. Nothing of all that, also, appears on our diagram. But when we drew this diagram, we drew it with a full consciousness of that complexity. And the reader, when he examines the diagram, should look *through*



The human elderly married couple can be regarded quite literally as a tetraploid and somatic sex-heterozygote $[(X)X : (X)Y]$ —a somatic residue which has previously "reduced" to form diploid macro- and microgametic individuals— $[(X)X]$ and $[(X)Y]$ by the meiotic segregation of the sex-determinants (cf. Figure 8).

Figure 6.

that same complexity, as through a transparency, to the bare elements we have drawn.

Nevertheless, we must insist that whatever we have shown on this diagram does actually exist in the warlike situation. Let there be no mistake about that. The bodies of the soldiers do indisputably contain enormous numbers of active microgametes, and these somatic vehicles, carrying the microgametes with them, do tend to move in space beyond the confines of the group. So much is fact, not hypothesis. It is equally certain that the microgametes of these soldiers tend in many cases to unite with the macrogametes of females belonging to the defeated group. That also is fact, not hypothesis. Of course, the reader will object that all this has nothing whatever to do with the causes of warlike situations. His objection will take no notice of the fact that he can, in any case, give no adequate account of what those causes are. That, however, for the moment, is beside the point. The fact remains that when we make a kind of child's drawing of the warlike situation (putting in very little, it is true; but putting in nothing that is not actually there), that situation looks disturbingly like a collective sexual act. How are we to deal with that appearance? Are we to suppose that it has been put there by Nature for no more serious purpose than to humiliate our pretensions? If that were so, we might be tempted, ostrich-like, to bury our heads in the sand and pretend that it did not exist. But in any case we cannot get rid of the appearance. So long as we go on making war as we do now, we shall continue to create this biological appearance of a collective sexual act. The best method is to face up starkly to its existence, to take the idea at its repellent and unpalatable worst, and adjust our thoughts to it. That adjustment is better left to the reader himself. We cannot, in the present work, pursue it into all its detailed applications. But because the concept itself is fundamentally logical and sound, there is no point at which it can ultimately fail of application. Indeed, we have no objection to the reader toying with it at first as an amusing or facetious idea, in the manner of, "What will people think of next?" That is as

good a way as any for it to gain its first admission to his thoughts. He will soon find himself waking up to the fact that, so far from being facetious, this concept is the most massive, commonsense, down-to-earth and probable interpretation of the warlike situation that it is possible to imagine, and the only one in existence that is commensurate with the tremendous scale and magnitude of that situation. Nevertheless, the initial mental adjustment requires courage and breadth of vision, for the concept itself is of such sweeping dimensions that timid or chaotic minds will never be capable of accepting it. It is like going out from a narrow room into an illimitable hall. There is no knowing where this idea may lead us. But the vision, the mental unification and the insight into great events which we gain thereby are worth any amount of pain and disquietude in the reconstitution of our thoughts.

Suppose that we admit that war, when suitably abstracted, has the appearance of being a collective sexual act. After all, it was indeed only to be expected that the human group, as a protoplasmic aggregate, should have some form of *collective* sexuality of its own. We are not outside the laws of life. Every existing protoplasmic aggregate has some form of collective sexuality. The fact that men have complex minds does not debar their society from that rule. It only means that collective sexuality in their case will assume a highly complex form, a form which may well conceal its underlying pattern. And there is ample room in this concept to accommodate all the ideological, economic and psychological complexity which runs parallel with the genetical tendencies of human war. It would be a worthless and mistaken concept if it could not make that accommodation. The complexities of war slot into place as contributory factors, aiding and serving what now occurs. And finally, this at least is beyond dispute, that we have to have some truly broad and massive biological foundation to support not only the immense human organization and energy of war, *but also the unteachability of mankind itself*. In the mechanism of collective sexuality, we have a foundation which goes down into the very roots of life.

CHAPTER IV

SEXUAL DISRUPTION OF COMMUNITIES

WE may suppose that the same general advantages attend the second-grade aggregation of cells as attend first-grade aggregation, viz., those mentioned by Trotter and Julian Huxley. The usual explanations of how societies originated, postulating a "herd-instinct" in some cases as the nexus, have been suspect by certain writers. This concept of a gregarious "instinct", while extremely plausible as discussed by Trotter in that most germinal of books, *The Instincts of the Herd*, suggests no immediately apparent method for its substantiation. We here incline to the view that second-grade cellular aggregates (communities) are primarily sexual and reproductive associations; that they are held together in the first instance by the mating attractions of their members. There is no conflict between this view and Zuckerman's, that "reproductive physiology is the fundamental mechanism of society."¹ We shall, however, take up the position that while sexuality may be regarded as the primary bond of second-grade aggregation, its unlimited action opposes the further integration of the aggregate. Of course, this standpoint does not rule out the possibility that the reproductive association, once formed, might then have imposed upon it by natural selection an unlimited degree of individuation, which might well include the development of a specific herd-instinct. But reproductive mechanisms, not herd-instinct, would be the original nexus. For the purpose of the present discussion, however, we need not allow ourselves to be drawn aside into what is still a polemical field, but can proceed at once to an examina-

¹ Zuckerman, *The Social Life of Monkeys and Apes*, p. 30.

tion of how the sexual process may oppose the higher integration of animal societies.

Second-grade aggregates of cells, animal societies, are diploid in respect of their constituent cells. The males in species with haplo-diploid sex differentiation form no exception to this rule; both their somatic and their germ cells differ morphologically, not genetically, from the haploid egg cells which by differentiation give rise to them. They must therefore be regarded as belonging not to the aggregate as a whole but directly to its germ-tract. The advantages of diploidy which we have already noted on lower levels of integration are seen to obtain most clearly on the second-grade level in the communities of the social Hymenoptera. Here, there is the same deferment of meiosis in the interest of the larger aggregation. After fertilization, sterile workers are produced first, reproductives only later. The agamogony of the diploid nuclei is utilized to build up the second-grade aggregate into a highly efficient functioning entity before chromosomal pairing takes place in the germ-cells of the female reproductives. The chromosomal pairing in the body of the new queen can be regarded as taking place in the body of the community as a whole. It should be remembered, however, that the diploid cells of the bee-hive are in all probability genetically identical only in respect of their paternal inheritance. On their maternal side, the ripening of the eggs is presumably accompanied by chiasma pairing and genetical crossing-over in the diploid oöcyte.

In the diploid cells of the social mammals, there is also a pre-pubertal deferment of meiosis which appears to be lengthened as we rise in the evolutionary scale. This is favourable to familial association and care of offspring. Unlike the social Hymenoptera, however, this deferment does not extend over a number of first-grade generations. There are no purely somatic mammalian individuals. Sooner or later in the life-cycle of every one, meiosis supervenes.

If we return for a moment to the first-grade level of cellular aggregation, we shall recall that in the most primitive colonial forms, notably those displaying no separation of somato-

plasm from the germ-tract, the whole colony "bursts" into a number of gametes, each of which fuses with another, generally from a different colony. Sexuality thus tends to bring about a periodic complete disruption of the less specialized first-grade aggregate. Only by the relegation of a proportion of its cells to a somatic condition can a continuing and complex existence become possible for the aggregate as a whole. Turning our attention back to second-grade cellular aggregates, we find that the most highly integrated of these, notably the communities of the social Hymenoptera, have relegated to a somatic condition not merely individual cells, but whole first-grade aggregates of cells, that is, *whole individual insects*. Had we no other evidence than this fact, taken together with our knowledge of the sexual disruption of primitive cell-colonies, we might still argue that sexuality would appear as a disruptive factor throughout the whole range of animal societies. There is, however, a wealth of observational evidence to support this argument, as we shall later see.

For the moment, let us imagine a bee-hive in which the queen gives birth only to reproductives. With the onset of the sexual phase, every member of the hive will feel the same urge to exogamous dispersal which is normally felt only by the specialized reproductives. The bee-hive will break up, that is to say, in precisely the same way that the primitive cell-colony breaks up, under the impact of sexuality. No integration and no continuing life would therefore appear to be possible for the hive without the somatic differentiation of a proportion of its members.

Now, it is interesting to note at this point that Trotter attributes the homogeneity of the hive solely to a lack of responsive versatility in its members, and in no way to the sexless and somatic condition of the workers. He says:¹

"There can be little doubt that the perfection to which the communal life of the bee has attained is dependent on the very smallness of the mental development of which the individuals are capable."

¹ Trotter, *Instincts of the Herd*, London, 1919, p. 107.

In discussing this statement, we cannot do better than to repeat the words of Freud¹ that "Our imperative need for cause and effect is satisfied when each process has *one* demonstrable cause. In reality, outside us this is hardly so; each event seems to be over-determined and turns out to be the effect of several converging causes." And so, while the mental limitations of the bee can be very plausibly linked with the homogeneity of her community, we suggest that this may be only one among several converging causes. Another cause, supported by comparison with somatic integration on the multicellular level, may be the sexless condition of the workers. If that is so, it might also be true that the relative lack of homogeneity in human groups is, in part at least, attributable to the fact that *no single one of their human individuals is wholly somatic*; that in all of them, sexuality, in a host of rationalized disguises, struggles more or less violently against the sexual repression that must inevitably (one might almost say "mechanically") accompany social aggregation. In fine, if human responsive versatility were freed from the socially disruptive action of sexuality, the result might be a society as perfect as that of the bee in the communion of its members, and yet infinitely richer and more complex.

Before leaving the social insects, we may mention the strictures, arising in most cases from an entirely anthropomorphic mode of thought, which some scientific thinkers see fit to make upon them. Professor V. H. Mottram, for example, says:²

"We cannot—we of the United Nations³—but believe in the intense importance of personality. We have no use for the bee-hive state with its *sex-frustrated workers* wearing themselves to death (for what?) . . ."

Let us examine this viewpoint (an exceedingly common one, by the way) in relation to the demonstrable fact that the limitation of sexuality has always been in the past, and gives every indication of being in the future, the most important prerequisite of all progress in living complexity and con-

¹ Freud, *Moses and Monotheism*, 1940, p. 170.

² Mottram, V. H., *The Physical Basis of Personality*, 1944, p. 11.

³ United in 1944, and now disunited on this very issue! (Author).

sciousness. In the first place, frustration, like freedom, is subjective or it is nothing. There is not the slightest indication in the condition of the hive that the worker-bee resents, or is even aware of, her supposedly pitiable condition; or that she recalls nostalgically those lost transports of sexuality which she has never in her life experienced. The imaginative exiguity of men is such that any condition other than their own is regarded as frustration. At that rate, the whole range of life is one mass of frustration, outside mankind. On the other hand, Trotter, who was not beyond thinking anthropomorphically himself, talks of the worker-bee going about her ceaseless tasks "in a way that never fails to impress the observer by its exuberant energy and even its appearance of joyfulness."¹ But indeed, the joyfulness of the worker-bee, no less than her frustration, leaves both her and us unmoved. And for what do these sex-frustrated workers wear themselves to death? For the hive, of course, for that larger body, which so thoughtful a writer as Julian Huxley has described as a super-individuality and the true unit of the bee species. If, however, Professor Mottram were to put the same question to his own cerebral cells, which by the way are also sex-frustrated workers, we should be at more loss to find any useful justification for their toil.

The late Sir. J. Arthur Thompson, writing on much the same subject, expressed the opinion that "the biggest blot is that the whole economy of the hive depends on the existence of an enormous body of labourers, which are *arrested females*."² Those last italics, Sir Arthur Thompson's own, fairly vibrate with chivalrous indignation. He goes on to say of "the much belauded industry of the workers" which "improve the shining hour" that "It is almost maniacal. They do not rest even at nights in the hive, but do indoor work to pass the time."³ Sir Arthur apparently felt no solicitude for the maniacal workers in the breathing centres of his own medulla, which workers, throughout the long and emin-

¹ Trotter, *Instincts of the Herd*, p. 106.

² Thompson. Sir J. A., *Biology for Everyman*, 1936, p. 275.

³ *Ibid*, p. 275.

ent scientific career of their whole society, did not rest even at night, but doubtless did indoor work to pass the time.

We have given this representative sample of opinion to show that the most distinguished men of science are no less prone than the uninstructed layman to read the human impulses and emotions of their own particular stage of evolution into a communal organism to which they have become totally inapplicable. But if the principles of comparison and continuity have any meaning, a broad survey of living organisms presents us with the possibility that, in a certain aspect of its organization, the community of the bee has already advanced along a road which we ourselves in the fulness of time may be compelled to follow. It is therefore of especial interest and importance to note how deep and widespread, even among scientific men, is our human abhorrence of these sex-frustrated workers, these arrested females, of the social insects. It is almost as though men recoiled prospectively from the coming of their own social soma. Although the worker bee is undoubtedly a "eunuch for her Kingdom of Heaven's sake," a bride only of that strange, mysterious God which is the larger Individuality of the Hive, she merits the terms "sex-frustrated worker" and "arrested female" far less than do our own nuns and vestals, who, incidentally, might seem in their own way to adumbrate the human future. This idea of sexlessness for the sake of God, for the integration of the larger individuality of the group—what is it when all is said but the complex human counterpart of that same tendency which we find carried to its biological conclusion in the hive? But the worker-bee herself is neither frustrated nor consciously arrested, for she never experiences the urge of sexuality in her individual body. But who is to say that she does not partake in the larger sexual beatitude of her community? The sexual pairing of the chromosomes has been frustrated in our own somatic cells; nevertheless, these arrested worker-cells, as units of our soma, participate in our own sexual transports. There is some reason for supposing that the sterile insect worker, from whose body chromosomal pairing has been totally withdrawn, still experiences some kind of diffused

sexual pleasure on a higher level of integration in the expulsion of the reproductives from the communal soma of which she is herself the unit. Bates, for example, writing of the Sauba ant, says:¹

“The successful début of the winged males and females depends likewise on the workers. It is amusing to see the activity and excitement which reign in an ant’s nest when the exodus of the winged individuals is taking place. The workers clear the roads of exit” (which might be likened to communal *vasa deferentia*—Author), “and show the most lively interest in their departure, although it is highly improbable that any of them will return to the same colony.”

It is difficult when reading this description to escape the impression that the departure of the reproductives is felt as a collective sexual pleasure by the workers. If that should be so, it would mean that our common belief that the sterile workers are debarred from every trace of sexuality requires a re-examination.

It is of the utmost interest to note that the bee has become a ubiquitous figure in political propaganda. Men everywhere fight against the coming of the bee-state. The present work, we hope, will give a deeper significance to this fact. Be that as it may, human solicitude is not only wasted, but impertinent, when directed at the bee-hive. Man is ever readiest with his sympathy where it is least required. Had the eminent writers quoted above devoted more attention to the primary mechanisms in their own society which have led recently to the wastage of several millions of human lives, and which give promise of destroying an even greater number in the future, we should have listened more attentively to their strictures on the bee.

In mammalian societies, sexual limitation is confined to the somatic cells of the individual animals, and does not involve the withdrawal of whole animals to the somatic condition. This fact alone would lead us to suspect that mammalian societies might prove to be less integrated than those of the

¹ Bates, H. W., *The Naturalist on the River Amazons*, London, 1910, p. 15.

social Hymenoptera. And there is, of course, ample observational evidence to confirm this. Now, in the case of cell-colonies, the unit from which the dispersal of the gametes takes place is normally derived from the cohabitation of two haploid sets of chromosomes within a single diploid nucleus. Even in species with zygotic reduction, in which the haplo-phase predominates, the dispersal of gametes can be traced back ultimately to an abridged zygosis. In mammalian societies, there is the beginning of a repetition of this on a higher level of integration. Here, the unit from which exogamous dispersal of the offspring takes place is normally derived from the cohabitation and recombination of two diploid animals, which, taken together, can be regarded as a kind of *social* "sex-heterozygote." In this larger "zygote", formed by the union of the parental animals, two grades of recombination occur, on two levels of integration. First, there is the pairing of bivalent chromosomes and genetical crossing-over in the germ-tract nuclei of both parental animals. Second, there is the sexual pairing of the animals themselves, followed by what is virtually a crossing-over of whole haploid nuclei to form the re-combined diploid offspring. We must regard this parallelism of crossing-over on two levels of integration as being significant in a cytological sense. The process by which new diploid animals arise from the pairing of parent animals in what we have described as a "social zygote" is thus analogous to reductional division in the diploid cell. And the eventual driving-out from the family group of the recombined and "reduced" offspring is comparable to the dispersal of the haploid members of the meiotic tetrad. We shall make this correspondence clearer in diagrammatic form when we come to discuss the genetical significance of the oedipal situation in the human family group.

We may regard the tendency towards sexual dispersal in mammalian societies in yet another light. By abstracting their cellular constitution, we can focus our attention on the several germ-tracts of the offspring of the mammalian family group, and for the moment can ignore the somata which enclose them. The pre-pubertal development of these germ-tracts,

regarded collectively, is not unlike the sexless stage in the development of a primitive diploid cell-colony. There is the same loose association, though of course on a higher level of integration. There is the same absence of chromosomal pairing in the cell, for only at puberty does meiosis take place in the germ-tracts of these mammalian offspring. The comparison is imperfect in the sense that the offspring, and their germ-tracts, are not genetically identical; nevertheless, in relation to other germ-tracts outside the family group, they may be said to approximate to one another. With the onset of puberty, these familial germ-tracts will break up into gametes, each of which will tend to fuse with another, *generally from another family group*. This is a repetition on a higher level of integration of what happened in the case of the primitive diploid cell-colony. The mammalian family group is behaving exactly like *a larger cell-colony*, which, of course, in the last analysis, is precisely what it is. But the gametes of the mammalian offspring, which tend to fuse with other gametes outside the group, are enclosed in somata, in animal bodies, which up to now we have ignored. The dispersal of the gametes will therefore entail the dispersal of the animals themselves. We may regard the gametes as "causing" the dispersal of the animals, using their bodies, their somata, as vehicles. And any behaviour on the part of the animals, such as fighting, which tends to disrupt the family group and bring about the dispersal of its members, may also be regarded as having been placed there by the gametes as a means to their own hybridization. When we say "placed there by the gametes", we use the words in a figurative sense, though in an *evolutionary* sense they can be taken as literally correct. Although we normally concentrate our attention on the visible bodies of animals, the fact remains that the germ-plasm is the most important part of organisms, and to a great extent uses the animal body as a vehicle and instrument. A question of great importance emerges from the foregoing image. Are we to suppose that the same factors which cause the dispersal of "naked" gametes from primitive cell-colonies, cause the dispersal, through fighting, of the gamete-bearing offspring from

mammalian family groups? And, when we find that this dispersal results in cross-breeding, are we to suppose that the fighting which causes it has no genetical purpose or significance?

This question is closely linked up with our view that war itself, however wasteful it may be, is a genetically significant and purposive phenomenon. It seems reasonable to suppose that since the first-grade aggregation of cells (multicellular body) came before the second-grade aggregation of cells (community), the same ultimate factors which lead to the dispersal of gametes from the first, also bring about the dispersal of gamete-bearing animals from the second. In multicellular bodies, we find the most elaborate structures and adaptations to ensure cross-fertilization. We explain these adaptations by natural selection, having regard to the evolutionary utility of sexual mechanisms. If, in mammalian societies, we find any kind of *dispersive* behaviour among the animals which has no utility apart from that of cross-fertilization, we may imagine that behaviour to have been selected for the same reason that analogous mechanisms in multicellular bodies have been selected. Whatever ultimate biological factor, therefore, tends to produce hybridization is also to be regarded as the ultimate cause of all social behaviour which can be shown to result in hybridization.

To make this clearer, we shall have recourse to Darwin's famous speculation on the structure of primal society. It runs as follows:

"We may indeed conclude from what we know of the jealousy of all male quadrupeds, armed, as many of them are, with special weapons for battling with their rivals, that promiscuous intercourse in a state of nature is extremely improbable . . . Therefore, looking far enough back in the stream of time, and judging from the social habits of man as he now exists, the most probable view is that he aboriginally lived in small communities, each with a single wife, or if powerful with several, whom he jealously guarded against all other men. Or he may not have been a social animal,

and yet have lived with several wives, like the gorilla; for all the natives 'agree that but one adult male is seen in a band; when the young male grows up, a contest takes place for mastery, and the strongest, by killing and driving out the others, establishes himself as the head of the community' (Dr. Savage in the *Boston Journal of Natural History*, Vol. V, 1845-7). The younger males, being thus expelled and wandering about, would, when at last successful in finding a partner, prevent too close interbreeding within the limits of the same family."¹

For the purpose of our argument, let us assume that the above quotation describes a state of society which once existed. The contest for mastery, which led often to the expulsion of the younger males, *prevented too close interbreeding within the limits of the same family*. In other words, we may suppose that the somatic behaviour-pattern which resulted in the contest, and more especially in the expulsion, was favoured, or at the least, tolerated, by natural selection simply and solely *as a means of hybridization*. That means that such sexual jealousies and struggles only acquire significance when they are related to the fundamental mechanism of genetical recombination. And further, if the beneficial results of hybridization should lead to a more numerous survival of the species, Nature would be quite unmoved by what, from an anthropocentric viewpoint, we might describe as the brutality of her dispersive methods. Until we have the courage to take her by the throat, Nature will ever be more concerned with numbers than with individual happiness.

It is clear, however, that the type of second-grade (social) aggregate postulated by Darwin was liable, like first-grade *Eudorina*, to recurring sexual disruption, and could not therefore be expected to display any marked degree of social organization. But organized aggregation has shown itself to be an instrument of survival. We may suppose, therefore, that any modification in the social behaviour of the members of the primal horde which displaced outwards the disruptive

¹ Darwin, *The Descent of Man*, London, 1896, pp. 590, 591.

action of sexuality, *while still permitting hybridization to continue*, would tend to be selected.

In mammalian societies, there has been no complete somatic differentiation of *whole* animals, as has occurred in the social insects. There is nothing that can legitimately be described as a *social soma*. Nevertheless, it is quite possible to regard the older animals, in which sexuality is on the wane, as being *relatively* somatic to the younger and more actively sexual animals. This will also be true in a quite literal cytological sense. Let us consider a primate family group as a sexual unit which interbreeds with other units like itself. The group consists of members, all of which at any given time will not be at the same position in the individual life-cycle. The passage of time will therefore discover changes of internal social relationship, shown in the behaviour of the group as a whole and of its members, which changes are directly related to cytological changes in the germ-tracts of the animals themselves. Over a number of generations, the periodicity of these changes will be clearly apparent. A mental image may assist us here. Let us picture the diploid germ-tract as a continuous line, divided up into sections to represent the generations through which it passes. The sexual impulsion at its maximum intensity can be represented by a point of luminosity moving down the line. Further, the line may be supposed to glow shortly before the luminous point reaches it, and also for a short time after it has passed. Although the light passes through every section of the line, it will only be in one section at any given time. This section can then be regarded as gametic, as sexual, in relation to the other living sections of the line. Conversely, the latter can be regarded as somatic in relation to the lit-up portion.

To return to our primate family group. During impubescence in the offspring, the sexual impulsion at its maximum intensity will be confined to the two parental partners. There will be no serious conflict in the group. But with the coming of pubescence in the offspring, there will be a shift of balance; the maximum thrust of sexuality will now pass into the young. In the parental partners, more especially in those

species with a long prepubertal deferment of meiosis, sexuality, though of course still operative, will at this time be upon the wane. Parent may thus be regarded as *somatic* in relation to its offspring. If, at this period in the life-cycle of the parent, we find hostile and expulsive behaviour at the somatic level which tends to bring about an exogamous dispersal of the young (as, for example, occurs in human warfare), we need not hesitate to regard it as being genetically purposive and significant. That does not mean that the genetical purpose of the expulsive behaviour will be consciously perceived. In the case of human warfare, as we shall see, the expulsive behaviour may be so complex and involved as to lead to no slightest suspicion of its inner purpose and utility. Since the thoughtful reader will already have leaped ahead to the further implications of this idea, it is well to clarify it further. Changes in the germ-tract should obviously not be considered to modify *directly* the behaviour of the soma which bears it at any given time. Somatic changes, no less than the cyclical changes in the germ-tract, are functions of the specific genotype environment reaction. Correspondences between the two should be regarded as having been established in the course of evolution, and as being now relatively independent of one another. We can illustrate this point from human society, in which our main interest lies. We all know of elderly men who display pacific attitudes of mind (attitudes, that is, which oppose warlike expulsion and hybridization) found more commonly in the young, and *vice-versa*. These exceptions prove the rule, however, that despite the very considerable diversity not only in the experience presented to it, but also of the cultural environment in which it develops, the mature human mind everywhere is remarkably uniform in its expulsive hostility towards the young. So much so, indeed, that we must attribute this uniformity to some fundamental order of biological necessity.

It is commonplace that a man's standpoint in regard to social questions may undergo a complete *volte-face* with advancing years. Each extreme of opinion, we believe, has some kind of physiological substratum, marking a particular

position in the individual life-cycle, by which in the final instance it is determined. The intrinsic merits of pacifism are no less clearly apparent to the youth than the merits of warfare to his father. In our present view, neither extreme of opinion, nor any intermediate point of view, is necessarily "right" or to be preferred to any other; each is merely to be regarded as reflecting a particular stage (between "full-gametic" and "full-somatic") in individual development, and as being meaningless apart from that. The common belief that social thought is quite autonomous and independent of bodily change leads to much futile recrimination on the score of inconsistency. But the individual has no more rational control over the conservatism of his old age than he has over the whitening of his hair. His inclination for warfare in his declining years, that is, for the warlike expulsion of his son, is the outward sign of his own biological passage from a gametic to a somatic rôle in the larger sexual tides of his community. He has no rational control over that passage, though of course he may rationalize it most ingeniously. It goes without saying that the exogamous dispersal of the young, a feature of all mammalian societies, which, in human society, takes the form of war, should not be attributed solely to the expulsive activities of the old. Indeed, the insurrectionary behaviour of the young, itself the instrument of exogamy, at once encourages and, as we shall later see, necessitates the dispersal.

We have shown reason for believing that the exogamous dispersal of offspring from the mammalian family group, on one level of integration, differs only in complexity from the sexual disruption of the primitive cell-colony on another level. Both forms of sexual disruption are derived *in the final analysis*, from an identical dynamism in the cell itself. In primate societies, we find the grouping of many family parties in more or less unstable herds. The relative instability of these herds can be attributed to the fact that the periodic sexual disruption of their constituent family groups has not been fully externalized. There is thus a constant internal pull and push between whatever factors lead to aggregation of

family parties on the one hand, and the unsynchronized and unoriented internal disruption of these parties on the other. Under these conditions, no advanced degree of social integration can be possible.

In human groups, the family is still the primary biological and interbreeding unit. Here, however, the cyclical "bursting" of the constituent family groups, at sexual maturity in their offspring, has been more or less satisfactorily externalized, co-ordinated and controlled through periodic war. Further, the periodic sexual "bursting" of the aggregated families is so nicely synchronized and balanced, as between the various larger aggregates, by statesmanship and diplomacy, that their centrifugal and dispersive elements meet, lock with, and expend themselves upon one another in such a manner as to leave the internal integrity of the larger aggregates relatively undisturbed. By this mechanism, the social disruption of meiosis is confined to the interface of nations. To this comparatively efficient social pattern, permitting as it does a considerable degree of internal discipline and organization, may be attributed the abundance of mankind, and therefore the past selection and present fixity of this behaviour. The dynamism of the process, be it noted, is still provided by meiosis in the cell, and so also is its periodicity. Nevertheless, the mechanism is not perfect; sexuality has not been fully externalized, and still remains, albeit in a diminished form, an internally disruptive element. Further, the failure or the refusal of mankind to see the process for what it really is, may cause it in the future to be attended with no mean danger for the race.

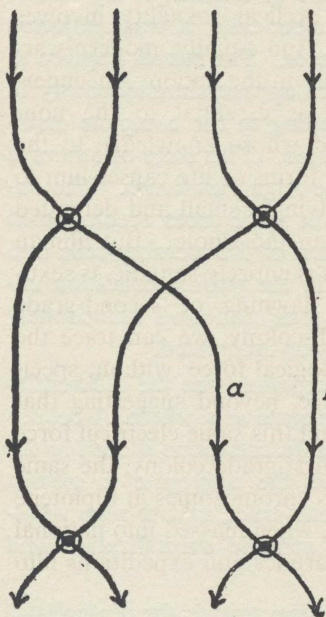
Before concluding this section, we wish to draw the reader's attention to a further point. It should be apparent by this time that we intend to place an interpretation on human warfare which, though admittedly unfamiliar, will be seen more and more clearly with the passage of time to accord exactly with experience. To begin with, the fate of this new concept will hang in the balance until it captures, in the minds of perhaps only a minority of thoughtful men, a base from which to advance to a wider influence on human thought. In its

first tentative beginnings, the concept must rest upon some clear central image or analogy to which the bewildering diversity of relevant experience can be referred. For the moment, the best single analogy we can suggest, and one which we beg the reader to hold constantly before his eyes, is the sexual disruption of the most primitive colony of cells. The same centrifugal thrust of sexuality which we observed in that microscopic mulberry of cells is reproduced on a macroscopic scale in the thrust of war in the national segregations of mankind. Let us consider the salient features of the analogy. In the cell-colony, dispersive sexuality displayed an inherent periodicity of rhythm. In the national aggregate, *which also is ultimately composed of cells*, we can detect an altogether analogous rhythm of collective and warlike sexuality, which rhythm itself, in the last analysis, must be inherent in the cells of which the human aggregate is composed. In the primitive cell-colony, which has no soma, cyclical sexuality involves the dispersal of its every member. And equally, modern warfare tears out a part of every family in the nation. An understanding of this second parallel is essential to the non-scientific reader, the restriction of whose knowledge to the macroscopic and more specialized forms of life causes him to picture the sexual process as involving a small and delimited section of the organism rather than the whole. But human society, not one of whose members is entirely somatic, is sexually unspecialized, is still in the dawning of second-grade aggregation. In the primitive cell-colony, we can trace the dispersal of the gametes to a cytological force, without specifying the exact nature of this force, beyond suggesting that it may ultimately be electrical. And this same electrical force that drives asunder the primitive first-grade colony, the same force that drives apart homologous chromosomes at diplotene of meiosis, is sufficient, we believe, when massed into national batteries of cells, to drive mighty armies and expeditions into every corner of the world.

CHAPTER V

THE GENETICAL SIGNIFICANCE OF THE OEDIPAL SITUATION

IN the present chapter, we hope to make clearer the underlying parallel between the dispersive action of sexuality in the primitive cell-colony on the one hand, and in the human family, and political group of families, upon the other. But first we shall have to retrace our steps a little. The reader's attention is again drawn to the fundamental pattern of sexuality in all living organisms:



1. The circles represent points of chromosomal pairing and genetical recombination.

2. Each line represents the track in space and time of a single haploid set of chromosomes.

3. If the lines 'a' and 'b' are isolated in space the organism is haploid: if they lie within a single nucleus the organism is diploid. This diagram could therefore be used equally well to represent haploid unicells or the germ-tract of diploid human individuals, depending on the spatial arrangement of the lines 'a' and 'b'. It is thus possible to abstract the human individual as a temporary spatial approximation of two haploid life-lines; and to treat all individual and social behaviour that leads to genic recombination or ethnic intermixture as epiphenomenal to the survival of the underlying haploid life-line.

FIG. 7.

HAPLOIDY: The first unicellular (or non-cellular) organisms to have a sexual process were probably haploid

over the greater part of their life-cycle. The sexual process consisted in the conjugation of two haploid nuclei, followed more or less immediately by the pairing of their chromosomes, genetical crossing-over, and the dispersal of the four haploid spore-nuclei to undergo a further period of sexless division. There was probably a specific periodicity in this behaviour, marked in some cases by the differentiation of gametes, and subject to modification by environmental factors.

In the haploid unicells, a further development was the loose aggregation of cells during their sexless period of division. After meiosis in the short-lived zygote, the haploid products of meiosis each built up an aggregate by cellular division without separation of the products of division. In the most primitive haploid aggregates, each member-cell was subject to the same genotypic cycle of sexuality. By reason of its aggregation with other member-cells, it was subjected to the same environmental influences. The sexual impulse to pair exogamously would therefore appear simultaneously in all members of the aggregate, leading to the complete disintegration of the aggregate as a whole. This state of affairs is found, to take one example, in the Alga *Pandorina*. The onset of the sexual phase was also in some cases accompanied by the morphological differentiation of the member-cells into gametes. Each cell (or gamete) in the pairing condition entered into a brief exogamous zygosis, followed immediately by reduction, and thus the cycle was completed.

A further stage of haploid aggregation was the differentiation of somatic cells from the aggregate as a whole. A beautiful series of progressive somatic differentiations is seen in the Volvocales. This process allowed the aggregate to persist beyond the sexual phase of its germ-tract, and to reap whatever benefits were provided by somatic specialization and organised aggregation.

In all these cases, we are supposing zygosis (or diplophase) to have been followed immediately by reduction. Further, we imagine that heterogamy, where it occurred in the haploid aggregate, was the result of a differentiation-in-space, and was

not necessarily dependent on the segregation of dissimilar genotypes by meiosis. An interesting speculation opens up before us here. Let us picture the short-lived zygote as a sex-heterozygote, producing, after reduction, two types of haploid aggregate, in one of which only female gametes appeared, and in the other only male. Such a condition (as appears to exist in the Alga *Eudorina*) is analogous, on a lower level of integration, to the ancestral segregation of the sexes in some mammalian species. That is to say, this mammalian social behaviour curiously repeats, on a higher grade of complexity, the sexual behaviour of primitive aggregates of cells. Seals, for example, during rut, unite in shortlived "zygotes", which, after pairing, separate again into ancestral sexual segregations. This is a very remarkable parallel. It is clear that in any attempt to draw comparisons between sexual mechanisms on the multicellular and on the social level we must compare mammalian societies only with the most primitive aggregates of cells.

DIPLOIDY: The diploid condition first appears at the unicellular level. Diploidy is seen in its essentials to involve the prolongation, without immediate pairing and disjunction, of zygosis. After the conjugation of the gametes, the two haploid sets of chromosomes live out their vegetative period "side-by-side" within a single nucleus. At the end of this period, each chromosomal member of the diploid nucleus finds ready at hand beside it a synaptic mate with which to pair. The diploid condition thus introduces a new measure of security and exactitude into the sexual process. Remembering its sexual culmination, diploidy can be regarded as a sexually purposive association. It differs in no essential from the haploid condition except in the *spatial* arrangement of the germ-tract. That is to say, haploid life-lines, hitherto separate throughout their vegetative development, are now yoked together in parallel threads (see Fig. 1). Chromosomal pairing is intranuclear, and reduction is followed more or less immediately by exogamous conjugation and the formation of new vegetative partnerships. A further refinement of the process may have been the deferment of intranuclear pairing and

meiosis until the diploid cell came into apposition with, or was stimulated by, another cell in the same condition as itself.

As with the haploid unicell, so with the diploid, the vegetative period could be utilized to form a cellular aggregation. In the primitive diploid aggregate, we can assume that the sexual phase occurred simultaneously in all the member-cells, for the same reason that sexual simultaneity occurred in haploid aggregates. *Meiosis in all the cells of the aggregate would lead to the complete sexual disintegration of the aggregate as a whole.* New zygotes would be formed, and diploid aggregation would begin afresh.

Heterogamy in diploid aggregates might result either from morphological differentiation, or from genetical segregation at meiosis. Here again we see a curious parallel between what may be presumed to have occurred in a primitive colonial sex-heterozygote and what occurs, on a higher level of integration, in certain mammalian species (second-grade aggregates of cells). In the case of both the rabbit and the porcupine, the sexes associate in neutral groups during the anæstrus. In this condition they can be likened to a colonial sex-heterozygote during its agamogony. With the onset of œstrus in the one, as with the onset of gamogony in the other, the sexual neutrality would be ended; pairing, "reduction" and the formation of fresh neutral "zygotes" would take place. Once again, the parallel is imperfect. And once again, when the complications at the second-grade level are allowed for, a significant residuum of similarity remains.

In the primitive diploid, as in the primitive haploid, colony of cells, the onset of sexuality in the life-cycle would end the life of the aggregate as such. No considerable individuation of the aggregate would be possible. This difficulty could be evaded in two ways. First, by a prolongation of the vegetative stage. Second, by the creation of a soma. Nature has availed herself, in the course of evolution, of both these methods. The first expedient (prolongation of the vegetative stage) would, however, if taken alone, limit the frequency of advantageous recombinations which might otherwise occur. And further, since every cell of the aggregate would sooner

or later have to turn into a gamete, no specialization would be possible. In fact, the second method has been favoured. The differentiation of a soma from the germ-tract not only allows unlimited specialization in the somatic cells, and hence new invasions of the environment, but also enables several cycles of sexuality to take place during the now prolonged life of the aggregate as a whole. Our own body is such an aggregate. During our sexual lives, pairing in our germ-tract is never at a standstill.

For our present purposes, we need not push the discussion of haploidy and diploidy in first-grade cellular aggregates any further. We have here all the materials we need for our argument. Mammalian social aggregates, in which our interest lies, display, on a higher level, the same sexually unspecialized forms of aggregation which were to be found among the cell-colonies in the archeozoic seas. The elaborate analogies which are so often drawn between the human group and the multicellular body are largely vitiated by our failure to recognize how very low in the scale of sexual specialization human society is. Only in the very beginnings of multicellular aggregation shall we find correspondences to our own society on its higher level.

We have already hinted that human sexual conjugation forms a significant parallel to zygotis on a lower level of integration. And we have now reviewed the material by which to make this parallel clearer. Let the reader picture the human group as a multiplicity of families. For the moment, he should ignore the "political" partitions which segregate numbers of these families into larger entities. We will now represent two intermarrying families in diagrammatic form to assist our thought. Graphic representation, although it aids comparison, is liable to abuse: we must not distort this diagram to fit our preconceptions. If, however, the diagram tallies exactly with the facts, the further pattern it reveals may be accorded due significance. The reader is asked to turn to the schema in Figure 8 (inside back cover), and to keep it open before him as he reads the succeeding pages.

On this diagram, time advances vertically down the page.

The movement in space of the germ-tract is represented in the horizontal scale.

The coloured bands represent human individuals. At the top of the page we start with four individuals, forming part of two family groups. At the bottom of the page, a generation later, we are left with eight.

Each black line represents the movement in space and time of a single germ-tract gene. Where these black lines lie inside the coloured bands the germ-tract must be imagined to inhabit a human individual. Wherever a coloured band branches off the germ-tract, the individual soma it represents is imagined to have moved off the direct line of germinal succession.

Starting from the top of the page, let us focus our attention entirely on the coloured bands (human individuals), ignoring the germ-tract for the moment. The first parallel association of the two red bands represents the pre-pubertal (sexually neutral) association of brother and sister in a single family group. The parallel blue bands represent an identical stage in another family. The band closest to the centre of the page in both cases is the male. As we move down the page in time, the onset of puberty severs the neutral association. The sexually mature male in each family crosses over to form a sexual association with the female of the other. This crossing-over is either achieved, normally, within a single "political" group of families, or else externally, through the agency of war. The new associations which result from the crossing-over are followed immediately by sexual pairing and the production of new human individuals (grey bands), who, throughout their impubescence, are bound with their parents into two new family groups, represented by the eight broad bands at the bottom of the page. The general layout of the diagram should now be clear.

Turning to the germ-tract: each black line represents the space-time movement of a single gene. To avoid a multiplicity of lines, and without in any way invalidating our diagram, we may regard each human individual as a zygote consisting of two homologous chromosomes, each containing two corresponding genes. In other words, each zygote consists of two

pairs of homologous genes. Now let us turn our attention to the germ-tract in the blue band at the extreme top right. During impubescence, the gene-lines remain yoked into the same two chromosomes inherited from the parents. At pubescence we will suppose the meiotic pairing of the two bivalent chromosomes to be accompanied by the formation of a single interstitial chiasma. (Whether this is mechanically possible or not does not concern us here.) The gene-lines, therefore, emerge from meiosis in two new combinations, each chromosome having exchanged a corresponding gene with the other. On our diagram, for simplicity, we have only represented the two *re-combined* members of the meiotic tetrad: the other two (in this instance, identical to the somatic chromosomes) have been omitted. The inset, which contains the *whole* meiotic tetrad, will make this clearer. We have already seen that sexual maturity involves the crossing-over of human individuals to form new sexual partnerships. Each human individual, however, carries with him in his germ-cells the chromosomal recombinations of meiosis. The new sexual partnerships ("social zygotes") are followed immediately by what may be termed "diploid pairing" (to distinguish it from the meiotic pairing of *haploid* chromosomal sets). This diploid pairing involves the "crossing-over" of whole recombined chromosomes in the haploid germinal nuclei, and establishes recombined human individuals to re-commence the cycle. Sexual pairing between human individuals is altogether analogous to the sexual pairing of chromosomes at meiosis in that it is followed by genetical crossing-over and recombination; although, of course, in human pairing the *unit* of crossing-over is the complete haploid set of genes, while in chromosomal pairing it is the individual gene. Except in so far as parental pairing produces further human offspring, the germ-tract may now be supposed to abandon the somata of the parents. Before we consider what further harmonies and parallels this diagram will disclose, we must make the following points clear.

The present diagram, if studied carefully, will be seen to differ in no essential point from that on page 59, except in the

spatio-temporal arrangement of the haploid life-lines. From the time that genic interchange takes place at meiosis in the parents no surviving interchange of *individual* genes occurs until meiosis in their offspring. The "diploid" pairing of human individuals, it will be remembered, involves the "crossing-over" only of complete haploid *sets* of genes. By binding haploid threads into the double threads of zygotes, by knitting them into multicellular and social aggregates, we can weave the sexual tapestry of our own society. But still the haploid cell remains the fundamental thread, the fundamental and unacknowledged "citizen" of mankind.

To simplify this diagram, we have shown meiosis as occurring only once during the life-cycle of the human individual. As another simplification, we have represented as simultaneous the production of offspring by the "diploid pairing" of the human couple. Neither of these simplifications need detract from the usefulness of the diagram.

A further careful consideration of this diagram reveals some curious and interesting parallels. If we employ the word "chiasma" in a wider genetical sense than usual, we can detect three grades of chiasmata on our space-time diagram. First, there is the chiasmatic crossing-over of individual genes at "inter-haploid" pairing and meiosis. Second, there is the chiasmatic "crossing-over" of whole haploid *sets* of genes at "inter-diploid" pairing and "meiosis." And third, there is the chiasmatic "crossing-over" of diploid sets of genes (whole human individuals) at "inter-tetraploid" (inter-familial) pairing and meiosis. That last form of crossing-over, of whole human individuals, takes place either individually within the group, or *collectively*, beyond the confines of the group, through the agency of war. *At each successive "crossing-over" the number of gene-lines is exactly doubled.* This doubling would be the same, of course, if every gene-line in the human complement were represented. Since all these "chiasmata" lie within the same space-time framework, and possess the same fundamental units, the temptation to trace them all (including those produced by war) to a common genetical impulsion is well-nigh irresistible.

Let us consider the condition of zygosis in relation to this diagram. Since we start our argument from the cell, we can ignore the chromosomal yoking of individual genes, and the haploid yoking of individual chromosomes. We start, therefore, with the yoking of haploid nuclei in the human zygotic cell. The counterpart of zygosis appears on a higher level of integration in the sexual partnerships of human individuals. This human "zygosis" is short-lived, in the sense that it is followed more or less immediately by sexual pairing and "reduction" to form new individuals. It never even begins to be a neutral partnership. If, however, we regard this "zygosis" of human individuals as existing at the level of their somata, and not at the level of their germ-tracts; if, that is, we imagine their somata to be "run-together" on the one hand, and their germ-tracts to be "run-together" on the other, we have, as it were, a *larger* "zygote" in which the joint "tetraploid" soma persists beyond the pairing of its two diploid germ-tracts. The parallel in animal behaviour to zygotic reduction at the unicellular level is clearest in the case of mammals like the seal, where the sexes meet, pair, "reduce" and separate (the separating units being their intra-uterine offspring and themselves) in the course of a brief œstral period. In man, the pre-pubertal cohesion of the family group forms a loose parallel to the cohesion of a sporocyst during the maturation of the spores. Of course, this sort of analogy must not be taken too literally. Its only real value is to make clear the framework of thought in which we intend to view the phenomenon of war in our own society.

We see, then, that certain correspondences exist between pairing and reduction in the meiocyte on the one hand, and pairing and "reduction" in the human sexual partnership on the other. The same ultimate genetical elements are found in both. In the germinal zygote, chromosomal pairing and reduction lead to the split-up of the meiotic tetrad. In the human sexual partnership, pairing and "reduction" are followed eventually by the separation of the recombined offspring from the family group. This separation of the offspring, and the *psychological* mechanisms which favour it

would appear to be genetically purposive and significant.

Let us enlarge a little on this idea of a parallel between the meiotic tetrad and the family group. The reader is referred first of all to the inset enlargement of the meiotic tetrad on the left of the diagram. Here, the convergence of the two double gene-lines represents, within a space-time framework, the pairing association of homologous and undivided chromosomes at zygotene and pachytene of meiosis. With the early diplotene division of each chromosome into daughter chromatids, the specific pairing attraction (which works only between pairs of threads, and therefore only between the new chromatids) is abolished. The chromosomes begin to repel one another. Division further reduces the longitudinal cohesion, for the new half threads at the moment of their origin are weaker than the parent threads. But the threads are supposed to be in a state of torsion when the immediate longitudinal weakening of the chromatids takes place. The weakened chromatids, exposed to the full force of this torsion, break to form chiasmata and new genetical combinations.

We are not here concerned with the ultra-mechanics of the cell, except to note that the cytologist interprets the meiotic cycle in terms of *mechanical forces*, whether of molecular attraction and repulsion, or of torsion. He finds in the cell "the same grounds for inferring forces that Newton had in the universe: movements and accelerations of bodies regularly occurring and accurately measurable."¹ Now, these forces clearly have a purpose. After the chromosomes have paired, and the meiotic tetrad has been formed, it is obviously desirable that the new recombined nuclei should be separated from one another. Such a separation, leading to fresh zygotic partnerships, favours the hybridization of the species. And, in fact, the mechanical repulsions which finally split up the meiotic tetrad effect just such a separation.

In the human family group it is equally desirable, for the same purpose of hybridization, that the new recombined individuals be separated from one another and from the family

¹ Darlington, C. D. *Recent Advances in Cytology*, London, 1937, p. 482.

group. On this level of integration, we find complex *psychological* mechanisms which tend to bring about the separation. Among such mechanisms we must certainly include the unconscious hostility (or "repulsion") which lies between parent and child of *like* sex. Freud gave prominence to this hostility in his central hypothesis, the Oedipus Complex. Its existence, however, is a matter of common experience, and we find it frankly manifested among the sub-human primates and in certain other animals. The whole point is that this psychological hostility, when fitted into our diagram, appears to be genetically purposive and significant as acting in the direction of hybridization. It is analogous to the electrical repulsion which splits up the meiotic tetrad. It is almost as though the mechanical forces at work in the meiocyte have re-appeared in the human family group in the form of complex psychological mechanisms.

There is a further interesting parallel between the meiotic tetrad and the family group. In the former, there are mechanical attractions which, to begin with, resist the separation of the four recombined nuclei and so act against hybridization. In the human family group, there are corresponding psychological attractions in the form of incestuous tendencies between parent and child of the *opposite* sex. Although these tendencies are for the most part unconscious, they must be counted as powerful psychological factors which *resist* the detachment of the recombined offspring from the family, and so *oppose* hybridization. The sexual development of the child is marked by a displacement of incestuous *libido* upon extra-familial objects. The displacement is now achieved by upbringing and education, but in primeval society, as Darwin suggested, it probably took the form of an actual conflict in which the young male was driven out of the family group to find a sexual partner elsewhere. The primeval conflict, now relegated to the unconscious, gives force to the educative effort by which, in these days, the child's incestuous *libido* is outwardly displaced. This means that any social device to mitigate or displace the socially-disruptive hostility of the oedipal situation will automatically work in the direction of

further hybridization of the race. (War, for example, may be just such a social device. And it is a matter of common experience that warlike intermarriage leads to ethnic intermixture on a Titanic scale.) We see that it is not necessary for man to have an "instinct" against incest. In fact, in early life he seems to have a powerful "instinct" *for* it. Whatever "instinct" there is against incest has been purposively provided by Nature in the form of oedipal hostility itself. We can see an added genetical significance in the fact that oedipal hostility reaches its peak at just that moment when the child reaches sexual maturity, that is, when he or she first develops active sexual cells. As Freud has said:¹ "From the time of puberty onward the human individual must devote himself to the great task of *freeing himself from the parents*; and only after this detachment is accomplished can he cease to be a child and so become a member of the social community."

We see, then, that the attractions and repulsions at work in the meiotic tetrad form, as it were, a tiny model of the sexual attractions and repulsions which act in the human family group. The fact that in the latter the incestuous "pull" lies between *opposite* sexes, while the oedipal "push" lies between like sexes, hints at a further mechanistic correlation. On both levels of integration, in the tetrad as in the family, the severing repulsions finally predominate and therefore promote hybridization.

We cannot dismiss this parallel as unimportant. It is, in fact, one of the utmost significance to us. If we turn again to Figure 8, we see that the only real genetical difference between the meiotic and the oedipal situation is that in the latter *the gene-lines have been exactly doubled*. This means that the oedipal situation is not meaningless or vestigial, as some psychologists have supposed. On the contrary, it has a definite genetical purposiveness. It also means that oedipal hostility, in its biological essence, is an utterly *impersonal* force, whatever conflicts it may cause between "persons". This psychological hostility is simply the counterpart, on a

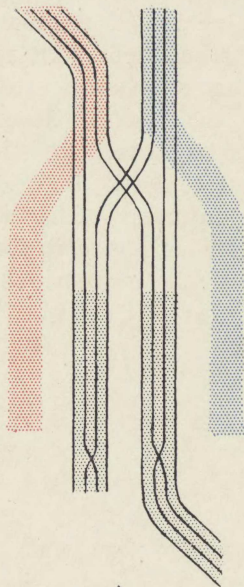
¹ Freud, *Introductory Lectures on Psycho-Analysis*, London, 1922, p. 283.

higher level of integration, of the electrical repulsions which sever the meiotic tetrad. We can thus, if the term may be pardoned, "de-anthropize" the oedipal situation and regard it in a quite objective light. It might almost be said that its ultimate material basis lies in the province of chemistry and physics.

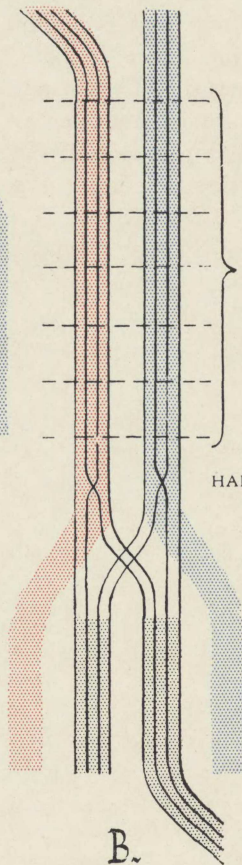
In this thesis we are seriously putting forward the argument that war is a *sexual* phenomenon, a *collective sexual ejaculation* from the warring group. The most vital premiss of that argument, by which it stands or falls, is that the oedipal situation has a biological as well as a psychological significance. Even now, those psychologists who trace war to factors arising out of the oedipal situation argue tacitly that the causes of war are sexual, for the oedipal situation itself is sexual through and through. But it is only implicit in such arguments that war is sexual in a *psychological* sense. By importing a genetical purposiveness into the oedipal situation, we can now argue logically that war is also sexual in the *biological* meaning of the word. Of course, we are faced with a very serious difficulty here. The biologist is normally unfamiliar with, or even hostile to, psychological concepts, while the psychologist tends to ignore the significance of biological mechanisms. But our argument of war-causation lies in both these fields of science, requires materials from both to be complete. It is essentially a *psycho-biological* argument. We can only hope, therefore, that each specialist will learn sufficient of the other's field to understand the parallel between the meiotic and the oedipal situation, and that he will have the modesty or magnanimity to defer judgment on this theory until he does.

Before we leave Figure 8, there is one final point to make. We saw that the human sexual pair "breaks down" more or less immediately into a larger "meiotic tetrad," and that in every generation the process leads not only to the dispersal of the recombined offspring *within* a particular human group, but also to a collective ejaculation of the sexual males *beyond* the frontiers of the group. By analogy with more sexually specialized organisms, the protraction, without pairing, of the

larger "zygosis" through several diploid generations might reduce the frequency of the collective ejaculation *were it also attended by a modification at the psychic and somatic level*. If, for example, instead of the process in "A" (Fig. 9) occurring, the process in "B" were to replace it, we should have a condition analogous to that in primitive diploid colonies. Both members of the larger "zygote" would reproduce by diploid parthenogenesis. After the passage of several generations, each then surviving member of the resulting clone might be supposed to pair sexually with its partner, the offspring immediately forming new "zygotes" to start the sexless phase afresh. This, of course, is an utterly fantastic speculation, one among many which (having regard to the discovery of artificial parthenogenesis and insemination) might open up before us here.



A.



ANY NUMBER OF GENERATIONS REPRODUCING BY DIPLOID PARTHENOGENESIS COULD BE INTERCALATED HERE.

HAPLOID PAIRING

DIPLOID PAIRING

TETRAPLOID PAIRING

FIGURE 9.

B.

CHAPTER VI

WAR AS COLLECTIVE SEXUAL COMBAT

WE come now to the most difficult chapter of the present essay: the application of sexual mechanisms to the interpretation of human warfare. It will be difficult, because the real nature of war is still imperfectly understood, and because we shall henceforth be dealing simultaneously with the anthropomorphic and the biological aspects of the matter. We have to prove that the warlike situation, while it may wear a perfectly commonplace and familiar shape in our minds, can also, when abstracted in biological terms, be caused to assume an entirely new appearance. To synthesize these two appearances is very difficult. The best we can do is to present them both to the reader's eye in rapid alternation, and note what "blinking" in their outlines may occur.

Let us start from the fact that sexual combat is almost universal in the mammals. Although this is generally known, we wish to give it firm authority in the reader's mind because it will lead us presently to some rather unpleasing conclusions.

Darwin said:¹ "The law of battle for the possession of the female appears to prevail throughout the whole great class of mammals . . .

"With social animals, the young males have to pass through many a contest before they win a female, and the older males have to retain their females by renewed battles . . .²

"Among the half-human progenitors of man, there may

¹ *The Descent of Man*, Vol. II., p. 552.

² *Ibid*, p. 564.

have been struggles between the males during many generations for the possession of the females . . . ¹

“ With savages, for instance the Australians, the women are the constant cause of war both between members of the same tribe and between distinct tribes.” ²

Darwin also mentions the interesting fact that “ the most timid animals, not provided with any special weapons for fighting, engage in desperate conflicts during the season of love. Two male hares have been seen to fight together until one was killed . . . ” ³

To quote a modern author, Zuckerman says: ⁴ “ Almost all male mammals fight during the rutting season. The weaker animals are effectively eliminated, either by death or forced banishment, and the dominant individuals mate with the females. Fighting is as common in species which maintain an ænestrous bisexual association as in species in which the sexes separate.”

Many more authorities could be cited to endorse these statements, without, however, adding any original matter. Let us accept sexual combat in the mammals as a fact, and so proceed. We can now turn to the sub-human primates, as being closer to ourselves, and note what effect sexual strife has upon their social aggregations. We shall find that sexuality disrupts the sub-human primate colony in much the same way as it disrupts a primitive colony of cells. After all, the animal colony is itself, in the last analysis, an aggregate of microscopic cells, though on a higher grade of integration. The action of sexuality is in principle the same on both grades, although in the animal colony, of course, it takes an infinitely more complex form. Let us take the baboon as a sample, because his social behaviour has been more closely and accurately studied than that of any other sub-human primate species.

¹ *The Descent of Man*, p. 564.

² *Ibid.*, p. 561.

³ *Ibid.*, p. 500.

⁴ Zuckerman, *The Social Life of Monkeys and Apes*, p. 562.

Zuckerman has made the following very significant statement:¹

"... one may see in the life of the monkey a crude picture of a social level from which emerged our earliest human ancestors some time in the first half of the Tertiary geological epoch. Since few significant differences can be seen between the broader social mechanisms of different monkeys and apes, and since man is also an Old World primate, one may assume that the social level discussed in this book" (that of baboon troops in the wild, and colonies in captivity) "is one through which man passed in the pre-human stages of his evolution."

This is the opinion of an extremely cautious and critical scientific thinker and one which, in the absence of any evidence to the contrary, we here accept. Keeping this opinion in mind, let us consider the following excellent summary of the baboon's social behaviour (based on Zuckerman's work) given by Wells, Huxley and Wells:²

"The stability of the whole" (baboon) "community is preserved, somewhat precariously, by what Zuckerman terms dominance. The peace of the colony is constantly being disturbed by mutual threatenings, by more or less sham fights, and so forth; and as a result of these trials of strength a scale of dominance is established, some animals confessing themselves weaker and inferior to others. It is the dominant males who get the wives. In any group of monkeys put together in a cage, even if they are of different kinds, the same kind of thing is seen; after a certain amount of fighting, one or two of the animals come to dominate the rest, who will not even take food thrown into the cage unless they are sure that the bullies are not watching..."

"From time to time the system of dominance breaks down. A married male may die, or he may lose his strength or assurance, and then the colony is thrown into confusion. The bachelors rush to take possession of his wives. The resultant squabbling and fighting may go on for two or

¹ Zuckerman, *The Social Life of Monkeys and Apes*, p. 315.

² Wells, Huxley and Wells, *The Science of Life*, pp. 1383, 1384.

three days, the females being seized now by one male and now by another . . .

"In baboons, then, the family group rests somewhat insecurely upon the dominance of the owning male. Probably in other gregarious monkeys the same system is the rule. Our own species may have passed through such a stage, and have advanced from it by substituting a system of oral tabus for the primitive and less secure system of dominance . . .

"It is these tabus that hold back our species from incessant sexual squabbling and make the disciplined tolerance needed for sustained economic co-operation possible."

Now, it is certainly undeniable that tabu is among the means by which man's social peace is maintained. That is to say, it is among what Freud called the converging causes of phenomena. But it is not the only means. Our argument is that the individual sexual combat which disturbs the baboon colony has come to be replaced in the human group by a *collective* and *external* sexual combat in the form of war. In us, the socially disruptive energy of sexuality has been externalized, and leaves the group internally at peace. This would seem to be an inevitable corollary of social evolution, of the progressive integration of the group. We have the same kind of thing on the multicellular level, where increasing individuation depends upon increasing externalization of sexuality. Indeed, sexual behaviour is one of the surest indications of degree of biological individuality in an organism. For war to be a form of collective sexual combat, it is not in the least necessary for men to see it in this light. We can justify the assertion simply by pointing to the genetical results of war, to the hybridization which it produces, and to the general cytological¹ pattern of the warlike situation itself. Nevertheless, in the psychological states which accompany war, in the feeling of the young males that war is the supreme test of their sexual character and virility, upon which the womenfolk will judge and favour them, and even in the com-

¹ See Figure 6.

monly-accepted picture of war as a defence of wives and sweethearts from ravishment by the foe, we have much indirect evidence to support the view that war is collective sexual combat, which in any case we can reach by direct biological abstraction. To return to the matter of tabu, it is most unlikely that this instrument alone could conjure out of existence all the socially disruptive aspects of sexuality. For man is still as powerfully sexual as the ape. Tabu could only be efficacious in this matter if there were also an *external* outlet. War, as collective sexual combat, provides that outlet, however much we may overlook its sexual character. The development of the modern nation from the savage community has been marked by a diminution in the severity of sexual tabus. It has also been marked by an increasing preoccupation with external war. As the outlet of external and collective sexual combat becomes more effective, so the danger of internal and individual sexual combat is progressively removed, and with it the severity of tabus. There is no doubt, if we look without illusions at the facts, that the modern nation is essentially a community organized for war. That is to say, war is not to be regarded as an avoidable accident, but as being just as intimately bound up with and phasic in national life as sexuality in a metazoan body. This is not a condonation of war, but an attempt to view it realistically as the first step to its ultimate prevention.

To return to the baboon colony. One fact is clear, that the social (and ultimately cellular) aggregates of the baboon are internally unstable. They are quite unlike the social aggregates of the ant and bee, in that they are liable to recurring disruption by sexuality. Let us reconstruct hypothetically the development from this low social level to the level of the human group today. We start, then, with a sexually unstable group in which no complex social organization is conceivable. To whatever extent the further enlargement of the group depended on internal sexual peace and specialized co-operation, it would not enlarge beyond its initial size. But suppose that the group came into increasing opposition with other groups like itself, and that this capacity for collective opposi-

tion became to some degree heritable. The external opposition would tend to favour internal peace. After a long interval of evolution, a stage would come when the sexual pugnacity of the younger males, by which hitherto the dominance of their elders had been menaced, was rallied *collectively* against the external source of opposition. There would be a pretext by which the young could be socially disciplined and controlled. Internal disobedience would be seen to weaken the group in its external struggles, and would be punished by all its members.

Next, let us suppose that the internal sexual peace, secured by external opposition, favoured some degree of social specialization and control of the environment. This specialization might well lead to an internal expansion of the group that considerably *outweighed* the external losses of its reproductive males. And in so far as the capacity for collective opposition rested upon heritable factors, the capacity would be reproduced and multiplied in the expansion of the group resulting from that opposition. To some extent, it might be true that the more the group's internal sexuality was displaced outwards, that is, the more collectively integrated and bellicose it became, the greater would be its numbers. If that were so, it would not only tend to defeat its less numerous and integrated neighbours but would also, by intermarriage with them, tend to disseminate the very genetic factors upon which its own bellicosity ultimately rested.

This is most important, for we have to prove that war is not only a form of collective sexual combat but that it also provides the means of *collective sexual selection*. If war were not followed by collective intermarriage, our whole sexual argument would collapse. But it is plain in history, and we can assume the same thing in pre-history, that some degree of ethnic intermixture has always been a natural consequence of war. This means that the level of collective bellicosity may through long periods of time have been raised by warlike intermarriage. The collective pugnacity of the group may have been developed by collective sexual selection in the same blind and automatic way that individual sexual pugnacity has

been developed in an animal like the stag. The males of the victorious group, that is to say, would seize the women of the defeated group and thus automatically generate upon them, and perpetuate through them, their own *socially* aggressive character.

After all, when all is said, we have got to find some mechanism by which the narrow patriotism and pugnacity of human groups came into existence. The mechanism of collective sexual selection provides the most likely explanation. It is not, of course, in the least necessary from a biological point of view that men should be aware of the collective sexual character of their wars, any more than it is biologically necessary for individual animals in conjugation to have a knowledge of chromosomes and genes. Nature will tolerate any mental picture of war which brings it to its genetical consummation. Once the war has been fought, for whatever superficial "reason" (and these "reasons" are legion), the natural mating reactions of victorious males and defeated females can be left to do the rest. Although it runs counter to patriotic illusions on the subject, it is nevertheless a fact that defeated females show a distinct preference for the *collective* sexual conquerors of their group. This tendency runs parallel, on a higher level of integration, to the preference of individual females for the victorious males in *individual* sexual combat. This ready acceptance of collective sexual conquerors is strongly corroborative of the view of war as collective sexual combat. To continue, it is possible that in pre-history some groups may have struggled consciously for one another's women, but, as we have said, it is not necessary for our argument that this should ever have been so.

Now, there is a strangely blind, irresistible and automatic quality about modern war. Perhaps not many people are aware of it. But those of us who are able to hold ourselves somewhat aloof feel this mechanical quality very acutely. War, indeed, is not at all unlike a huge machine, with a demonic will and character of its own. It is as unteachable, as impervious to the prospect of disaster, as a machine. It clearly has no basis in the rational faculty. In its compulsive,

unreasoning energy, it resembles individual sexuality. Even the stubborn apathy and bewildering resignation of men in the matter of war can be explained if we regard these qualities as *genetically purposive*, as contributory to a larger sexual act. That is not to say that war may not have a merciless and inhuman rationality of its own; but it is certainly outside the rational faculty as we understand it. This state of affairs fits in very convincingly with the concept of *collective* sexuality. War is simply to be regarded as a piece of collective behaviour which has been implanted and developed by collective sexual selection. And as we withdraw ourselves from it, so that we see it as one whole, it appears as automatic, unteachable and involuntary as sexuality in a metazoan body. The warring group can be regarded, to put it rather brutally, as so much spawning protoplasm, as so much mindless flesh. Such a view must necessarily appear to be an assault on human dignity. But the whole development of science has been a series of similar assaults. It is possible to make too much of the influence of human rationality upon collective bellicosity, and to limit our thinking thereby. We gain a far closer insight into the causes of war if, in imagination, we momentarily debase the individual, if we deliberately lower our estimate of his rationality, and examine the warlike situation as mechanism pure and simple.

The argument that war, as a form of collective sexual combat, provides the vehicle of collective sexual selection, depends entirely upon the tendency being a heritable factor. We have to assume that the individual disposition to make war as a member of the group is, in the last analysis, transmissible through the genes. Only thus can we explain the raising of the level of bellicosity in human groups. Now, there are many people, and many distinguished scientists, who argue that war, despite its overpowering prevalence, is not inherent in human nature. They feel that it is to be regarded instead as an artificial product of the social environment. But after all, the social environment is created from within outwards, by man himself, and is therefore ultimately the product of man's genetic character. That social environ-

ment, however diverse and malleable in other aspects, is today remarkably uniform in its preoccupation with war, and rigidly resistant to its abolition. It is inconsistent to draw parallels with the domestic abolition of slavery and duelling. Indeed, it might be convincingly argued that the development of internal clemency and altruism has not only gone hand in hand with increasing ferocity in external war, but even that it has *depended* upon the existence of that external vent. It is possible in some cases that the thesis that war is no part of human nature is the reflection of an intense personal dislike of war and all its manifestations, and is therefore, to some extent, the result of wishful thinking. This is an attitude of mind which we ourselves share, and with which we wholeheartedly sympathize. But in its effect, though certainly not in its spirit, it is a reactionary attitude, because it tends to obstruct effort to explain war scientifically and so to postpone its ultimate prevention. The best mode of expressing hate of war, *that which inflicts the greatest ultimate execution on the hated object*, is to discover what war really is. There is little in history, and even less in the modern world, to support the hope that war can be talked out of existence, or that men can be "converted" against it. *A few individuals apart, man in his present form is simply a war-making automaton.* Even when he displays intelligence in other walks of life, he uses that intelligence in the case of war only to create ingenious justifications for its prosecution. That being so, it is logical to assume that the desire and the capacity to make war are attributes of human nature and are therefore, in the last analysis, transmissible through the genes. It goes without saying, of course, that to this same genetic transmission we must also trace the peculiar psychological situation in the human family group which is among the *secondary* determinants of war.

The concept of war as collective sexual combat opens up two important lines of thought. In the first place, we can postulate that just as individual sexual selection may militate against the survival of a species as a whole, so collective sexual selection may have the same effect. Originally the collective sexual opposition of human groups may have been

an instrument of internal sexual peace, and so have led to an expansion in human numbers. The process, however, has now pushed us so far and fatally along the path of collective bellicosity that human behaviour seems scarcely any longer to be malleable in the matter. This may mean that a stage will eventually be reached when the external destructiveness of war will outweigh its internally preservative function and cause a serious diminution in human numbers. If or when that time comes, the process will be found to be irreversible. It is doubtful whether it is reversible even now. The only line of advance then left open may be a direct modification of the psycho-biological nature of man by scientific man himself.

The second point is, that the view of war as collective sexual combat throws new light on the popular idea that war is a struggle for existence between nations. It shows that idea to be misconceived in so far as it considers war to be analogous to a struggle for existence between individual animals of different species. The very fact of warlike inter-marriage makes nonsense of the analogy. Nations pour their own living "flesh" into their victims, and so implant the very character by which their own spiritual cohesion tends in turn to be destroyed. This is the mechanism of that see-saw movement which we find in history. It would be impossible to imagine anything more completely antithetical to a struggle for existence between individual animals. But we do at least gain a fresh insight into the strength and stubbornness of this misconceived idea if we regard it as rationalizing the prosecution of collective *sexual* movements, which movements, from a biological point of view, are as important as a struggle for existence. That is to say, if we may express the matter metaphorically, the misconception has been fostered in the popular imagination *by the collective germ-tract itself*, in order to bring about its own release and dissemination from the group. When we find a militarist philosopher like General Ludendorff¹ speaking mystically and almost rhapsodically

¹ General Ludendorff, *The Nation at War*, English Trans., 1936.

about the value of war in the life of the immortal nation, and gaining a wide and appreciative audience for his philosophy, we must regard him as being the unwitting spokesman of the germ-tract, rather than of the nation itself. War does not preserve the nation, as we understand that word: it externally transmits the national germ-tract, which passes freely under alien flags, into other nations. We must picture two levels of biological reality in the international situation. On one level, there is the collective to-and-fro of the germ-tract itself, knowing nothing of nationhood. On a higher level, international divisions, by preserving internal sexual peace, keep in being the vast multitude of hidden germinal strands.

So much for the view of war as collective sexual combat. There is no space in the present work to cite historical illustrations of the fundamentally sexual character of human war. They will in any case present themselves abundantly to our educated reader. The peoples of the British Islands, inundated by wave after wave of alien and warlike genes, and later, as might have been expected, jetting these very genes into every corner of the world, will certainly spring to mind as an example in this connection. In Figure 10, we reproduce a chart, from Mr. H. G. Wells' *Outline of History*, which shows the track of raiding and migrating peoples in Europe between 1 A.D. and 700 A.D. This chart brings home to us very vividly the extent to which human groups must have fought and interbred with one another in the past, and so have raised the level of human bellicosity. In these raiding and migratory movements of loosely integrated human groups, we can see, as it were, on a higher level of integration, a crude parallel to those first primitive colonies of cells which must constantly have been dissolved and re-combined by sexuality as they drifted through the archeozoic seas. Of course, it has long been recognized that war and raiding and migration have led to the blending of ethnic types, and so to the sexual function of hybridization of the race. But it has never seriously been suggested, as far as we know, that sexuality itself may be the prime instigator of these massed and

cyclic movements. That perhaps is because the scale of human collective sexuality is so vast as to disguise any obvious resemblance to sexual systems on lower levels of integration. It is difficult for us to see the wood in which we ourselves are trees. Yet it is quite possible for Nature to manipulate our collectivities as sexual wholes, even though that manipulation may lie outside our narrow range of vision. Another reason why the resemblance of war to a sexual process has escaped our notice is because parallels can only be drawn, and that very imperfectly, with multicellular organisms on the very lowest level of integration, with those, that is to say, which have not developed any form of soma. And this type of organism never comes within the purview of the layman, the range of whose comparative faculty is therefore limited. Yet another reason why this resemblance has been overlooked is because wars in historical times have been fought for a bewildering variety of rationalized motives and incentives. It is only when we reflect how elusive, indefinable and even contradictory these incentives really are, and how seldom or impermanently they are achieved in actual practice, that we even begin to suspect the operation of more general and fundamental motives. And yet, once we make the broad association of war with sexuality, we discover so much firm corroborative evidence in the genetical pattern of the warlike situation itself that the idea seems presently to become commonplace, its only remaining strangeness being that it has never occurred to us before.

As a matter of fact, there is no element of daring whatever in the assertion that war is a collective sexual movement, a Titanic ejaculation of reproductive flesh from the body of the warring group. Considering the amount of hard evidence which points to this conclusion, it is a very trite and tame idea indeed. No good argument can be advanced against it, except the really crushing one that it is new. It requires far more audacity, a far braver heart to disregard the facts, to assert, for example, that wars are caused by ideological or economic factors. It also requires infinitely more sophistry and ingenuity. Our own hypothesis does not suddenly convert war

into a collective sexual movement. War is already, and has always been, a sexual movement. We do not insert anything fresh or foreign into the warlike situation, anything that has not been there since time immemorial. In the simple fact of warlike intermarriage, there are sufficient grounds to say that war is sexual. From the simple fact that armies of male sex sally out from their communities, we are entitled to use the words "collective sexual ejaculation" in regard to war. Let us not be confused, startled or intimidated by these common words; let us remember their root meaning, and how much, even in their scientific usage, it is possible for them to cover. Of course, in a certain sense, we might allow war to remain sexual in a fragmentary sort of way, at various particular and isolated points, as for example in the intermarriage it produces, or in the issuing of male armies from the nation. We might consciously and deliberately restrain ourselves from seeing the larger and unified sexual pattern of the whole. This would appeal to many who fear to have any sort of shape or comprehensive outline to their thinking. For clearly, the larger pattern does not import anything new into the warlike situation, except a purely subjective outlook in regard to war. The only justification for this more commanding viewpoint is that it is probably the one which Nature herself employs. For it is manifest that in war she treats the human individual as callously as a gamete, wasting and disregarding him. The real danger of allowing war to remain sexual in a merely fragmentary way in our minds, is that we tend to ignore these fragments altogether, and fall instead into hopelessly artificial and perverted modes of thought. And also, by failing to unify the fragments into a comprehensive shape, we deny ourselves the possibility of prediction.

Earlier in this section, we endeavoured to show how the development of collective sexual opposition may have helped to lift our society above the contemporary level of the baboon. We were on relatively firm ground there; the sexual squabbling of Monkey Hill was a fact before our eyes. It was easy to see how the externalization of sexual combativeness would act in the direction of internal peace. Again, to

take a vast leap forward, it is also a fact that the growth of human population in the last two centuries, the result of a scientific revolution which could never have taken place without internal sexual peace, has far exceeded the casualties in (external sexual) war throughout the same period. That was one aspect of the matter, an explanation of war in terms of animal behaviour. On the other hand, we attempted in an earlier section to connect war with its genetical results, to view it simply as a large-scale sexual movement. The reconciliation of these two views is not immediately apparent.

It would seem that war, whatever its biological disadvantages, and they are many¹, has at least two biologically valuable results. In the first place, it tends to large-scale hybridization of the race, which incidentally is the ultimate motive of all sexual operations. In the second place, by externalizing the disruptive sexuality of the group, it makes possible "the disciplined tolerance needed for sustained economic co-operation." The result of that tolerance and co-operation has been an enormous expansion of human population. Now, to which of these two biologically valuable results must we trace the deeper cause of war? It is not easy to answer this question, and we do not propose to go into it very deeply here. Of this at least we can be sure, that internal social co-operation alone has made possible the recent rapid multiplication of mankind. At first sight, then, it would seem obvious that the main purpose of external war is to preserve that internal co-operation. In this view, the collective hybridization produced by war would have to be regarded as a random and relatively unimportant result of the externalization of sexual combativeness from the group. We could sup-

¹ The most widely recognized disadvantage is war's dysgenic selection of the males, the physically fit and bellicose being killed. But we must balance this with the fact that war, through collective intermarriage, also selects for war-fitness and bellicosity. It is enough for a few survivors to get through, to transmit and multiply their genes. This should reassure those whose idea of racial progress is towards increasing war.

port this view by arguing that if nationalism were dissolved, and human individuals were allowed to circulate freely everywhere, there would be just as much scope for hybridization as at present. Indeed, theoretically, there would be *greater* scope; for nationalism, by favouring marriage within the national group, acts to some extent as a restrictive factor to hybridization. Thus, the hybridizing function of war would *not* appear to be the most important. But by this "granulating" our nations into individuals, we should merely be substituting individual for collective sexual combat; the existing basis of co-operation would be destroyed, and human numbers would rapidly diminish. Otherwise, why have we not dissolved nationalism already? We have to find some massive reason for its persistence. We might even carry the same argument down to the cellular level, as a complete *reductio ad absurdum*. Thus, human individuality itself can be regarded as a restrictive factor to hybridization. That is to say, if human individuals were granulated into cells, and if their original sexual functions were restored to the somatic cells, there would, theoretically, be even greater scope for hybridization at the cellular level. But with this ultimate granulation, multicellular organization would be dissolved. The human cell would be banished from its present environment, with the possible result that its numbers would enormously diminish.

It might seem, therefore, at first sight, that the hybridization achieved by war is not the main biological motive of that movement. But we must be very cautious here. This is new territory, and we have still to get its salient features into focus. For example, if we turn to the society of the ant and bee, we find there that the collective ejaculation of reproductives has a hybridizing function pure and simple. It has got nothing to do with the maintenance of internal peace. That is because the social insects have developed a collective soma, from which all internal sexuality has been removed. Cellular and multicellular sexuality remain only in the bodies of the reproductives. This comparison shows us the natural end of a line of development. The human segregated group, however, is

betwixt and between. It has considerable¹ internal sexuality, and also some collective external sexuality. In this case, the external sexuality is still linked with the preservation of internal sexual peace. But since the natural end of the line of development of external sexuality is hybridization pure and simple, the present hybridizing function of war may be important as such in its own right. The rule would seem to be that Nature, as she creates fresh aggregates on successive planes of integration, displaces their sexuality outwards. She cannot, merely for the sake of the integration of the aggregate, discard sexuality completely, for genetical recombination is just as necessary for life as aggregation itself. She retains sexuality (with, perhaps, a restricted scope for hybridization), but retains it in such a form that it does not disrupt the aggregate. This ties in with what is happening now in the human group. We are not selecting or educating against sexual pugnacity, the one factor which disrupts our own society. On the contrary, we encourage it, in its external action only. Of course, this may be regarded as the automatic result of collective sexual selection through collective sexual combat. The tendency towards collective and external sexuality is there, however, whatever its mechanism. This does not imply that the natural end of our present line of development is some seventy or eighty national somata, interbreeding like termitaries. Such a state of affairs would be altogether fantastic and absurd, and in any case quite unsuited to the terrestrial conditions of mankind. Any speculation about the remote future is really a waste of time. But it is certainly more likely that we shall eventually attain to some form of global society from which the socially disruptive element of sexuality will be eliminated, its hybridizing function being retained and scientifically controlled. It is difficult to see what other major possibility can lie before us if our society is to avoid destruction by its own internal sexuality.

¹ We advisedly use the word "considerable" instead of "free", which might seem more appropriate, because in point of fact heavy restrictions and limitations have already been imposed by society upon internal sexuality, to preserve internal peace.

This is very unsatisfactory, and, as we have said, we make no attempt to go deeply into the matter here. That must be the task of other minds, enjoying some measure of self-confidence and support. All we can say is that war probably began in the service of social integration, by converting individual sexual combat into a collective variety of the same; and that in course of time it became so disguised and rationalized as to lose all recognizable connection with its integrative and sexual function. The natural line of development of the process, with an increasing social integration that may eventually, perhaps, involve some kind of somatic differentiation, will be for it to swing over to a hybridizing function pure and simple. That tendency is opposed and even retarded by our nonsensical rationalization of war as an unqualified struggle for existence. Indeed, with the advent of atomic weapons, war may turn into an unqualified struggle for self-sterilization and destruction. If, as seems very likely, man in his present form proves to be completely unteachable in this matter, conditions of widespread death and chaos may be created in which a new biological order of humanity will have an opportunity to take root. If that should be so, it might already be on the wheel of destiny that existing man should bring about his own departure from this planet's side, to make way for his successor.

But in any case, a clear perception of the distinction and mutual antipathy of the process of aggregation on the one hand, and that of genetical recombination on the other, remains the first step to any real insight into the broad movements of society. This is the starting-point of any social philosophy that is not to be entirely superficial. For human society itself, in a last and entirely commonsense analysis, is an aggregate of microscopic cells. That aggregate has been built up in conflict with the disintegrative tendency of sexuality in the cell. That is the microscopic root of the matter. All larger situations, including human segregation and war, can be reconstructed out of that fundamental conflict. Having regard to this, we can say that there is quite enough in the contemporary warlike situation to justify us in describing it

not only as a collective sexual combat, but also as a collective sexual spawning. As soon as we focus our attention on the group as a whole, the second term becomes implicit in the first. And so, when we say "sexual spawning", we really *mean* "sexual spawning". We intend not only what the layman means when he employs those words, but also the finer connotation given to them by the biologist, whose gaze reaches down to chromosomal pairing in the cell. The normal mind is so evasive and impenetrable in face of an unfamiliar hypothesis, so fatally eager to rationalize a merely instinctive opposition, that we are compelled to be emphatic. It is no fanciful or facetious image, then, no mere figure of speech, to describe war as a collective sexual movement: it is a statement, at our present stage of knowledge, of plain uncompromising fact.

CHAPTER VII

GENERAL DEDUCTIONS

THE foregoing chapters of this essay have been devoted to an examination of how the sexual process may affect the structure of living aggregations on both the multicellular and the social plane. Henceforward, we shall make certain deductions from the theory that political division and war are the outcome of a fundamental biological conflict between sexuality and aggregation. But before we do so, it is necessary to make clear the general philosophic framework in which we view these phenomena.

For the purpose of this hypothesis, we recognize no impassable line of cleavage between mankind and the rest of animate nature. Both man and his communities are protoplasmic entities. The human group itself is made of precisely the same material as the bodies of its members. For, when all is said, what is society made of, but the fleshly bodies of men and women? It is therefore no whit less logical to speak of a sexual process in regard to the fleshly body of society as a whole than it is to speak of such a process in regard to the bodies of human individuals. Sexuality is an attribute of flesh: and society is made of flesh. It is as simple as that. Protoplasmic mechanisms apply equally to society. This forthright way of looking at things is possibly unfamiliar; but it is certainly not illogical. Perhaps it is even *too* direct and logical for the normal human mind, which shows a decided preference for tortuous, arbitrary and artificial modes of thought. In another sense also, it is as reasonable to look for sexuality in the human group as a whole as it is to look for it in the individual. For in either case, sexuality is not, in the last analysis, a function of the whole entity concerned, but of a lesser entity: the cell. The principal objection that can be levelled against the concept of the collective sexuality of a

whole human group, namely, that sexuality is a function only of the part, can therefore be levelled with equal logic against the existence of sexuality in the individual. Theoretically, we have as good grounds for inferring sexuality in the group as we have for inferring it in the individual. Be that as it may, we have to remember that the group is very definitely bounded in its behaviour by the vital needs and mechanisms of the substance, the protoplasm, of which it is composed. However complex society may be, it cannot divorce itself from its biological basis, though it may certainly attempt to *talk* itself out of all connection with that basis. In fact, if we think the matter out, we shall find that a great part of social complexity consists in the elaboration of protoplasmic mechanisms, which in any case cannot be evaded.

From our viewpoint again, the individual man occupies the same relatively subordinate position in regard to the political division and warfare of his society as any individual cell in a spawning colony of cells. If we abstract the human group as an aggregate of microscopic cells, the individual man becomes a kind of half-way house between the microscopic and macroscopic levels of integration, a sub-division in a larger body of microscopic entities. Thus the cell can be regarded as working through us, through our will and rationalizing faculty, to exert its influence on the movements of society as a whole. This is a perfectly valid way of looking at things, however humiliating it may be to our pretensions. The mere fact that man's mental organization is infinitely greater than that of any individual cell in no way affects his present powerlessness to control the collective sexual movements of his society. There is no use pretending that we have control, when events prove that we have none. Human mental complexity produces a rich embellishment and rationalization of the warlike movements of society. But embellishment and rationalization do not imply the power to control or check. We have devoted so much sterile ingenuity to complicating our own conception of the causes of war that the admission that we have no control over the phenomenon itself has become a very bitter pill to swallow. But there is no evidence in the contemporary

situation that we have any such control. Indeed, we commonly make light of our inability to prevent war. Of course, the psycho-biological nature of the individual can be taken to be such that the waging of war is accompanied by a sense of volition. That is to say, the powerlessness of the individual to prevent war will be non-apparent to himself, for he will regard himself as "choosing" to support its prosecution. It is characteristic of the consummation of any biological function or necessity, as nutrition, for example, or sexuality, to be accompanied by a sense of willing or choosing in the subject. There is, however, no viable alternative to the satisfaction of biological necessities, and so "choice", in the literal sense of the word, is not strictly applicable to them. In this sense, the inclination of human groups and individuals for war may not be such a free choice as it appears. One might risk the speculation that in the collective aspects of human affairs a biological necessity lies beneath every wish; but the very wish itself must automatically conceal the necessity. It might be plausibly argued that it is in precisely those fields of behaviour where he is most remorselessly enchained by his psycho-biological nature (as in the waging of war, for example), that man believes himself to be exercising the freest intellectual choice.

The more we ponder the general philosophic parallel existing between a military expedition and, let us say, a plate of microgametes expelled from an algal coenobium, the more curiously this parallel is seen to fit. The microgametes cannot be said to "will" their sexual "expeditions"; they have no mental capacity to will with. Nevertheless, if we were temporarily to endow them with such a capacity, and remembering that their survival depends ultimately upon the "expeditions", they would undoubtedly "choose", as do men, to undertake them. Of course, we are not here attempting any close analogy between the sexual behaviour of the colonial *Volvocinae* and the collective sexuality of human groups. Such analogies are of little scientific value, and in any case we have no need of them, since we can regard the human group as a multicellular entity in its own right. But we do submit that

in his present unwillingness or inability, call it which you will, to control the collective sexuality of his group, the human individual stands in the same subordinate relationship as an individual cell in a spawning colony of cells. If we seem to minimise the power of the human intellect in this matter, we have the bitter and unflattering experience of all recorded history to support us. Only when the human intellect applies itself to the modification of its own psycho-biological nature can it hope to become an independent power.

There is another point to make here. We believe today that human personality has a physical basis. It is implicit in this belief that in so far as man is still unable to bring about any fundamental change in his physical make-up, he is to that extent unable to modify his overt personality. Now, the attitude of the individual towards political problems is not, perhaps, entirely unconnected with the nature of his personality, and therefore with its physical substratum. If, as appears to be the case, the physical substratum undergoes a progressive ontogenetical development, this development may well have its reflection in a changing attitude towards political problems. That a change of political opinion does normally occur is clearly demonstrated in the case of a large number of men whose opinions in youth and age have been placed on permanent record. We do not need to cite examples here, as the fact is already widely recognized. We do, however, intend to place a new interpretation upon it in the light of the hypothesis outlined in this work. The ontogeny of the human individual is characterized by a waxing and waning of sexuality, accompanied by profound changes in the endocrine system. If this flood and ebb of sexuality, through its physical substratum, can be correlated with changes in personality, and hence, to however slight a degree, with changes in political opinion, with the normal passage from the reformist tendency of youth to the conservatism of old age, it might become possible to distinguish a definite *biological* variant in the political attitudes of the old and young. Now, our hypothesis regards war as a collective sexual movement, a collective sexual ejaculation from the group. The young, of sexual or military

age, make up the bulk of the "ejaculate". The old, of "somatic" or non-military age, serve to ejaculate their sexual offspring. The different attitudes of old and young towards war can, we believe, not only be correlated with their relative positions in the ontogenetic cycle of sexuality, but also with the respective parts which Nature compels them to play in the social ejaculation. To the normal man, the necessity and indeed the excellence of political division and war become more and more apparent with advancing years. This progressive inclination for warfare on the part of those who are expected by society to play no active part in it, is not to be attributed to a mere acquisition of experience. It is rather to be associated with an ontogenetic waning of the sexual impulse, with the passage of the individual from a "gametic" to a "somatic" rôle in the larger sexual tides of his society. If, as seems to be the case, this speculation is supported by experience, it adds a fresh significance to the tendencies of reaction and revolt.

The normal man is not likely to admit any connection between his changing attitude towards political questions and the physical waning of his sexuality. He will necessarily regard his mind as being completely free and will resent any suggestion that physiological factors can affect it. If he detects any inconsistency between his earlier and later political viewpoints, he will tend to regard the earlier view as "mistaken" and attribute it merely to a lack of knowledge or experience. Yet the change is so constant, can so certainly be predicted, that we have to assume the operation of more fundamental factors. Only by constantly reviewing his political outlook against the notion of ontogenetic development, against the waning of sexuality in his own body, can the political thinker attain to any degree of genuine objectivity. Otherwise he must expose himself to the taunt that he also, like every other aging person, has had his conservatism thrust upon him as helplessly, with as little influence of the rational faculty, as the whitening of his hair.

If, as we believe, war is a form of collective sexuality of the whole group, we are left in the position that the individual

may suppose himself to be pursuing certain ostensible and apparent ends, while in reality, or rather, in a more accurately abstracted framework of thought, he may be pursuing quite unsuspected ends: the deeper inhuman ends of Nature. Great and entire volumes have been written to refute our rationalizations of war. And wars continue unabated. They continue, we submit, because, however merciless and wasteful they may be, they serve ends necessary for the survival of human society in its present sexually unspecialized condition, ends which only now dimly become apparent.

CHAPTER VIII

POLITICAL DEDUCTIONS

THE family group is among the exogamous units that compose the protoplasmic body of mankind. Many families are ringed about on a national basis to form larger sexual entities "hostile" to one another. It is entirely legitimate to describe nations as sexual entities in so far as their warlike commerce one with another, however it be rationalized, does as a matter of historical fact tend to hybridize the race.

Let us glance back for a moment at the structure and behaviour of the primeval family group. There we saw that the son, on attaining sexual maturity, came into conflict with the father, and was "killed or castrated or driven out."¹ As Darwin suggested, "the younger males, being thus expelled and wandering about, would, when at last successful in finding a partner, prevent too close interbreeding within the limits of the same family."² In other words, at precisely that pubertal phase *when active germ-cells developed in the body of the son*, a psycho-sexual conflict led to his expulsion from the family. If we focus our attention entirely on these *germ-cells*, we see them transported outwards in their somatic vehicle to a distance from the family group in which, ultimately, they had their origin. Still observing this spatial move-

¹ Freud, *Moses and Monotheism*, London, 1940, p. 131.

² Darwin, *The Descent of Man*, London, 1896, pp. 590, 591.

Both Atkinson and Freud seem to have recognized that the conditions of the Darwinian primal horde would in practice bring about the exogamy of the young men; but, strangely enough, neither appears to have taken the further step to regard those conditions (and their modern counterpart in the oedipal situation) as being genetically purposive for that reason. In a recent work, Sir Arthur Keith describes much the same mechanism in chimpanzees, also, apparently, without drawing the conclusion of genetical purposiveness. He writes (the italics are our own):

ment, this dissemination of the son's *germ-cells*, we can describe the process as *a seminal ejaculation from the body of the family group, or from the larger social group of which the family was a part*, and that in the most literal scientific meaning of these words. Looking at the matter from an evolutionary point of view, one may indeed regard these germ-cells as having *created* the father-son repulsion as a means to their own terrestrial dispersal. Stated differently, the conflict in the primeval family, and its modern counterpart, the oedipal situation, appear to be genetically *purposive* as tending to dispersal and hybridization. That is to say, the oedipal repulsion would appear simply to be the social counterpart of the mechanisms by which multicellular bodies scatter and disperse their seed. Now Freud¹ has rightly scouted the idea that the savage's dread of incest arises from an innate perception of the biological value of exogamy or of the dangers of inbreeding. He points out that if there existed any instinctive abhorrence of incest, reflecting biological tendencies, social barriers to this practice would be unnecessary. Instead, he regards the incest-dread as a social or traditional instrument to preserve society from the conflicts that disturbed the primal horde. But the very act of preserving society from these conflicts, by marriage restrictions, laws of avoidance and the like, does in fact tend further to hybridize the species. It is therefore the psychic conflict itself, re-born in every generation, which remains the instrument of repulsion, of dispersal, of hybridization. The oedipal situation can be regarded as a dynamic balance, in which the centrifugal push of oedipal hostility meets the centripetal pull of the incestuous tendency and finally overcomes it. This immensely

"Further, sex jealousy is strongly developed in male chimpanzees, ending in the death or expulsion of one of the contestant males. All who have studied anthropoids in the jungle have observed stray or 'rogue' males; but so far no observer has seen one of these rogues crashing its way into a strange group or seeking to entice females to join him and so form a new group. Yet we are justified in believing that such things do happen, *and in this way new seed is introduced to old groups*, and so a form of exogamy is instituted, very different, as we shall see, from modern human practice". (*A New Theory of Human Evolution*, London, 1948, p. 150.)

¹ Freud, *Totem and Taboo*, London, 1938, p. 191 *et seq.*

complex psychic situation curiously repeats, on a higher level of integration, the electrical pull and push of forces in the meiotic tetrad, in which the severing repulsions finally predominate.

Let us return from the isolated primal family and regard a modern nation as an entity composed of family groups. In so far as modern war propels the sons of these family groups beyond the frontiers of their nation it has precisely the same genetical *effect* as conflict in the primal family. Indeed, if we imagine a multiplicity of primal families to be aggregated in such a fashion that all their sons, on reaching sexual maturity, are expelled simultaneously under organized direction, we have a picture that resembles in broad outline the genetical effect of modern war. The fact that war tends to hybridize the species deepens this resemblance.

In an earlier chapter, we have shewn reason for believing that the directing outwards of the pugnacity of the reproductive males is a means of preserving internal national peace, and that the very division of nation against nation may, in fact, lead to an *overall* survival of our species that *far outweighs* the loss of life resulting from international struggle. The pugnacity of the reproductive male is a factor that has to be reckoned with. It cannot be talked out of existence. The dispute whether this pugnacity is a genetic character, or a product of the social environment, is both sterile and immaterial to the present issue. For the existing social environment has been created from within outwards, by man himself, and is therefore a product of man's genetic character. Doubtless, if human pugnacity and its genetic anlage could be spirited away, national segregation would cease any longer to be necessary. Unfortunately, this segregation, created unconsciously to preserve internal peace, tends to *increase* the very pugnacity it guards against. Aggressive peoples, by intermarriage with their victims, genetically disseminate their own aggressive character. The Roman, Saxon, Danish and Norman conquests of the British Islands implanted the character that carved out the British Empire. War, in effect, provides the means of *collective* sexual selection; is itself a

form of *collective* sexual combat. Like individual sexual selection, the collective process can, if pushed too far, militate against the survival of the species as a whole. And the mechanism, once set in motion, is automatic and irreversible. It now grows big with disaster for mankind. But we digress.

Whether we like it or not, the facts insist that mankind *is*, and remains obstinately, a politically segregated species. Nor can we, in all seriousness, attribute this segregation to a merely capricious human wilfulness and stupidity. The mental calibre which has produced radar and rocket aircraft would long ere this have perceived the wastefulness and futility of nationalism were there not some fundamental barrier to human unity in the very psycho-biological nature of the individual. Talk will never shift this barrier, unless that talk be directed to the examination and deliberate modification of the causative mechanisms in the individual man himself. We may, a very few of us, detest national segregation, and all the lies, prejudices, conceits and cruelties which its maintenance, in the absence of any clear-sighted understanding of its causes, now entails. To dissolve this segregation, however, we must first uncover its aetiology. We must justify it, and produce a truly scientific apologetic for it, however distasteful the latter task may be. Then, and then only, having dissected the process down to its ultimate dissepiments, can we hope to supplant it by a cleaner, more economical and aesthetically satisfying alternative. We must remember the advice the Red Queen gave to Alice, and try walking in an apparently opposite direction to attain our hill. We shall not attempt fatuously to talk war out of existence. We shall face up starkly to its present inescapability; and then, having discovered precisely *why* it is inescapable, we can begin with some hope of success to devise methods for escaping it.

Despite political segregation and war, or rather, *because* of these very things, man is a powerful and numerous species. All the scare-writers and panic-pacifists in the world cannot blind us to the fact of his numerousness and power. Civilization is always on the point of extinction in our major wars, and always, unaccountably, survives. It becomes apparent

that it is immaterial how human society is divided up, so long as it is in fact divided. The scientific student of international war is unimpressed by the merits of any particular national segregation as opposed to any other: he is impressed only by the merits of segregation *qua* segregation. Indeed, true science has no fatherland but the Earth; and the scientist has an ear cocked attentively and simultaneously in every country on his planet. Whatever he hears, and wherever he hears it, sounds deplorably alike to him.

It must certainly not be thought, however, that the varieties of ideological superficialities and catchwords which *do* exist among the nations are unimportant. On the contrary, they serve the biological purpose of inciting the common man to liquidate his own pugnacity against the pugnacity of his national neighbours, thus leaving his homeland internally undisturbed. For the scientific thinker, however, this ideological diversity is epiphenomenal and phantasmal, a question merely of longitude and latitude, a useful rationalization of power-politics and international war. We put it to the thoughtful reader that Man is now an interbreeding species; his family ties, his fundamental needs, his joys and fears and sorrows, are everywhere the same. All segregational governments must, in the last resort, rest upon the consent of the majority. It is of little importance how this subjective consent is obtained, so long as it is in fact a consent. In precisely those quarters where our own particular national blinkers might lead us to suppose men most unfree, we find them engaged sincerely in wars of "liberation" against their neighbours. "Freedom" is a purely subjective concept, bearing little relation to the realities of national life. Conscripted soldiers fight as "free" men for national sovereignties that lead invariably to more conscription. Every nation is taught to regard its chosen antagonists as being unfree. This is part of the ideological "build-up" that reflects the sexual "build-up" of international war. No: diversity of political ideologies is no diversity to any scientific thinker who dares to give an impartial ear to what every nation has to say. It is vital, however, that this fact should escape the notice of Everyman, and

more particularly of his son, who must be incited by any ingenious rationalization to sally out and annihilate himself against his opposite number in the enemy, in order that both his nation *and* the enemy's, by this discharge of disruptive energy, may remain internally at peace. The "scientist," so far from exposing the underlying uniformity of segregational governments, should invent further fictitious "differences" by which their younger males may be conveniently destroyed. And this, for the most part, is precisely what he does.

In the same way, a babel of tongues assists the maintenance of political division. Speech was, and probably still is, the primary means of intercommunication, and hence of human sympathy and social homogeneity. It is therefore a matter of vital importance that there be no common language of mankind. Such a universal tongue would render more difficult the extroversion of national sexuality and the whole-hearted prosecution of our wars. Happily, the common man, dimly conscious of this fact, struggles to maintain our polyglottic babel. Only a few irresponsible persons, unduly impressed by the fact that radio-telephony carries the human voice around the world in a split second, see fit to advocate a common language for the race. Although there are many exceptions to the rule, we find that segregations sharing a common tongue tend to become allied during their periods of "gamogony", which lends some support to our correlation of lingual diversity and sexual extroversion.

National and tribal culture is another valuable instrument of division. Careful comparison reveals that men everywhere show a uniformity of behaviour—as we should expect in a genetically homogeneous and interbreeding species—that far outweighs superficial differences in their culture. It is for precisely this reason—fundamental identity of behaviour—that their trifling cultural varieties must be underlined and stressed to enable warfare to take place. And indeed we find cultural minutiae invested with just those strong emotions we should expect to accompany an instrument of survival. It should be clear, of course, that *particular* tongues and cultures have no genetical significance: only the capacity to en-

due these trifles with dynamic emotions is genetically determined.

Since the internal peace of a nation would appear to depend upon the directing outwards of the pugnacity of its younger males, it is interesting to note that the various national segregations, during their periods of sexual tension and "gamygony", tend to become balanced in two major groups of opposed and equal power. This balance of power clearly facilitates sexual extroversion by providing each group of nations with an opposing group of sufficiently menacing dimensions to attract, and draw outwards, the hostility of its reproductive males. Again, and this perhaps is the root of the matter, *a balancing of power will cause the infliction of maximum casualties on both sides, after hostilities have broken out.* Each balanced opponent, that is, will assuage and liquidate the other's internal plethora of disruptive sexuality. *War, in this sense, is a contract between governments, by which each undertakes to purge the other of its reproductive youth.* This deeper, unconscious pattern of events extends beneath the conscious and superficial pattern of vociferous hostility.¹ Many sensitive young men, poets, writers and the like, have stumbled intuitively upon this undertone of war. But they have recoiled in horror from a thought so painful, so meaningless and inexplicable, so apparently contradictory not only of parental affection but of all the long-iterated rationalizations of human warfare. They have written their agonized "Why?"—have grown old, have forgotten. Yet that deeper pattern is full of meaning, even becomes, in a sense, rational and purposive when placed in a biological framework of ideas. Well might Ruskin exclaim: "For the soldier's trade, verily and essentially, is not slaying, but being slain."² In one of his novels, H. G. Wells causes the principal character to write: "Massacres of boys! That indeed is the essence of modern war. The killing

¹ This deeper pattern may be correlated with the varying reactions in different age-groups to proposals to punish enemy leaders as "war-criminals".

² Ruskin, *Unto this Last*, London, 1901, p. 25.

off of the young.”¹ That essence, that sombre necessity indeed, is woven into the very fabric of human society. It reappears in symbolic form in Christianity, in the crucifixion of the Son for the redemption of mankind. Wars, our experience tells us, result in the killing off of young men. When enough young men have been slain, there is peace. It is odd, on the face of it, that this tremendous biological *result* of war should never have been associated with the ultimate *cause* of war. It is a principle of science to search for the purpose and utility of vital mechanisms in their result. In the case of war, we must suppose powerful psychological resistances to oppose this train of thought. The normal view is that the massacre of the young is an accidental outcome of quite other determinants of war. But these other determinants are invariably superficial to a biological system of ideas. We do not suggest that the massacre of youth is the only aim of war. Were that so, human groups would by now have acquired the behaviour of periodically exterminating their military youths *within* their frontiers, without driving them beyond. The massacre is only one aspect of the matter, a relief of national tension. The other, and perhaps equally important, aspect is the genetical recombination achieved by war (see p. 88).

To continue. The “ideal”, of course, for the purpose of maintaining national stability and organization, is a long and static warfare of attrition in which the ribbon of carnage approximates to the interface of the two opposing groups of nations, until the time when one group, acting as the “female” in this case, yields and is occupied by the social semen of the other. In this dreadful sense, the first world war was ideal, procuring as it did a whole generation of international peace. The deadlock, the appalling wastefulness of the attacks, the unimaginative generalship on both sides, by according with the unconscious purposes of war, were in a longer view beneficent, and for this very reason were endured so long and so uncomplainingly by the warring nations.

It matters nothing how the balance of power is composed,

¹ Wells, H. G., *Mr. Britling Sees It Through*, London, 1916, p. 442.

so long as a balance is in fact achieved. In fine, the grouping of weights on any one scale requires no community of ideology or culture within the group: "weight" is all that matters. Although historical statesmanship amply corroborates this view, it is very properly lost sight of in the rationalized exigencies of the sexual struggle. Allies are always Glorious. Until a random re-arrangement of the weights displays them as Inglorious Foes.

The balance of power, be it clearly noted, is an instrument primarily of *war*, and not of long-protracted peace. It is an instrument of peace only in so far as *internal peace* cannot exist without external war. Its deep unconscious purpose is to make wars more bloody and exhausting, and by this means alone to ensure internal discipline and order. It is a delusion, utterly belied by history, to suppose that the balancing of power can have any other outcome but a long and costly struggle. The fact that men continue, in spite of the most glaringly contradictory experience, to employ this balance as an instrument of *peace* becomes explicable only if we regard their deeper nature as driving them inexorably in the opposite direction. Every effort to achieve a balance is an unconscious effort to instigate another war—an effort which, in the framework of this hypothesis, we find ourselves unable altogether to condemn.

Now, it is apparent that the normal statesman and diplomatist do not consciously view the balancing power in any comprehensive framework of ideas such as that propounded here. And so occasions may arise where the equilibrium fails before its sanguinary purpose has been achieved. One group, sexually expended, may capitulate before the other has sustained sufficient losses. The victors, rutting dismally with an unspent plethora of reproductives, will then be compelled immediately to create a new balance among themselves, to turn on one another. Although this is scarcely the place for a contemporary application of our theory, it should be manifest that the concept of sexual extroversion provides the clue to the present international situation. The Axis Powers capitulated before the United Nations had achieved sufficient

losses in their own rank and file to secure a generation of international peace. The latter, sorely oppressed by a "musty superfluity"¹ of unexpended males, not hastily to be demobilized, must now become the Disunited Nations in order that, as soon as may be expedient, their sexual discharge shall be complete. Had Britain and America allied themselves to Germany as soon as her tide of eastward conquest began to ebb, the war would have been more bloody and protracted, and every major power would have gained sufficient "losses" to ensure a peace comparable in length to that following the first world war. There would have been none of the eager anticipatory talk of the "inevitability" of a third world war which now so pleasantly assails our ears. As it is, the Western Democracies have been left, so to say, sexually "hung-up", turgid and tumescent with large numbers of unkilld young men, and, in the interest of their own survival by internal peace, will be compelled to engineer another Cyclopean "conjugation" in the not so distant future. In the recent war, as well we know, the United Nations fought for Freedom—for freedom, that is, or relief, from their *own* reproductive accumulations. By spawning side by side they bled, presumably, to sustain and perpetuate each other's political ideologies. Now that two of them, by the untimely cessation of hostilities, are compelled to aim their unexpended armies at the third, their erstwhile ally, it astoundingly becomes apparent that their respective political ideologies all along were mutually exclusive—that a single "free" world cannot possibly contain the two. What we preserve as "Freedom" today, you perceive, we destroy with unfailing consistency as "Tyranny" tomorrow. Let it not be thought that we view these ideological acrobatics in any spirit of derision: rather, knowing well that they sustain our bare existence, we feel an envious admiration for the mental elasticity of the acrobats.

¹ *Messenger*: The news is, sir, the Volsces are in arms.

Marcus: I am glad on't; then shall we ha' means to vent our musty superfluity. See, our best elders.

(*Coriolanus*, Act. 1, Sc. 1, lines 230-232.)

Those familiar with this play by Shakespeare will recall the background of civil unrest against which the words are spoken.

Let us pause for a moment and consider two possible objections. In the first place, exception may be taken to our use of such terms as "rutting", "turgid", "tumescent", "conjugation", and so forth, in connection with the phenomena of war. It will be claimed that their employment in this context is repellent, fantastic, or completely unscientific. It is characteristic of every fresh departure of thought touching the behaviour of man and his society to appear repellent or fantastic. We can only say that once the initial resistance has been broken down, once the mind accommodates itself to these associations, they appear so obvious and commonplace as scarcely to arouse any emotion whatever. As to the usage of these terms being unscientific, there is some force in this objection. Clearly, such terms are customarily applied to states of sexuality in the individual. We are perfectly aware of that. But since no terminology exists as yet to describe sexuality at the social level, these expressions serve to provide by analogy a general insight into the social situation. Moreover, in breaking fresh ground, in associating idea-systems which normally are tenaciously held apart, a certain crudity and iteration are perhaps excusable. A careful reader will note the parallels where they exist without being confused or misled by the unavoidable inexactitude of the terms. In spite of the terminological difficulty, however, no amount of sophistry can elude the fact that a social group is as much a protoplasmic entity as is the body of any of its members. Here, at least, we are not arguing by analogy. A human community is itself composed of the microscopic cells composing the bodies of its members. Society is not *like* a multicellular body: it *is* a multicellular body, partitioned, if you prefer that, into human individuals. Or again, sexual cells "in" the individual are also "in" the community containing that individual. These facts, so fraught with significance and so seldom pondered, should be borne in mind by any who think wishfully that the terminological difficulty in itself nullifies our conclusions, or who hope to use that difficulty as a smoke-screen to obscure the less flattering aspects of this theory.

In the second place, exception may be taken to the view that the peace-period enjoyed by a nation bears a mensurational relationship to the number of its casualties in the preceding war. This view, though seemingly cynical when thus stated, is in fact widespread. We commonly hear that such and such a nation "has lost too many men to go to war again for several years". Alternatively, we are told that such a nation must repair its economic structure before it can resume hostilities. Later in this chapter, we shall show that between wars there is a definite protoplasmic "build-up" within the national entity, a progressive shift in the *proportion* of certain cytological categories, which can be linked up, through the structure of the family group, with the nation's psychological preparedness for war. Economic preparedness would appear to be a by-product or expression of this protoplasmic "build-up", in which are embedded the ultimate determinants of war. We shall indicate a possibility of war-prediction by sounding the "depth" of this protoplasmic accumulation at any given moment. This concept of a protoplasmic "build-up", which overflows in war, is in flat contradistinction to the view that war can be postponed indefinitely by political action. We are told that if Hitler had never come to power there would have been no war. Our own view is that the rise of the dictator was an expression of accumulating tendencies in the German people, which had their counterpart, with other modes of political expression, in the countries opposed to Germany. Douglas Reed has written:

"In view of the mass of information which, for five years before that time [Munich: 1938], was supplied to the British Government, it is impossible to believe . . . that he [Mr. Chamberlain] did not know that a stand then might have averted war altogether."¹

In reality, a stand in 1938, so far from averting war, would have precipitated it. That is the unconscious reason why so many people clamoured for a stand at that time, because unconsciously they wanted war earlier than it came. We are not

¹ Douglas Reed, *Lest We Regret* London, 1943, p. 18.

here discussing the strategic merits of war in 1938 from the viewpoint of any country. Strategic considerations are rationalizations of unconscious psycho-biological impulses. The Munich "crisis" brought a sense of frustration to many people, was an excruciating check on the very brink of their national ejaculation. It did, however, serve to fortify the rationalization that Britain was forced into war against her will, after the utmost effort to avert it. In the same way, the hoary adage, *Si vis pacem, para bellum*, has triumphantly withstood centuries of contradictory experience because it promotes that opposite of peace which is unconsciously desired. When nations re-arm "to preserve the peace," you may be sure that war is imminent. No political device, no changing of governments or hunting of scapegoats, can avert war when the diffused and fundamental tendencies in the national body have risen to the level of overflow. What these tendencies are, and how they operate, we shall explain later in this chapter.

Let us return to the present international situation. We said, earlier on, that if Britain and America had allied themselves to Germany as soon as her tide of eastward conquest had begun to ebb, the war would have been more bloody and protracted, and every major power would have gained sufficient "losses" to ensure a peace comparable in length to that following the first world war. This view may appear cynical. But it is the facts themselves, interpreted without illusions, that are cynical. If, as our press and radio suggest, America and the western European states are to find themselves at war with Russia, it would seem that the third world war is to be a mere continuation, after a short breathing-space, of the second. Better, surely, to have got our heavy casualties all in one bout in the recent war, and to be able to look forward now to peace for a generation. The loss of life is the same in either case. But the economic dislocation, the continuance of conscription, the civilian bombing, the sorrow, the partings, and the disruption of families, are more onerous in two abortive wars than in one wholehearted one. Better for the recoupment of the national organism is one severe discharge

of sexual tension than two impeded bouts: things being what they so damnably are. It may be objected that it would have been impossible to switch propaganda against Russia in 1943. It took little enough time to effect that switch in 1945! But that is the whole point. So long as we neglect the psychological realities of our situation for this rubbishy, phantasmal game of ideologies, we shall not even balance power aright, shall not even make the best of that bad job imposed upon us by our nature.

Our rationalizations of war may lead us astray in another direction. One of the purposes of war is to relieve the national organism of the constantly-mounting sexual tension created by the accumulation within its borders of young men of sexual or military age. This accumulation of young "men" implies also the accumulation of the microgametes (spermatozoa) contained in the bodies of these young men. These accumulating microgametes in their totality are also "in" the national organism. To this hidden microscopic accumulation may be traced in the ultimate analysis the mounting sexual tension of the nation. Now, this tension may be best relieved by destroying these microgametes (and the bodies, or somata, which contain them) between the hammer of a nation's war effort and the anvil of its enemy's. That, in reality, with great economic loss, is precisely what war does. Remember, the *facts* are cynical. But, owing to our rationalizations, our dishonest sugaring of the nasty pill, we are compelled to extend warfare to civilian populations, to those parts of national bodies, that is to say, which are *not* responsible for the sexual tension. This dishonesty results in needless economic dislocation. The most obvious danger is that economic exhaustion may compel a nation to capitulate before its biological tension has been discharged. In that case, the biological tension will rapidly re-assert itself and will instigate another war before the economic structure has been adequately repaired. Analogies with sexual activity on the individual level will here present themselves to a thoughtful reader. Our current rationalizations of war, therefore, will lead us ever deeper into economic misery. Clearly, we are faced with a dilemma.

In the first place, we can rule out the possibility of "continence" in so primitive an individuality as a nation. As well expect it of a coenobial alga. A nation's only alternative to external war is civil war. Recent history proves that. Civil unrest in France and Greece and, earlier, in Spain, was the direct result of inadequate casualties in external war. Nor can the armies of the world be persuaded to bayonet themselves to death in isolation. And mass hara-kiri is only practiced at the moment by Japan.¹ Obviously, within the framework of our rationalizations, it is entirely consistent to bomb the civilian population of an enemy, and for him to retaliate upon our own. A refusal by any national government to do this, by exposing the inner pattern of reality, would provoke immediate mutiny in its armies, and thus bring upon it the very disaster that wars are waged to obviate. And finally, it is quite out of the question for a national government to make an open breast, to throw itself upon the mercy of its armies, with the confession that all its educational effort, propaganda, civilian war work, and the like, are devoted unconsciously to the destruction against the enemy of those, its *own* armies. Such a confession, by subverting an age-old and comforting tradition, would disrupt society and plunge it into primal chaos. Such a confession of reality would never be believed. Nor could it be made by any government, for the good reason that what is unconscious can never be confessed. The reader may measure the difficulty of exposing reality to the light by his own reaction to this view of war.

There are, however, many protests against the bombing of non-combatants. These are quite inconsistent with our rationalizations of war. Armies are clearly supported by their homeland. Nevertheless, a deep instinct, emerging confusedly from unconscious strata of the mind, suggests to certain people that war should only concern itself with the elimina-

¹ Immediately after Japan's capitulation in 1945, large numbers of her soldiers, unable any longer to die against the enemy, committed suicide with their own grenades. This action, rationalized as an inability to bear disgrace, was in fact prompted by the deep unconscious motives which we here disclose.

tion of men. That instinct speaks truly. But it cannot be accommodated to our rationalizations. It is useless to try to do so. As an example, Mr. Harold Nicolson during the recent war "announced (in the *Spectator*) that if the only argument in favour of our bombing of Germany were that it would have the same effect upon Germany's internal resistance as was produced in 1918 by the blockade, he would feel it to be 'better to have another year of military warfare than to achieve victory by bombing in the night.'"¹ We are indebted for this quotation to Mr. Douglas Reed. Biologically speaking, Mr. Harold Nicolson was right. But the incongruity of his view with normal rationalizations of war can be gauged by the indignation it aroused in Mr. Douglas Reed. Again, some generals have taken pains to assure us that the next war will not be won by pushing buttons. Armies will still be needed. There is a note of unconscious panic in these pronouncements, a fear that war, with all these new inventions, is going off the rails, that it may cease to fulfil its proper function of killing off the males. The generals are right. War *is* going off the rails. Our imperfect rationalizations are to blame.

So where do we stand? No one doubts that civilians will be bombed atomically in our future wars. The probability is that nations will be broken economically and forced to surrender before their sexual tension has been allayed. In a surround of deepening economic chaos, civil disturbance or petty and sporadic fighting may increase. This may lead to a progressive fragmentation of society. All this is purely conjectural, but it provides a picture of events that may possibly come true. Civilization will not readily collapse. Such prophecies are mostly based on wishful thinking. But eventually, at some remote epoch in the future, it seems likely that conditions will become so intolerable that Science will consciously direct our evolution, will itself create the somatic descendants of our race. Some kind of *social soma* there will have to be, as the only possible reconciliation of sexuality and aggregation. This is the beaten path of life from level to level of complexity. The only alternative is death.

¹ Douglas Reed, *Lest We Regret*, London, 1943, p. 330.

To return to the main theme of this chapter. Because a balancing of national segregations serves the cause of sexual extroversion, it often happens that a powerful nation, feeling the cyclic urge to rut, will unite its weaker neighbours, by its "mailed fist" diplomacy, into an antagonist of sensible proportions. In the light of our hypothesis, such a policy of truculence as Germany adopted before the two world wars becomes biologically significant. If we regard this policy from the standpoint of our rationalizations of war, it must appear as folly. Nations are never cowed by truculence: indeed, truculence prompts them to re-arm. The aggressive intentions of a nation should surely be concealed until the propitious hour for an onslaught on its unprepared opponents has arrived. And yet experience proves that this never is the case. Our hypothesis enables us to uncover the inner teleology of this curious behaviour in its results, to see it as a biologically significant design, albeit unconscious, to create the conditions of a balanced and therefore *costly* war.

Now, if we remember that *it is perfectly possible for men to follow one set of ostensible and supposedly rational ends, while in reality performing precisely those ACTIONS necessary for the consummation of entirely different and unsuspectedly inhuman ends*, we shall see our way more clearly. This point needs careful thinking over before its tremendous significance is perceived. The *actions* of men in war, that is to say, their physical destruction of one another's bodies, the physical diaspora of these bodies in space, the physical coupling of genes from these bodies with genes from alien bodies—such *actions* discharge the sexual tension of communities and hybridize the race. This is the hard core of reality. This is the Why of War. Nature has her gaze on this. Any rationalization will serve that brings this thing about. And the rationalization need have no connection with the underlying facts.

Men would still fight even if they could find no slightest reason for their fighting. "Reasons" are in fact unnecessary. The itch to rationalize war is a random activity of the human cerebrum, an activity from which Nature remains con-

temptuously aloof. In reality, men remain as ignorant of the inner motive of their wars as a dog and bitch in conjugation are ignorant of chromosomes and genes. They neither need nor sincerely want to know the fundamental Why of their bellicose transactions. Nature provides them with a compulsive pattern of behaviour, an impulse, an appetite; she provides the means to satisfy that appetite; and she leaves the job at that. As with individual sexuality, the collective sexuality that we know as War can be regarded as a broad and many-stranded impulse. Like individual sexuality, it can bring sadism, masochism, and any other contributory tendency within the orbit of its action. And like individual sexuality, it has its psychic concomitants in the unconscious as well as in the conscious level of the mind.

It is this many-stranded "impulse" of war, having its evolutionary origin in the sexual mechanisms of the cell, which men rationalize as "greed", "love of adventure", "self-preservation", and so on. The impulse itself is so compelling that it will break its way through any contradiction between rationalization and experience. The most conspicuous contradictions will be ignored. The exploding of a rationalization will have no effect whatever. A thousand books like *The Great Illusion* could be written, and the cycle of war would move on undisturbed. The rationalization is purely secondary, a belated and half-hearted attempt to make sense of human nature; its logical and formal annihilation in no way modifies the impulse that is rationalized. That is why men begin to call war irrational. In point of fact, it is cruel, clumsy, and wasteful of individual life, but it is not in a strict sense irrational. It is irrational only in the framework of our current rationalizations.

Thus it is that men continue to use re-armament, truculence, and its modern counterpart, "toughness", in order "to preserve the peace" despite the proof of all history that these things have an exactly contrary effect: which is, the relief of sexual tension by balanced and therefore *costly* war. This contrary effect, however, preserves *internal* peace. The externalization of sexuality would appear to be a condition,

a *sine qua non*, of *all* protoplasmic aggregation, whether multicellular or social. The very tensions in human collectivities may be regarded as having been placed there to produce the warlike hybridization of our race. And so we begin to understand why men so persistently sabotage their "attempts" at international organization, and why these organizations are ingeniously created in such a fashion as to contain the seeds of their own stultification and destruction. Unconsciously, men do not want them to succeed. They lay the blame on their national representatives, but see to it that the representatives fail to reach agreement. They would reach agreement soon enough if it were sincerely and generally desired that they should. When, owing to a low degree of sexual tension in a nation, it gives way to an opponent, there is a clear and unmistakable tone of disappointment in the latter's press, as though subconsciously it felt itself "let down" by the agreement. The acquiescence of the other side is interpreted as a subtle ruse. There are calls for renewed vigilance. These are followed by fresh and preferably impossible demands: *anything to goad the other to a stand and fight*. When internal sexual tension reaches its peak no amount of acquiescence is allowed to check hostilities.

International organizations are not intended to be anything but a sham. They were created for a sop to the critical and uneasy thinkers of mankind, to those political theorists who disclose the more obvious discrepancies between human practices and protestations. In effect, they give the average man a fresh lease of life to make-believe in himself as a peace-loving creature. In a later section, we shall throw a novel light on the pleasing convention that the common man, little man, average man, or man-in-the-street, loves peace with every layer of his mind. Any political theorist who starts with this convention is heading straight for an impasse. This path of thought climbs straight to exasperation and futility; Mr. H. G. Wells' final book, *Mind at the End of its Tether*, gives a sombre picture of its culmination.

Experience proves that international political organizations have a transient and illusory success in those periods of wide-

spread sexual nausea when their principal member-nations have recently suffered heavy casualties in war. The present uneasy state of the world—the result of undischarged tension in certain major nations—is reflected in an open and eager scepticism of international methods of war-prevention. Even the short period of “hopefulness” which ushered in the League of Nations, after four biologically exhausting years of war, is conspicuously lacking in these post-war days. We are not ahead of the early '20's, but far behind them. Nor shall we ever move ahead until we face up to reality. Work out the casualty-population proportion of each nation recently at war, and you will gain an immediate insight into its degree of mobilization and its attitude to disarmament and international arbitration. That proportion, again, or the resultant degree of mobilization, will be found to tie in with each nation's state of civil peace. In this connection, the following report¹ of an article in *Pravda* is almost too good to be true. On December 21st, 1946, this Russian Communist organ accused the Turkish Government of aggravating relations with its neighbours by keeping a million-strong standing army. The newspaper added: “Strange as it may seem, Turkey is the only country which is not trying to demobilize after the war in which it played no part.” Strange indeed! As mysterious as continence leading to an accumulation of gametes in the individual male. We shall have more to say of Marxism as a guide to world affairs.

In a work such as this, which for the first time brings into association and interpenetration two systems of ideas which have hitherto been held exclusively apart, a certain amount of repetition and digression is desirable. We shall touch here on the rationalization that war results from economic forces. Roughly speaking, this idea takes two forms. First, that wars are prompted by motives of acquisition in whole national groups. Second, that wars are promoted for the profit of classes or sectional interests in these national groups.

¹ *Calcutta Statesman*, December 24th, 1946.

To begin with, it would be foolish to deny the importance of economic tendencies in war. War is a complex phenomenon, and economic strands do undoubtedly traverse the pattern of the whole. But to claim that war-causation resides entirely in this field presupposes a quite awe-inspiring indifference to whole sectors of man's non-economic behaviour. As we shall show, such a claim does, in effect, attribute to our species an entirely capricious blindness to its own economic advantage. Economic "causes" of war are usually found in the same bed as the convention that man is fundamentally peace-loving. He is displayed to us as reluctantly fighting for the economic self-preservation of his nation, or else as allowing himself to be gulled to death in millions to line the purse of the armament manufacturer or other capitalist. Both these are pleasing and highly meritorious points of view. They reflect great credit on the human race. They strike one with the force of unconscious concealments of the deeper and infinitely less attractive realities of the situation.

Before the first world war, Norman Angell wrote a book in refutation of the thesis that war and conquest increase the economic wealth of nations. That book had no discernible effect on the international situation. We do not propose to reproduce its arguments, or to point its moral in the warlike impoverishment of so many national states today. We can get our point across in quite a different way. It is sufficient to repeat the Wellsian thesis that the dissolution of national sovereignties, were that even remotely possible, and the creation of a World State, would far better serve the enrichment of individuals than any conceivable amount of international war. Now, suppose you put this proposition to your neighbour: "In a united world, released from our crippling diversion of wealth and manpower into war, the standard of life of all classes of individuals would enormously increase." How will he reply? Exactly thus, we think: "Certainly we should be richer in One World, but the average man" (by which he means himself) "would never hear of such a thing." Precisely. Pushed further, he himself will abandon the economic argument and fall back on what he calls the irrationality of human

nature. He himself will admit the existence of non-economic determinants of war.

As a matter of fact, having regard to our current rationalizations of war, there is no *a priori* reason why a World State should not *already* be in existence. Within his limitations, Wells was perfectly justified in arguing as he did. The world must have appeared totally incomprehensible to him. He would see that the vague attribution of nationalism to "herd-instinct", to the "in-group" drive, and so forth, is no explanation whatever. It is simply calling nationalism by another name. Nor does it offer any reason why "herd-instinct" should not by now have been extended to our species as a whole. Human collectivities have shown a remarkable capacity for expansion. They have seldom been genetically homogeneous, or genetically demarcated from the neighbours with whom they went to war. Our present sovereignties can individuate the most diverse ethnic types that exist upon the earth today. Nor is diversity of culture the ultimate "cause" of human segregation, but rather its concomitant, the result of partial isolation. Empires, warring as unities, can incorporate the extremest range of language and tradition. Indeed, as the League of Nations found, the only definable basis of solidarity in a national or imperial group is the possession of an army of its own. Aldous Huxley has correctly pointed out¹ that the League, in practice and implication, defined a nation as "a society organized for war". Which definition, by the way, has seldom been given the sustained attention it deserves.

And so it was that Wells, observing the extraordinary fluidity and internal heterogeneity of nations, their expansions and fluctuations in the course of history, argued for the final step of total unity. With the coming of modern communications the world had so shrunk as to be administrable as a single entity. No difficulty remained! Men wanted peace. They wanted economic wealth. Here were both, waiting on a platter. Yet these earnest strivers after peace and wealth

¹ Aldous Huxley, *Ends and Means*, London, 1938, p. 109.

refused most obstinately to unite and grasp them. Taxed for their reasons, they could only mumble indistinctly about the irrationality of human nature. So Wells, as must any man who accepts his limitations, proceeded from his earlier discovery of (non-existent) hopeful tendencies to his final discovery that mankind was collectively insane. And even the insanity-hypothesis, no doubt, will appear to many as preferable to the theory here presented.

Before leaving the rationalization that wars are fought for the economic self-preservation of whole national groups, it is well to mention a theory of Mr. Morley Roberts,¹ claiming some measure of biological authority, that war is essentially a struggle of national organisms in the "nutritional field". The national group is pictured as an "invertebrate", as a kind of amoral protoplasmic sponge, engaged in a life-and-death struggle for food with its neighbours. The principal enemy "sponge" of the moment (that is, Germany in 1941) is seen to be claustrophobic, psychasthenic. Mr. Morley Roberts' proposition that nations are protoplasmic entities is logically unassailable. The use he makes of this fact is more questionable. Nations are not hard entities, exclusive aggregations, at the biological level. In these days they do not move in space; only their frontiers shift to and fro over the rooted body of mankind. A frontier is a septum, not a derm. Nor are nations genetically discrete in the sense that metazoan bodies are. It is doubtful whether any close analogy can be drawn with the metazoan level of integration. The economic facts of international trade, the assistance rendered to defeated enemies, the supplying of enemies with the armaments by which one's own armies are destroyed — none of these facts finds any pigeonhole in Mr. Morley Roberts' analogy. Indeed, his concept of hostile and neurotic sponges recalls Trotter's famous picture of an hysterical German wolf-pack grappling with an altruistic British bee-hive. This sort of thing is immediately rendered suspect by its propagandist flavour. However politically praiseworthy it may be,

¹ Morley Roberts, *The Behaviour of Nations*, London, 1941.

it is a waste of time from the point of view of science to attempt biological or other justifications of particular national policies. Such attempts amount only to rationalizations of rationalizations. It is certain that war has a biological (as well as a psychological) significance. But biological science must establish the meaning of war in its own terms and on its own conditions, without regard to political prejudice or human susceptibility.

The second economic argument is that war serves the sectional interests of certain groups within the warring nations. This fact is undeniable. But to suppose that wars are *caused* by such groups *against the general wishes of mankind* is utterly fantastic. Freud put the matter well when he said:¹ "And now look away from individuals to the great war still devastating Europe: think of the colossal brutality, cruelty and mendacity which is now allowed to spread itself over the civilized world. Do you really believe that a handful of unprincipled place-hunters and corrupters of men would have succeeded in letting loose all this latent evil, if the millions of their followers were not also guilty?"

That final word, "guilty", is not, perhaps, appropriate. But the argument is sound and commends itself to our reason. When we discuss the psycho-biological forces in the individual which lead to war, their mechanism and periodicity, we shall show that such emotionally-tinged words as "guilty" are not strictly applicable to them. To continue, it would seem a meaningless slight upon the intelligence of men to suppose that they could allow themselves to be slaughtered by the million, against their collective will, to enrich a minority of individuals. Just think of it. But this derogatory supposition is not without significance in itself. It implies that the style of "fool" is preferable to that of "murderer" or "knave". An unconscious perception of their individual responsibility for war impels men to hunt for scapegoats on whom to project their internal sense of "guilt". War, as a form of collective sexuality, is the end-result of diffused and

¹ Freud, *Introductory Lectures on Psycho-Analysis*, London, 1922, p. 283.

quite impersonal forces. Ideas of "guilt" are therefore no more appropriate to it than to the phenomena of individual sexuality. Such ideas are the psychic reflection of the purely *mechanical* conflict between sexuality and aggregation, imposed by Nature on every level of integration, multicellular and social. Attempts to personify the impersonal forces of war resemble the attempts to personify the forces of Nature which marked the animistic phase of human culture. They recall the childhood of our race. It is amusing to note that the immensely popular vogue of the Hidden Hand, of sinister figures lurking behind the arras, provides a symbolic representation of the anonymous nature of the cytological mechanisms which are ultimately causative of war. A sample of this literature may afford the reader a welcome relaxation:

"Whodunit? The larger pieces of the puzzle fall into their places. We grow warm, gentle reader. We approach the motives and the culprits.

"But what of the weapon? I think we have found it. Call it The Hidden Hand, or Anonymity.

"The further you probe into these things, the more clearly you find that power today is wielded by men who lurk in shadow, whose instruments the politicians merely are, those public figures which you acclaim today and curse tomorrow.

"Only by assuming the existence of this non-national, anti-national, super-national, international demon, Anon, can I understand Mr. Lloyd George's words (April 7th, 1923):

" 'Wars are precipitated by motives which the statesmen responsible for them dare not publicly avow. A public discussion would drag these motives in their nudity into the open, where they would die of exposure to the withering contempt of humanity.' "¹

Beside such a lively Pandæmonium, such a motley mythology as this, the view that war in its essence is impersonal may appear rather colourless and thin. Nor can we offer any

¹ Douglas Reed, *Lest We Regret*, London, 1943, pp. 92, 93.

culprits, any scapegoats. To the question: "Whodunit?" we have to reply: "In the ultimate analysis, the mechanism of meiotic disjunction in our cells." Hearing which, our questioner laughs incredulously, and retorts: "Can you in all seriousness expect me to believe that the colossal juggernaut of war is propelled by a mechanism invisible to the naked eye? War is a massive phenomenon, and requires a massive cause and explanation!" In vain shall we refer him to the biologist to learn how great a part this microscopic process plays throughout the whole range of life, how massive have been Nature's somatic adaptations to its needs, how complex and fatal her adaptations of behaviour. Nor will he turn to the psychologist to learn how despotic a rule is imposed by the psychic superstructure of this tiny process upon the minds of human individuals. He needs a massive cause and explanation! Shall we tell him that from this same sexual process in the cell we trace not only the division of our species into male and female, but the most intimate conformation of our bodies, and the very colour of our thoughts? Shall we explain that the attribution of warlike movements in society to this process which has largely made us what we are, is but a mild assumption; that war itself is but a slight phenomenon to trace to such a potent source? In vain. He turns to his own more massive explanations. And what are they? Some ideological jargon of the hour, some sophistication of economic motives, some claptrap of "ambition", "irrationality" or "greed".

But we are being unjust. On reflection, we recall how improbable the association of sex and war appeared to us at first. It was only after constant jostling of the two ideas together that we became ourselves convinced. And the average reader will refuse admission of the connection even tentatively to his thoughts. He will refuse admission to the seed from which conviction grows. Freud said of Psycho-Analysis that "if you give it your little finger it will soon have your whole hand."¹ So it is with the linkage of war with sexual-

¹ Freud, *Introductory Lectures on Psycho-Analysis*, London, 1922, p. 163.

ity. Once admit even the bare possibility of this association, and you will find yourself, months or maybe years later, jumping to your feet and exclaiming: "Good heavens, yes! This preposterous concept is correct!"

Well then, we have to take these two seemingly incongruous systems of ideas, put them to bed together, and see how they will breed. We have to couple War with Sexuality. Let us assume that the constellation of ideas aroused by the word "War" does not differ radically between scientist and layman. In either case it will be entirely anthropomorphic. The constellation aroused by "Sexuality", however, wears one aspect to the biologist, quite another aspect to the psychologist, and yet another aspect to the layman. Let us consider first the layman's coupling of War with Sexuality. For him, Sexuality arouses thoughts of his own person, then of other human individuals, and finally, perhaps, of the commoner domestic animals. His view of Sexuality is essentially introspective; he sees it as a system of affects, pleasurable or painful, centered upon himself. This constellation appears utterly incompatible with that of "War". The two differ, it seems to him, as widely as love and hate. He recalls his own pleasure in the sexual act, and then places that feeling alongside his feelings as a member of a community at war. It is obvious that there is no connection, and so he dismisses the idea. But let him reflect for a moment. In his own body there are two levels of integration. He is an individual, and at the same time (though he seldom remembers this), he is also a community of cells. His sexual activity appears very differently on these two planes of existence. The sexual "pleasure" of his total personality is accompanied by *widespread death* among his sexual cells. He can, of course, gain nothing of scientific value by attempting to place himself imaginatively in the position of any one of his sexual or somatic cells, while his "own" sexual activity is taking place, beyond the realization that his "own" sexual pleasure is no divining-rod for sexuality on other levels of integration. He is asked to couple Sexuality with War as a *collective* sexual act, as a Titanic sexual act in which he himself plays a *subordinate part*. It

is to be expected, therefore, that his feelings in war will differ widely from those in individual love. All this is very elementary. Yet scientists, who should know better, base objections on just such puerile associations of ideas.

Another objection of the layman will be this. "Even admitting that war is a sexual phenomenon, I cannot see how it can be directly 'caused' by a sexual mechanism in the cell." A consideration of individual sexuality may resolve this difficulty. Here we find elaborate bodily organs and a complex pattern of behaviour which have been established in the course of evolution to assist the bringing together of sexual cells from separate individuals. In the new individual thus formed, there takes place at puberty a fresh shuffling of chromosomes, and the formation of new, re-combined sexual cells. Working backwards, we connect this intra-cellular chromosomal re-shuffling in the second generation with the pairing of human individuals in the first. In this sense we say that their pairing was "caused" by a mechanism in the cell. But clearly the cellular mechanism does not *directly* cause the pairing of human individuals in every generation. Evolution has simply established a purposive parallel between complexity of organ and behaviour in the individual and the underlying cytological mechanism.

We were familiar with the superficial aspects of sexuality long before we discovered its cytological significance. In the case of war, we find a blind, compulsive pattern of behaviour leading to that event. It appears that exhortation cannot deflect this pattern of behaviour from its consummation. Men feel themselves to be enchained by their own nature. The impulse to war is widely regarded as irrational, that is to say, as meaningless *in terms of our rationalizations of it*. Even the psychologist who traces war to the oedipal situation regards the latter as adventitious or vestigial, something we would be better off without. To show that war, however wasteful, is genetically significant is in no way a condonation of war. Nature is always wasteful in her sexual mechanisms. An understanding of the genetical significance of war may lead eventually to the replacement of this wasteful mechanism by

others more economical of human wealth and life.

Let us consider next the biologist's coupling of War with Sexuality. His province contains the point of our inverted pyramid: sexuality in the cell. For him, Sexuality has no anthropomorphic connotation. He will climb part of the way up the widening pyramid with us, and will halt where his province merges into that of the psychologist, leaving us to pass through this alone to the level of everyday politics and war. We meet him again at the uppermost level. Here we find him talking very much like the layman. He is either "for" or "against" war. If "for", he finds scientific arguments to support lay rationalizations, talks of the "struggle for existence among nations", and so on. If "against", he declares himself a humanist, condemns racial prejudice, and sees no biological inevitability in war. Or he sides frankly with the economic school of war-causation. Whether for or against, he can offer no comprehensive picture of war that might serve as a basis for prediction.

The biologist will refuse to admit the fundamentally sexual character of war. That, we think, is because he has failed to recognize in the Oedipus Complex a psychological connecting-link between his own biological province and the field of international politics. It has not occurred to him that this psychological connecting-link is biologically purposive and significant, or that, given the necessary vital statistics, it offers a mensurational basis for war-prediction. But he will, nevertheless, come part of the road with us. He will admit that certain sexual strands run through war, as, for example, in the relegation of most combatant duties to the sexually active male. But he connects this entirely with the young male's "combative character", and not in any way with his temporary enchargement with active microgametes. Again, he will admit that war tends to produce ethnic intermixture on a Titanic scale. He will see that, despite patriotic illusions to the contrary, females of defeated groups give themselves readily to the victors. Starting at the unicellular level, he will concede the importance of genetical re-combination,

through a wide range of metazoan forms, up to the level of human individuals. He will acknowledge that much somatic structure and behaviour has been adapted to its needs. But he will stop short of attributing to sexual mechanisms that form of collective behaviour known as war. That, he feels, is too much to demand. In the case of war, genetical recombination appears to him as a random and comparatively unimportant outcome of profounder biological determinants, such as "love of glory", "irrationality", "herd-instinct" and so forth. He will not grant that these things might be epiphenomena of genetical determinants, though he will, of course, allow the most complex epiphenomena in the case of *individual* sexuality.

One source of confusion to the biologist occurs to us at this point. The concept of the *collective* sexuality of a community may have called to his mind the comparison of human war with the sexual behaviour of insect communities. There is, in fact, no comparison; nor do we attempt it, for the reason that the insect-state has developed a social soma, whereas human collectivities have not. Sexuality is diffused throughout the human group, which therefore suffers a tremendous internal tension. Human and insect states are alike in that both entail the co-operation of individuals. Now, a condition of *all* co-operative aggregation would seem to be the externalization, either partial or complete, of internal sexuality. The insect-state, by developing a social soma, is not compelled, as we so evidently are, to preserve internal co-operation by an external massacre of the reproductives. There is no possibility of sexual combat among the sterile workers of the insect-state. In human communities the possibility exists, and is only avoided by the substitution for it of a *collective* sexual combat with the reproductive males of neighbouring states. This finds a curious confirmation in the age-old, and yet most modern, propagandist picture of war as a defence of wives and sisters from ravishment by the foe.

Having seen how far the biologist will come with us, let us turn to the psychologist. How does the coupling of "War" and "Sexuality" appear to him? In his case, the constella-

tion of ideas aroused by the word "Sexuality" relates solely to mental states in the human individual. His view of Sexuality is essentially anthropomorphic. Of one school of psychology Trotter wrote:¹ "... one can scarcely fail, on coming into it from the bracing atmosphere of the biological sciences, to be oppressed by the odour of humanity with which it is pervaded." That may be so; but the school to which Trotter refers has provided us with the one concept needed to link biology with the inner dynamics of society and the periodicity of war, and to afford us a refreshingly un-human view of both. In reality, the psychologist is wholly justified in his preoccupation with the mental aspects of sexuality. He should never forget, however, that he is observing only one small facet of a subject which has also a deep and widespread biological extension.

The coupling of "War" and "Sexuality" will appear nonsensical to those psychological schools which deny the cardinal importance of sexuality in mental life. We cannot hope to carry them with us. Now, a purely biological approach shows us that sexuality is fundamentally inimical to *all* living aggregation, whether multicellular or social. In the case of human aggregation, great effort is made by the guardians of the state to mitigate the action of this disruptive force. In that effort concealment plays a large part. One receives the impression that the summary rejection of Freud's doctrines by certain schools of psychology arises less from scientific motives than from an unconscious desire to aid the moralist in his defence of society against the explosive enemy of sex. If so, that effort is mistaken. Science is not concerned with the preservation of society. But this at least is clear, that unless we understand the nature of socially disruptive forces we can never hope adequately to restrain them.

This brings us to the Psycho-Analytic School, and the schools grouped more or less distantly about it. The coupling of "War" and "Sexuality" has already tacitly been achieved by those psychologists who trace war to factors arising from

¹ Trotter, *Instincts of the Herd in Peace and War*, London, 1919, p. 78.

the oedipal situation. This statement may cause surprise and resentment. But a moment's reflection will show that the oedipal situation is sexual through and through. Now, starting with the cell (meiocyte) at the tip of our inverted pyramid, we can build up a biological concatenation to show that the oedipal situation is genetically significant, and not a random or vestigial mechanism. At this point we pass the baton to the psychologist. Starting from the oedipal situation, and employing psychological concepts, he can carry the chain of causation up to the broader levels of politics and war. But it must be remembered that in the upper levels the psychologist is dealing with the psychic aspects of entities which are also, in another aspect, biological. That is to say, our pyramid of causation from cell to war is biological through and through, although psychological concepts become applicable in its upper levels.

We doubt if any psychologist will deny that the conscious or unconscious hostility between parent and child of like sex, by countering, and normally overcoming, incestuous tendencies, does act in the direction of hybridization of the species. It is not necessary for man to have an "instinct" against incest. In fact, in early life he seems to have a powerful "instinct" *for* it. Whatever "instinct" there is *against* incest is provided by the oedipal hostility itself! That is to say, oedipal hostility *is itself* the anti-incestuous "instinct" and is only biologically significant for that reason. This means that any social device to mitigate or displace oedipal hostility will automatically work in the direction of further hybridization of the race. We have already drawn attention to the curious parallel which exists between the oedipal situation on one level of integration and the situation in the meiotic tetrad on another. That parallelism of attractions and repulsions is worthy of sustained and earnest meditation. It acquires greater significance when we reflect that the meiotic situation lies *within* the oedipal situation, as one section of a telescope may lie within another. Picture a three-sectioned telescope in process of extension. The outermost section represents the human family group forming part of a com-

munity. The extension of the middle section represents the oedipal detachment of the son from the family group. And the extension of the thinnest section represents the meiotic detachment of gametes from the body of the son. Society is, in reality, a beautiful mechanism of wheels within wheels, operating simultaneously on three planes of living integration. We have enough material here to establish the collective sexuality of a human community, not by analogy, but in its own right.

We have mentioned this because it now appears possible to take a mechanistic as well as a psychological view of the oedipal situation. We can, to some extent, waft away that "odour of humanity" which Trotter found oppressive. The Oedipus Complex, Freud's central hypothesis, was perhaps the most unpalatable of all his theories. That is perfectly understandable, for it cut to the very heart of the human situation, uncovered a mechanism which it had taken millenia of tradition to conceal. The biologist may get a very approximate picture of the potentially disruptive forces at work in a human group if he imagines an aggregate of diploid cells in which every cell becomes a meiocyte, each diploid cell in this case corresponding to a family in the human group. The generality of mankind are engaged in failing to notice, deliberately ignoring, or talking out of existence that oedipal hostility which is not only nakedly apparent in family life, but forms the basis of so many literary and dramatic works. To this generality the majority of scientists belong. Even among psychoanalysts there is an innate tendency to succumb to lay rationalizations, to fall back to the position that oedipal factors are merely contributory to, rather than causative of, war. All this is very excellent and commendable; and we appreciate its biological significance. Science, however, is less concerned with the concealment than with the revelation of reality. It may therefore help to sustain the weaker brethren to reflect that oedipal hostility, in its essence, is an utterly impersonal force. Nature implants it for a quite inhuman purpose. However complex it may be, whatever anthropomorphic connotation it may have, it is analogous in the last resort to the electrical repul-

sion which severs the meiotic tetrad. May it not be itself in the last resort electrical? Such a view would rid the concept of much emotional lumber.

Of the Oedipus Complex Freud said:¹ "We are more in danger of underestimating than of overestimating its influence and that of the developments which may follow from it." Roughly speaking, theories relating war to the oedipal situation fall into two groups. In the first of these, attention passes from the infantile to the adult situation, where the unconscious hostility (genetical repulsion) between the father and his *adult* son is regarded as a culminating cause of war. During the sexual "maturation" of the boy, that is to say, the father, who as an adult controls policy and education, has unconsciously been creating the conditions for the warlike expulsion of his son. "Military age" is in fact the age when sexual cells have been developed and have become fully active in the body of the son. It was at this point that the primeval conflict probably took place. On reaching sexual maturity or "military" age, the son finds the conditions for his own warlike expulsion either imminent or already present. During the period of sexual "maturation", the son's unconscious hostility (genetical repulsion) towards his own father—an internally disruptive force—is displaced outwards by social suggestion upon father-surrogates in the government of the chosen enemy-to-be; in fine, it is externalized. A parallel development, of course, has been taking place within the "enemy" collectivity. The *reciprocity* in the build-up of internal sexual tension in two "opposed" collectivities is of vital importance. Each collectivity displaces the internally disruptive hostility of its youth upon the mounting bellicosity of the other. To each collectivity, therefore, it appears manifest and indisputable that its own gathering armaments are created solely in response to, or in "defence" against, the gathering armaments of the other. Whereas, in reality, these armaments are the by-product of a purely *internal* psycho-biological accumula-

¹ Freud, *Introductory Lectures on Psycho-Analysis*, London, 1922, p. 175.

tion. This becomes plain to see when one collectivity, owing to a low internal stage of tension, fails to provide the other with the necessary pretext. The other then re-arms despite the lack of "pretext".

This linkage of war with the oedipal situation is undoubtedly crude and naïve. It leaves out of account the part played in war by the sadistic, masochistic and homosexual tendencies arising from the infantile oedipal situation. But indeed, we should like to stress our willingness to give weight to any treatment of the oedipal situation which recognizes the cardinal importance of this link in the concatenation of war-causation. The foregoing crude treatment has this one advantage: it lends itself most readily to the concept of a *biological* accumulation linked, through the oedipal situation, with a build-up of psychic war-impulsion. The analogy presents itself of sexual accumulation in the individual body, with its accompaniment of gathering sexual tension in the mind. That is not to say, however, that other treatments of the oedipal situation as a factor in war-causation may not tie in equally satisfactorily with a biological interpretation.

How will the mechanism of psycho-biological accumulation and gathering tension work in a human collectivity? Somewhat thus, we think. Picture in your mind a nation which has just suffered heavy casualties in war. The males of "military" or actively sexual age will only represent a fraction of the nation; perhaps one sixth. The recently-suffered heavy casualties will therefore have made a noticeable gap in this potent fraction. Now let us resort to an artlessly anthropomorphic picture, not forgetting however the biological levels of integration and the impersonal forces which lie hidden beneath this superficial image. You are to see the nation in your mind as a multiplicity of family groups, each gathered about its breakfast table. At each domestic board there will probably be a father, perhaps reading the newspaper; a mother, pouring out the tea; and children. At many of these tables there will be a son of military age. At many others, the grown-up son's place will be empty, for he has only recently been killed in the war. How will the oedipal situa-

tion vary between these son-filled and son-depleted families? Let us take the second case first. In families which have lost a son, or sons, there will be a revulsion against war. This revulsion may take several forms, or be compounded of these forms. At the conscious level there will probably be remorse for the dearly-loved son who has been lost, mingled with resentment towards the "bungling politicians" who brought the recent war about. At the unconscious level the picture will be very different. Here, the son's loss may be felt as the most satisfactory solution of an intolerable domestic tension. The boy had been growing more difficult to manage, more rebellious. His mother, perhaps, had sided with him against his father. A bout of "military discipline" had seemed the best thing for him in the world. So, it may be, the father will have a deep *unconscious* satisfaction that his son is dead. The war has solved his own domestic problem. But, alongside this unadmitted feeling of satisfaction, there will be a quite needless sense of "guilt"—needless, because oedipal hostility is not only universal, but biologically purposive and fundamentally impersonal. The father's unadmitted sense of "guilt" will be linked, perhaps, with a dim realization that he himself supported the politicians who brought the recent war about; that he hoped secretly, even while he did this, that war would come and would claim his son.

Now, let us consider how the father of this son-depleted family will react to the political news in the morning paper. The newspaper, we will suppose, describes an electoral campaign between a bellicose and a pacific party for power in the national government. Secondly, it reports the proceedings of an international disarmament conference. And thirdly, it announces a dispute with some foreign government. At the conscious level, the father's remorse for his sacrificed and beloved son will *tend* to find expression in such words as, "Never again!" His unconscious feelings will also support this attitude, but for a different reason. The son is dead. His expulsion is no longer necessary. The conscious attitude of "Never again!" will also act as an atonement for the unconscious sense of "guilt". Other and more rational considera-

tions will also operate. Men do not want war with every fibre of their being. Considerations of discomfort, upheaval, and so forth, act against it. These are swept aside where an undischarged oedipal situation exists. In the case of this son-depleted father, however, they have a chance to operate. His attitude to the political news, therefore, will *tend* to favour the pacific party for election. He will *tend* to be neutral, or even faintly sympathetic, towards disarmament. He will *tend*, in the dispute with the foreign power, to favour some measure of conciliation.

From this single family, let us allow our gaze to roam over all the other son-depleted families dotted about the country. For the most part, these families will *tend* to be pacific. Collectively, their votes will play a *proportional* part in the choice of what manner of party comes to power, and what foreign policy is pursued. Even in the single-party countries their effect will be the same. Here, the peace-war posture of the single party will be modified, and the reaction may be less sensitive and immediate. Again, regarded collectively, these pacific families provide a stream of pennies to play a *proportional part* in determining the peace-war attitude of the press. Despite comforting illusions to the contrary, the press is compelled to be sensitive to the public, for the good reason that advertisement itself depends on circulation.

Before leaving these son-depleted families let us make sure we have the picture right. Each pacific family circle contains what is, in essence, a particular type of *biological* situation. Can you not see that this inner situation forms the mainspring of the vast machine, drives the complex whole? Each "pacific" family, we realize, *lacks* a son of actively sexual age. Put otherwise, each "pacific" family *lacks within itself* that son's supply of active sexual *cells*. This is the vital essence of the matter, to which the whole "pacific" superstructure is adapted. This impersonal biological situation, existing on the lowest level of integration in the national body, we have now linked, *through* the oedipal situation, to a statistical effect upon the attitude of government and press. We note, as we pass from these pacific family circles, that in

them the love of "glory" and "adventure", the economic "struggle for existence" among nations, and all the other footling rationalizations with which men strive to conceal the inner cause of war, are conveniently forgotten now that their biological tension has been satisfactorily discharged.

We can turn now to the *son-filled* family groups. In these, the son may have survived the recent war, or have been too young to serve. The oedipal situation here will *still* be charged with sexual tension. At the conscious level, there will be great joy and enthusiasm at the son's safe return, or relief that he was young enough to escape the butchery so recently endured. The strength of the expression of this conscious joy or relief will reflect, to some extent, the strength of quite opposite tendencies in the unconscious levels of the mind. The situation of the returning son has a peculiar biological significance, more especially when he returns at a time when there have been few casualties in the ended war. Biologically speaking, he is unwanted, however extravagant the conscious joy occasioned by his safe return. Where there have been insufficient casualties, a large army is kept mobilized, and preferably abroad. This, by discharging domestic oedipal situations, forms an alternative, though a less internally satisfactory one, to heavy casualties in war. The continued maintenance of such a large and unexpended army is not in itself the *cause* of prolonged tension in the world: it is merely the *symptom* of an undischarged biological tension *in the nation*. We gain a partial insight into the situation of the returning son if we juxtapose this situation and the treatment meted out to the unmated drones when they strive for readmittance to the hive. Obviously, any serious comparison is absurd. But the second form of behaviour does seem very faintly evident in the first. How often we hear the elder generation say: "Well, young man, you have had a fine time these last few years of war, knocking about the world, leaving us to do the work. But your good time is over. Henceforward you must settle down to labour with the rest." The burden of these words is unmistakably punitive. Our juxtaposition of human and insect behaviour gains some slight

further meaning when it dawns upon us that human armies, though physically unspecialized, are indeed as sexual and somatically unproductive as the drones.

In the *son-filled* families, therefore, the oedipal tension will still be undischarged. Where the son has returned from war, the unconscious frustration of the father will find such conscious and innocuous expression as: "What are we to do with the boy now?" In any case, whether the son has returned, or is growing up, unconscious feelings of hostility in the father will tend to promote a bellicose attitude at the conscious level. Unconsciously, the father will seek fresh wars for the expulsion of his son. In these son-filled families the posture in regard to foreign affairs will be the same as it was on the eve of the recently-ended war. This posture can be summed up in the words: "There must be no relaxation of preparedness." Now, let us assume for a moment that there have *not* been heavy casualties in the recent war, and that in consequence the son-filled families are much in the majority. In these families, the fathers will favour unconsciously those press reports which describe the international situation as tense and threatening. The press, compelled to be sensitive in this case to a predominantly "son-filled" public, will magnify each minor foreign incident until it wears the aspect of a major "threat". This journalistic process can be extraordinarily subtle, while at the same time being impeccably sincere. It is aided by the fact that in international affairs men are fatally, inherently, incapable of objective thought. The result will be that the father of a son-filled family will find in his national press the most complete and obvious justification for the attitude: "There must be no relaxation of preparedness". But there are two handles to this stick. As so often happens, the most obvious end to grasp is not in fact the right one. The father's conscious chain of reasoning is: "The press shows the international situation to be threatening; *therefore*, very reluctantly, I shall have to allow my boy to go and fight again." If we reverse this sequence, we arrive at the true chain of causation. In the majority of families the son is present; *therefore*, through the statistical effect of these

families on the temper of the press, the international situation is *caused* to assume the aspect of a threat. Any journalist or statesman who attempts, by an unbiassed evaluation of the facts, to pour oil on troubled waters and to minimise the seriousness of the "threat" will be howled down or ignored.¹ When a country is sexually tense, is bent on war, it is a waste of time to place objective considerations in its path. Such a mistaken policy stems invariably from a naïve acceptance of peace-loving protestations at their face value. We must remember that not only journalists, but all of us, are exceedingly sensitive to the political humour of the hour. In a nation bent on war, the common citizen can only make conciliatory remarks about the "other side" at the expense of great spiritual discomfort, and at the risk of denunciation by his fellow citizens. Thus we see the son-filled nation re-arming to an "external" threat manufactured in the first instance from *within*. Thereafter, the mechanism of reciprocity comes into play. The "other side", alarmed, though possibly less eager for war, will take measures which give a more realistic colour to the idea of a threat. Regarded as a biological and impersonal mechanism, this is one of the neatest that Nature has created.

Before enquiring how the father of a son-filled family may respond to those same three items in the news, it is expedient to reflect that his first reaction to any talk of war, touching either its promotion or prevention, will be: "How does this affect my son?" His answer to that question will normally determine his political attitude. Economic and other arguments will come later, deferring to, masking, and making "sense" of the oedipal consideration. In a book published before the second world war, Dean Inge wrote, as far as our memory goes, somewhat as follows: "I am the last person to want a war. I have three sons of military age." We must realize that, at the conscious level, this kind of protestation is wholeheartedly sincere, however repeatedly and monotonously "external" events may "necessitate" the warlike

¹ Recent reactions to the naïve, but genuinely pacific, speeches of Mr. Henry Wallace provide a case in point.

embroilment of the sons. Again, we hear much of people gloating over the casualties of their own side in war. But let us not forget that such gloating, however nakedly manifest to a shrewd observer, forms no part of the consciousness of the subject. We have to be clear on this point. Now, conscious and rational impulses, regarded as springs to action, are weaker than those arising from the unconscious, which possess instinctual force and bear the impress of an immemorial past. Of these latter, whose unbridled operation would destroy society, sexuality is perhaps the most powerful and the most socially disruptive. Among the many manifestations of sexuality banished to the unconscious, we find that genetical repulsion which lies between a father and his son, that primeval conflict which evolved with the development of society into the oedipal situation of today. But unconscious impulses, because they serve biologically necessary ends, cannot be annihilated by society; if they were, the life of society would cease: at the most, they may be rendered socially innocuous by a distortion of their underlying nature. And so it is that the young male's expulsion from the primeval family group (a biologically valuable device) has been distorted and replaced by the son's warlike expulsion from the family group today. But the primeval situation, precisely *because* it is biologically purposive, remains fully active in the unconscious, and breaks through any conscious barrier to its consummation.

It breaks through *any* conscious barrier. This point is beautifully illustrated in a work we have already quoted: *Mr. Britling Sees It Through*. In this book, Wells shows us a father (who, as far as world-outlook is concerned, can only be Wells himself) confronted with a war in which his son is killed. The father can make no sense of that war, beyond attributing it to "fools", "knaves", "politicians", "tricksters" and the like. Although this father, Britling-Wells, rejects the patriotic rationalization of war, that does not in the least prevent him from allowing, and indeed tacitly encouraging, his son to go and fight. Here again we see how invincibly the genetical expulsion will achieve itself, despite

any breakdown in its intellectual rationalization. When a celebrated "Thinker of the Future" can so gracefully dispense with "reasons" in this matter, we can scarcely wonder that a normal father, who *is* convinced by patriotic rationalizations, should lend himself so readily to the genetical expulsion of his son. This book by Wells is thoroughly depressing. It shows how far an advanced and reputedly pacific thinker may be from any sort of grasp of the warlike situation, and how dismally he may betray in himself the very behaviour which gives rise to war. It brings home to us our appalling intellectual poverty in the matter of war, and indeed the appalling danger of our situation. But this book enjoyed enormous sales. That can only mean that many parents are dimly and perhaps uncomfortably aware of some faint echo of oedipal hostility in themselves. To these needlessly uneasy folk, Mr. Britling's "advanced" but quite unreasoned acquiescence would come with an effect of intellectual balm. Our own *impersonal* view of war will provide a less endearing, more enduring consolation.

Now let us see how the father of a *son-filled* family will react to those three same items in his newspaper. In his case, considerations of warlike discomfort or upheaval will be swept aside by the undischarged oedipal hostility. He will *tend*, as a result, to favour the bellicose party for election. He will *tend* to be hostile towards any project for disarmament. He will *tend*, in the dispute with the foreign power, to clamour for "firm", "tough", or even retaliatory action.

From this single son-filled family, let us allow our gaze to roam over all the other son-filled families dotted about the country. These families will all *tend* to be bellicose. Collectively, their votes or desires will play a *proportional part* in the choice of what manner of party comes to power, and what foreign policy is adopted. Again, regarded collectively, these bellicose families will provide a stream of pennies to play a *proportional part* in determining the peace-war posture of the press. In the present instance, of course, we are picturing a nation which has recently suffered heavy casualties in war. But suppose those casualties to have been slight, and the son-

filled families to predominate, we shall indubitably find that conscription is retained. Before leaving these son-filled families, let us make sure we have the picture right. Each bellicose family circle contains what is, in essence, a particular type of *biological* situation. This inner situation is the cellular mainspring of the complex whole. Each "bellicose" family, we realize, *possesses* a son of actively sexual age. Put otherwise, each "bellicose" family (like a larger spermatogonium, a larger meiotic tetrad in the national aggregate) *contains within its periphery that son's supply of active sexual cells*. This is the microscopic essence of the matter, to which the whole "bellicose" superstructure is adapted. This impersonal biological situation, existing on the lowest level of integration in the national body, we have now linked, *through* the oedipal situation, to a statistical effect upon the attitude of government and press. We note, as we pass from these bellicose family circles, that in them the love of "glory" and "adventure", the economic "struggle for existence" among nations, and all the other superficial rationalizations with which men mask the deeper cause of war, are still in full swing, *because* their biological tension has not been suitably discharged.

We are considering the situation in a nation which has recently suffered heavy casualties in war. *At this point there is a definite numerical ratio between the total of son-filled and the total of son-depleted families*. The word we wish to stress particularly in the foregoing sentence is *ratio*. This ratio concerns physical entities, concrete biological entities, which, given the necessary vital statistics, can be *counted*. It is this ratio which concerns us, not the overall population of the national group. Casualties regarded as heavy in a small nation might well be regarded as light in a large nation. The ratio itself is what matters in the internal dynamics of a nation's war-peace situation. There are, of course, other methods of isolating and establishing a biological ratio. It might, for example, be based on the proportion of males up to and including military age to those beyond that age; that is, putting it rather inaccurately, of sons to fathers. Or again,

we can focus our attention on the lowest level of integration in the national group: the level of its microscopic cells. In imagination, we can "granulate" the nation into its component cells, and divide these into two heaps: roughly speaking, somatic and gametic. That is not nearly so fantastic as it sounds, for the good reason that the ultimate cause of war lies imbedded in this cellular level of integration. This, then, would give us a cytological ratio. Given the necessary vital statistics, there are these and doubtless many other methods of establishing a biological ratio. Whatever ratio slotted most neatly into the oedipal situation would almost certainly be the best. There is an enormous field for research here, a veritable stamping ground for "mass-observation" and statistical ingenuity. The point is: however the *biological* ratio, at any point of time, may be established, it will be found together with a particular internal level of *psychological* war-impulsion, and no other. The two are linked inseparably. That psychological level will have its reflection in the press, and in other organs of national propaganda.

Let us return to the biological ratio as it may stand immediately after a costly war. *The essential fact which here presents itself is that this biological ratio will not remain constant, but will shift continually with the passage of time.* It is easy to see why this must be so. Immediately after a costly war we have a large number of son-depleted (microgametic-cell-depleted) families whose adult members tend to exert a "pacific" influence on the national government and press. These adult members were already too old to take an active part in the war which assuaged them of their sons, and, at a lower level of integration, assuaged them of their sons' supply of active sexual cells. In the years following the war, this generation will die out, or cease to exert influence. The number of family groups from which oedipal tension has been discharged, and which therefore tend to be "pacific", will steadily diminish. Meanwhile, the survivors of the active war-generation have become fathers in their turn, thus creating fresh, sexually-charged oedipal situations. However small this generation of survivors may be, virtually *all* its members

will create fresh familial tensions. Fluctuations of national population, therefore, will not affect the steady swing-over of the biological ratio towards complete sexual re-chargement. The nation will fill up with sons. Put otherwise, the nation, at its lowest level of integration, will fill up with micro-gametes. The government and press, unconsciously sensitive to this biological swing-over, will adopt a progressively more bellicose attitude towards the outer world. This concept of a biological *ratio*, irrespective of size of population, provides a firm basis for what is indeed a matter of common observation, namely, that lengthy peace can only follow costly war.

Some loose ends may be tied up here. It has often been remarked that the passage from war to war entails a forgetting of the horrors involved. The fact is indisputable, and theories of war-causation have been based upon it. But such theories offer no handle for mensurational treatment. The concept of a biological ratio, on the other hand, concerns physical entities which, given the necessary vital statistics, can be *counted*. The mental concomitants of the inter-war period, including the process of "forgetting", will be found to conform as epiphenomena to the shifting biological ratio.

It may be objected that a large number of individuals in the nation do not form part of an oedipal situation, that these will consequently be indifferent to war and its preparation. Leaving aside the possibility that oedipal tensions may be transferred to extra-familial surrogates, it seems evident, if we ponder the matter, that such solitary individuals will in any case be brought into conformity by suggestion. That is to say, the propagandist "humour", created by the biological ratio, will also bathe these solitary individuals with its suggestive influence. The biological substructure acts upon the organs of propaganda, which again re-act upon, and unify, the biological substructure.

Again, it may be objected that the sexual maturity of large numbers of males does not coincide with a war period. These are too young for one war and too old for the next. That is true. It makes no difference whatever. During their lives, these males all enter into oedipal situations in one capacity or

the other, and hence form part of the biological ratio. Their influence may help to accelerate or retard war, as the case may be, even though they themselves play no combatant part in it.

So much for our artlessly anthropomorphic picture, in which we saw the nation as a multiplicity of family groups, each gathered about its breakfast table. This provided us with a purely superficial aspect of biological reality, and one that is quite the least important. The danger of this kind of image is that it masks the lower and equally "real", perhaps *more* "real", levels of living integration contained within the national entity. When we think about war, our minds tend to run off into visualizations of people hurrying about the streets, working in factories, fighting on battlefields. We forget that beneath all these "people", *inside* them, there is a quite impersonal level of integration: the level of the cell. At this deeper level, the cells carry on their inhuman transactions with a complete indifference to the human complexity above them. Yet these transactions and their requirements in great part determine the diverse activity and behaviour of the surface level. And if these cellular transactions were to cease, that surface, by which our minds are hypnotised, would dissolve and vanish like the wraith it truly is.

Admittedly, it requires some modicum of audacity and scientific imagination to granulate the community of one's fellow men into microscopic entities and consider it in this light. But it is a trick of thought easily acquired. And indeed it *must* be acquired if we are ever to advance from a shallow and superstitious view of war. We have to see the community as mechanism as well as mind. We are sure that many who give an objective consideration to international affairs, who see what they call one bout of warlike "folly" followed inexorably by another, must have *felt* the mechanical nature of society, must intuitively have seen it as a huge machine. To these unsentimental thinkers we offer the following image.

Picture a vessel pivoted horizontally beneath a constantly flowing tap. When a certain *proportion* of the vessel has been filled with water, it tilts automatically, discharges its contents,

rights itself, and begins to fill again. The cycle of filling, tilting, discharging and righting will continue with an even periodicity as long as the system remains unchanged. If we know the rate of flow of the water, the vessel's volume, and what proportion of it must be filled before it tilts, we can *predict* the tilt. We can do that at any moment by measuring the water already in the vessel. So long as the system remains unchanged. But if the rate of flow should be altered, or the vessel spring a leak, or be tilted prematurely by an external agency, or be checked externally at the moment of the tilt so that it discharges incompletely — if any of these things should happen, the tilting periodicity will be affected.

We want you to accept this simply as a crude working-image of the vital dynamics of the peace-war situation. The vessel represents a human collectivity organized for war. The constant flow of water represents, in the last analysis, the eternal division of the human cell in commerce with its surround. The proportion of the vessel that must be filled before it tilts represents the biological ratio at which the human collectivity will overflow in war.

A change in the water's rate of flow would represent, very roughly, a change in the sexual rate of national birth. A leak in the vessel would represent a relief of collective sexual tension by some non-warlike means, emigration, peaceful colonization, or the like. A premature tilt by an external agency would, perhaps, represent premature "aggression" by a foreign power. An external check at the moment of the tilt would represent a prevention, by ideological confusion, or by whatever means, of sufficient casualties in war.

This, quite obviously, is the crudest of all crude images. It fails to touch the human situation at a hundred different points. But let us not ignore the modicum of help it gives us. Keeping this image of the tilting vessel in our minds, let us carry it over into one further attempt to see the human group as a multiplicity of cells. After this, we shall make no further demand on the reader's imaginative capacity.

First of all, picture a national collectivity planted in its territory on our planet's side. Then, in your mind's eye,

dissolve this collectivity into its component family groups. Next, dissolve each family group into human individuals. And finally, dissolve each individual into microscopic cells. You see the nation now at its lowest level of integration: the level of its cells. This level, you realize, was there, *is* there, all the time, lying beneath and within the upper levels of integration with which we are familiar. Society can be pictured as that well-known Chinese puzzle of boxes nestling one within the other. The innermost box represents the cell. As you watch the cells in a human collectivity, you note their incessant division and reproduction. This division, you perceive, is taking place within the bodies, families, and total collectivity of human individuals, although for the moment these higher individualities are excluded from the picture. The division of the cells requires an unremitting incorporation of organic matter from the surround. This matter arises ultimately from the soil; so, for convenience, you may regard the cells of this collectivity as actually arising from the soil, as a vast multiplicity of tiny fountain jets. These living fountain jets, taken collectively, correspond to the water which poured into the vessel. This constant spring of replenishment from below provides the motive force for the complex machinery at the upper levels.

You notice that the cells are of two fundamental types: sexual and somatic. The somatic cells compose the mortal bodies of human individuals. Sooner or later, they perish and pass again into the soil, into the surround. But fresh somatic cells, composing new mortal bodies, are constantly budded forth from the immortal sexual cells. At this level of integration, you are struck by the relatively greater importance of the sexual cells. They seem to be in command. All the time, as you watch, they unite in pairs. After an interval, they re-shuffle their nuclear contents, and separate again. This cycle is endlessly repeated. At longer intervals, vast quantities of (male) sexual cells stream right beyond the confines of the collectivity. Outside there, some perish, and others unite with (female) sexual cells from alien collectivities. In all their movements, the sexual cells *carry with them*

great quantities of their somatic offspring, as ships at sea might carry seagulls in their wake. You feel that the somatic movements are in some way dependent on, and secondary to, the movements of the sexual plasm; that the latter provide the clue to the meaning of the whole. This strange supremacy of the sexual germ-plasm has elsewhere¹ been vividly expressed.

“The germ-plasm is potentially immortal. Generation after generation it lives on, sprouting out bodies to house it and feed it and keep it warm, driving them with strange appetites and lusts so that it may get release from them and start again. Clearly it is the germ-plasm which evolves, not the ephemeral bodies it throws out.”

And in these latter days the germ-plasm sprouts out not only individual bodies, but also social collectivities of these bodies. To gain release, it drives with strange appetites and lusts not only individual bodies, but also the social collectivities of these bodies. That larger sexual appetite and lust is what we know as War.

Emphasis has been placed on the cellular level of integration in society because it provides the answer to those people who “don’t see how” war can possibly be regarded as a sexual movement. But only scratch at the surface of society and you will find protoplasm, cells. A human group is as much bound by the needs and limitations of living substance as any other protoplasmic entity. Only, in this case, because of the complexity of the human cerebrum, these needs and limitations carry a psychic superstructure which may prevent all recognition of their inner nature.

By emphasising the importance of the cellular level of integration, we do not in any way overlook or minimise the importance of psychic complexity in the upper levels. We merely provide a biological basis for the psychic complexity of war. The psychologist must not feel that we are obtruding a naïve oversimplification upon his province. That is certainly not the case. In the instance of *individual* sexuality, its

¹ Wells, Huxley, Wells, *The Science of Life*, London, 1938, p. 518.

derivation from meiosis in the cell does not diminish by one jot or particle the complexity of the psychic mechanisms found in the sexual life of man. The biological explanation, indeed, adds to the significance of these phenomena. So in the case of war: its derivation from a widespread and fundamental biological mechanism should give a fresh impetus and viewpoint to psychological inquiry into its nature.

To attempt a *broad* explanation of the warlike behaviour of the human community in terms of that community's smallest living units is to follow a recognized path of scientific thought. As Haldane has remarked,¹ the spirit of science has always attempted to explain the complex in terms of the simple, and has on the whole succeeded. We remember Lamarck's words: "The most important discoveries of the laws, methods and progress of Nature have nearly always sprung from the examination of the smallest objects which she contains, and from apparently the most insignificant enquiries."

We have come a long way round to return to the economic rationalization that wars are created by capitalist minorities against the general wishes of mankind. But we have gathered invaluable material on the way. We now see that capitalist minorities, private armament industries and the like are tolerated and allowed to profit by war precisely because their activities run parallel to the general wishes of mankind. Capitalists do not themselves create war for profit: they draw profit from supplying the sinews of the wars desired and created by the ruck of their fellow citizens. It is commonplace that countries readily supply one another with the armaments by which their *own* armies are destroyed. This weird behaviour is quite repugnant to the "theory" that war is a struggle for existence between nations. Conversely, it is entirely consistent with the view that war is fundamentally a "contract" between opposed groups of governments by which each group unwittingly undertakes to assuage the other of its sexual and disruptive youth. For that

¹ Haldane, *The Inequality of Man*, London, 1938, p. 114.

assuagement would clearly be impossible unless the "other side" were adequately armed. And therefore the arming of the "other side" is widely tolerated, and, being perhaps unconsciously desired, arouses no general qualm or scruple. Book after hair-raising book on this subject pours from the presses. To no effect whatever. Here again we see with what subtlety Nature can bend the very apathy, resignation or complacency of the human mind to her own inhuman ends.

We see, then, that there are really *two* kinds of war in operation. There is an ostensible and consciously-perceived *external* war between the nations, and an *internal*, unconscious war between governments and their *own* armed forces. This second and certainly more fundamental war cuts right across the first. *And it is obvious that the greater the energy devoted to the external war, the greater will be the execution inflicted in the internal one.* There is a groping perception of this fact in Communist ideology, though here, unfortunately, a sterile set of abstractions prevents its clear elucidation. War is not nearly as rational, as humanly rational, as Communism would have it. Now, the idea of an internal, unconscious war between nations and their *own* armed forces, between fathers and sons, between the capitalists and proletariat of Communist ideology, may seem repellent to many people. But it is not so, philosophically regarded. *This internal war is simply the repulsion that lies between the sexual and somatic elements of all multicellular and social organisms.* There is a repulsion, an electrical "hatred", an internal war, if you wish to call it so, between our own bodies and their sexual cells, driving the latter out. It is no accident that we use the same words, attraction and repulsion, to describe electrical phenomena as well as love and hate in human individuals. The electrical attraction between the chromosomes of conjugating gametes reappears, on a higher level of living integration, in the "love" of conjugating humans; in the latter case, simply, the gene-lines have been doubled. And so it is with the somatic and sexual categories of nations. The fact that in war part of the national flesh

remains at home, while the remainder splits away from it, might presuppose some form of repulsion disjoining the motile from the static elements. If you wish, as an anthropomorphism, to describe that repulsion as "internal war", "oedipal hostility", "unconscious hatred", or even as the would-be rational "class-war" of the Communists, there is nothing to gainsay you. And of course, people display far more energy and enthusiasm in the "disjoining" operation, in the prosecution of war, than ever they do in its prevention. It is questionable whether, in the latter case, they display any energy at all.

Let us in passing consider the rationalization that war, as a "struggle for existence" between nations, is fed by an "instinct" of self-preservation in the warring group. Of this concept Glover has written well:¹

"The suggestion that self-preservative impulses can be saddled with the greater part of war responsibility is simple and appealing. By contrast with the unconscious motivations described in the foregoing chapter it is almost praiseworthy. It is, however, one of those alluring suggestions which are effective only so long as they are not examined too closely . . . to advance self-preservatory impulses as the sole or major factor in war immediately involves us in difficulties. If it can be shown not only that economic (self-preservative) factors are liable to lead to war, but that war, despite some possible immediate advantages, leads to economic disaster all round, then some other important factor is necessary to explain why a country should cut off its own nose to spite an enemy's face."

That puts the matter in a nutshell. Some other important factor is necessary to explain why a country should cut off its own nose to spite an enemy's face. We believe that the collective sexuality of a group, which, like individual sexuality, can bring sadism and masochism into the orbit of its action, supplies precisely that "other important factor" which we need. How does a sexual view of war tally with

¹ Glover, *War, Sadism and Pacifism*, London, 1947, p. 35.

the theory that war results from the self-preservative impulses of the group? Here the reader may exclaim: "Of course: aggressive groups, by warlike intermarriage with their victims, reproduce themselves and so preserve their stock. And it is for just this vital and unconscious purpose, rationalized in other ways, that nations devote such appalling energy and expenditure to war." This view seems attractively simple and obvious. Like so many first ideas which leap persuasively to the mind, it has no foundation in reality. Organisms above the unicellular level, whether they be multicellular individuals or social collectivities, contain both germinal and somatic elements. Sexual operations are concerned only with the perpetuation and recombination of the germ-plasm, not with the preservation of the soma or its soul. Once the germ-plasm has passed from one soma to the next, the first soma becomes redundant except in so far as it may protect its somatic offspring, the latest guardian of the germ-tract. Put otherwise, Nature is only concerned with her latest and newest somatic individuals, because these contain the advancing spearhead of the germ-tract. To take an obvious example: an aging animal may be killed by its offspring. In this case, the sexual activity which produced the offspring, so far from preserving, actually proves fatal to the parent. But the parental germ-plasm is preserved in the offspring and may, in certain circumstances, be all the better preserved for the destruction of the parental soma. As another example, a seedling may grow up to deny soil and sunlight to the parental plant. At the social level, in the case of collective sexuality, we see the same mechanism in operation. An aggressive group may, by warlike intermarriage and culture-contact with pacific neighbours, implant the very aggressive character by which its own psychic cohesion is in turn destroyed. The recent German flood of conquest over Europe has left behind it in non-Germanic countries innumerable children having German fathers. These children are growing up as good little Frenchmen, Poles, Roumanians, Hollanders and so forth, as the case may be. The germ-plasm of their fathers lives on under non-Germanic flags, and may at some

future date forge the very instrument by which that spiritual cohesion known as "Germany" is dissolved. In reality, the germ-plasm cares not a rap what flag waves over it. It uses our flags with a quite inhuman cynicism for its ends, discards them unconcernedly when they no longer serve those ends. If Mr. Douglas Reed¹ wants a non-national, anti-national, super-national, international demon, Anon, on whom to blame our wars, then here that demon is: the germ-tract of mankind.

Seen in the light of this relation of soma to germ-plasm, the so-called self-preservatory "struggle for existence" between nations takes on an exceedingly strange appearance. We see it as a struggle of political affiliations; as a struggle of thoughts, not of flesh. The "flesh" passes freely from one political affiliation to another, to and fro, beneath the phantasmal struggle of patriotic loyalties in men's minds. A victorious nation pours its own living "flesh" and culture into its victim. It would be hard to imagine anything more completely antithetical to a struggle for existence among individual animals. Defeat in war is the very means by which nations renew their warlike strength. A series of early defeats at the hands of aggressive peoples, and the inter-marriage which resulted from those defeats, raised Britain to the status of a world-power. Now that they are finished and done with, those same defeats appear in British history as a source of pride; yet, at the time they took place, they were regarded as disasters by the defeated, as "death" in their "life-and-death" struggle with external foes. But what died? Names and labels only: names that become meaningless as they recede into the past. How strange a light is cast on history by a sexual view of war. We see a kind of see-saw movement in the rise and fall of empires, an automatic to-and-fro of aggressive potency, with a constant rise in the average level of aggression. War is no vestigial thing: it is on the increase, not upon the wane. We can visualize the relationship of our political affiliations to the underlying movements of germ-tract in the image of a gridded trans-

¹ See page 122.

parency laid upon a map. The rectangles of the grid are like our national segregations. Beneath these artificial squares, the mountains, rivers, roads and railways of the map wind in all directions, as the germ-tract flows impartially beneath our evanescent segregations.

We must therefore reject the suggestion that sexual war preserves a particular and peculiarly "national" stock by transmitting that stock externally. For not only does the "national" germ-plasm pass under alien flags, but that very passage may in course of time re-act upon and destroy the spiritual cohesion of the parent nation. Sexual war is externally preservative only of the anonymous germ-tract, not of particular national adhesions. In one sense, however, war does indubitably preserve the immediate unity of the nation: it preserves the nation from its *own* armies. Using the "enemy" as a weapon, the nation wages unconscious war upon its *own* armed forces. And those armed forces die unconsciously to defend the nation *from themselves*. The technological discoveries and the consequent social integration which so enormously swelled the numbers of mankind were the fruits of segregated peace. That internal peace, supporting those enormous numbers, is maintained only by the purgation of external war. For we have yet to evolve a social soma of mankind. In our present condition, the banishment of external war would entail the banishment of internal peace, and with it, of the enormous numbers supported by that peace. Society is not an aggregate of wax dummies. It is charged with the most dynamic and disruptive forces. We have, however regretfully, to deal with ourselves as we are. There is no trace of cynicism, therefore, in the view that nations wage unconscious war upon their *own* armed forces. For they kill the disruptive few only that the many may survive. Nor is it any paradox to say that the unconscious death-wish entertained by fathers for their sons, by creating foreign war and thus preserving the domestic peace, is the source of life for an even greater multitude of sons.

Perhaps it is this very sense of *inward* danger which, when displaced outwards, lends such convincing colour to the pic-

ture of war as a struggle for existence against *external* foes. That would explain why nations, ignoring peace-feelers from the other side, carry on their wars beyond the point where the original *status quo* has been regained, and beyond which the argument of self-preservation ceases to be valid. The excuse given in these cases is that only unconditional surrender will enable the enemy to be disarmed and will prevent a recurrence of aggression. But experience proves that unconditional surrender never does prevent a recurrence of aggression. On the contrary, we find that nations, between the wars, either actively re-arm, or complacently permit the re-armament of their vanquished foes. No: the demand for unconditional surrender becomes purposive and significant only if we regard it as an unconscious effort by the nation to inflict maximum casualties upon its *own* armies. This again explains why nations continue to fight long after they become aware that the war has turned irreversibly against them. Here, the more "sensible" course would be, by surrendering, to retrieve as many men as possible from the defeat, and to hold them in reserve for aggression in the future. But these nations continue to destroy their manpower as long as their enemies give them opportunity. Such behaviour is only intelligible as a last desperate effort by the nation to void itself completely of its *own* armed forces. In the spring of 1945, at a time when foreign armies had already penetrated deeply into her territory, when her General Staff knew that the war was irrevocably lost, Germany continued to call mere school-boys to the colours, hurling them to their death "to protect their sisters and sweethearts from ravishment by the foe." When the war ended, photographs appeared showing German women fraternizing freely with their erstwhile enemies: as freely as their own defeated menfolk would allow. In the area of at least one occupying power this fraternization reached such proportions, and caused such a high incidence of disease, that it was seriously suggested that the occupying troops be confined permanently to their barracks. But Germany was free of her own armies; for which "freedom", unwittingly, she had gone to war. We see to what ghastly

extremities the internal pogrom may be pushed. Only in this special sense that it preserves *internal* peace by an external massacre of reproductives, can war be regarded as arising from self-preservative impulses in the group.

This leads us naturally to an exceedingly curious speculation which, though not without a solid evidential basis, will appear incredible to the normal reader. Just as a powerful nation at its cyclic "rut" builds invariably, by truculent display, a balancing coalition against itself, and thus unwittingly precludes the rapid and bloodless consummation of its war; so also in the actual course of struggle it may stay its hand in the face of premature success, and allow its enemies to renew their strength. As, in that first fateful September of the first world war, Germany stayed her hand upon the Marne, so again she stayed it after the débâcle of Dunkirk. The outcome in both these cases was a war long and costly in reproductive life. Dealing with the unfamiliar, it is necessary to clarify our thoughts. We do not suggest that the German General Staff *consciously* perceived that a rapid victory would thwart its destruction of countless German lives; and that it therefore consciously chose, by "blundering" strategically, the alternative of costly stalemate and ultimate defeat. Such considerations, though they undoubtedly carry a determining weight in the deliberations of any military staff, must clearly operate at the level of the unconscious rather than of the conscious mind. We do however submit that Nature—to employ a convenient image—having her gaze fixed upon the deeper purposes of war, and deaf to the specious reasoning of her human children, saw to it that these sanguinary purposes were achieved. If we regard the nation as a collective sexual entity, we can also imagine "tides of force" at work within its body which efface any opposing individual action. If this be so, the halting of the German onslaught in 1914, as in 1940, was unconsciously determined on a non-human level of integration, and was not the adventitious outcome of mistaken leadership. Nor, in the framework of this hypothesis, was that leadership mistaken, eventuating as it did in a thorough discharge of reproductive tension.

Although, as we have already pointed out, it is biologically unimportant how human society is divided up so long as it is in fact divided, political segregations have hitherto tended to expand in area and thus become less numerous. The intracompartmental peace, resulting from intercompartmental struggle, has permitted the growth of science and technology, which in turn have led not only to the numerical increase of the species but also to immense developments in the communications, the neural and vascular systems, of the specific body as a whole. It thus becomes possible to sustain and administer sexual segregations of unprecedented geographical dimensions. Theoretically, this process of enlargement could continue until the number of our segregations was reduced to two. If these compartments could be maintained in equilibrium, and could remain geographically unchanged, we should have the most logical and satisfactory form of world order possible for man in his present sexually unspecialized condition. Wars would continue to take place whenever the two compartments came periodically on "heat"; and a frank recognition of the sexual springs of war would enable the victorious segregation, after a brief period of "occupation" or social insemination, to withdraw its gametic armies and re-arm its vanquished partner against the next cycle of sexual bellicosity.

This, of course, is utterly fantastic, a mere *reductio ad absurdum*. Nevertheless, it cannot be denied that even now society falls into two major segregations in its wars, and also, in a less accentuated form, in its periods of warlike preparation. That is the whole meaning of world war. But the geographical composition of the two major groups, not consciously controlled, is subject to a constant change and fluctuation. Further, the continuance of smaller segregational loyalties, which at an earlier period directly served the needs of sexual extroversion, but which now are necessarily drawn into one or other of the global scales, leads to much petty and purposeless bickering during the periods of re-armament. In a scientifically equilibrated world, these functionless loyalties might be progressively expunged by directing their sexuality

against the larger global counterpoise. As things are, however, and since men cannot rapidly be brought to recognize the sexual cause of war, the smaller nations serve to provide our statesmen with the lesser weights needed for a balance, and also with conventional pretexts for declaring war.

During their periods of warlike preparation, national segregations behave in many respects as though the world were one. International trade, international health-services, the dissemination of scientific knowledge, broadcasting and communications: all these transcend our sexual frontiers. It is perfectly practicable to regard mankind as a single entity divided only for the preservation of internal peace. The individuals, *qua* individuals, of this larger entity can and do co-operate upon all matters unconnected with the one sacred and inviolable cause of sexual extroversion. During the interwars, a Turk will feel no compunction to drink with an Armenian whom presently, equally without compunction, he will be prepared to kill. So vital to our existence are our divisions, and so cunning has been Nature's fabrication of our minds in the preservation of these divisions, that such behaviour arouses no qualm or scruple in the normal resistant mind: only to the sensitive, in the sleepless ebb of night, does the full horror of its inconsistency become apparent.

CHAPTER IX

IDEOLOGICAL DEDUCTIONS

IN his extraordinarily interesting book, *The Anatomy of Peace*, published in 1945, Mr. Emery Reves stresses the failure of Capitalism, Socialism and Religion to prevent war. But it is doubtful whether any ideology can actually prevent war. It would seem that ideologies are expressions rather than causes of political events; that they reflect and provide pretexts for the psycho-biological movements of society, rather than cause these movements. What, then, are the underlying tendencies which give significance to our ideologies? It appears that there are two main tendencies. On the one hand, we have the spirit of revolt, striving for universalism, equality and peace. This is the spirit of the young men, with which all the great religions start. On the other hand, opposing the first tendency, we have the spirit of reaction, of conservatism, working for political segregation, inequality and war. This is the spirit of the old men, in which all the great religions fail and end. So much is commonplace. But beneath this level of universalism battling with the spirit of division, it is possible to distinguish two fundamental biological tendencies, which, without straining the words beyond recognition, we may describe as "sexual" and "somatic". These tendencies are both necessary for organised life, but they are mutually incompatible. All living bodies and societies are built from a more or less unstable compromise between the two. The sexual tendency strives to disrupt living aggregations into their smallest sexual units, the cells, while the somatic tendency strives to preserve these aggregations from sexual disintegration. It is these two fundamental tendencies which reappear, dressed with the infinite invention of the human mind, in the ideological struggle of reaction with revolt.

On the social level of integration, we may recall that national divisions, by causing the sexual males to expend their pugnacity externally on one another, to annihilate themselves, not only preserve internal social organization but also result in an increasing spiritual homogeneity within each national group. To preserve this internal unity and peace, it is clearly necessary that the "gametic" males shall not feel that they are being *driven out* to die upon the bayonets of the enemy, but rather that their group, faced with the evil machinations of its neighbours, calls upon them *with the utmost reluctance* to preserve its life or interests. "We don't want to lose you, but we think you ought to go." As a matter of fact, these young men really do die to defend their respective countries: *unconsciously, they die to defend them from themselves*. The appalling energy of the sexual impulse, operating at the social level of integration, is only too clearly demonstrated in the thunderous and Titanic conflicts of today. Were this dreadful force in its entirety turned *inwards* upon our segregations, they would instantly be shattered and destroyed. Of course, in the sense that governments unconsciously seek pretexts for wars, the sexual males *are* periodically driven out to die. But never forget that their own pugnacity requires that external outlet. It has been truly said that "You can do everything with bayonets except sit on them." National governments, faced with the alternative of civil war, are compelled in sheer self-defence to engineer external wars. And the sexual males are never conscious of being herded out to die. Only in periods of war-weariness and disillusionment, when there have been excessive casualties, does the unsentimental reality of war dawn upon a few sensitive young men. Then we have such fitful and futile gusts of irritation as are to be found in Siegfried Sassoon's *Base Details*, Richard Aldington's *Death of a Hero*, and in Somerset Maugham's *For Services Rendered*. Or we have the facetious mood, expressed in this quotation from Robert Graves: ¹

¹ Robert Graves, *Goodbye to All That*, London, 1929, p. 288.

'War should be a sport for men above forty-five only, the Jesse's, not the David's. "Well, dear father, how proud I am of you serving your country as a very gallant gentleman prepared to make even the supreme sacrifice. I only wish I were your age: how willingly would I buckle on my armour and fight those unspeakable Philistines! As it is, of course, I can't be spared; I have to stay behind at the War Office and administrate for you lucky old men." "What sacrifices I have made," David would sigh when the old boys had gone off with a draft to the front singing *Tipperary*.'

But whether the mood of disillusionment is facetious, cynical, or even savagely resentful, it soon passes and comes to nothing. It has no staying power, such is Nature's cunning. The clouds of illusion close up again; the disturbing glimpse of reality is lost. Few pacifists remain pacific after they cease to be liable for military service, after passing, that is to say, from a "gametic" to a "somatic" rôle in the larger sexual tides of their society. It never occurs to the young men that the facts of the warlike situation admit a scientific, an objective, interpretation which is yet utterly different from that mass of garbled prejudice and exhortation which forms the "interpretation" offered to them by their education. And they cannot be blamed for this. They are in reality a kind of social gametes, and it is not biologically desirable that they should think, any more than it is desirable that the gametes in our own bodies should think and so resist ejaculation. Nature does everything in her power to stop them thinking. And their own governments, unconscious instruments of Nature, do the rest. Few if any of them have either the mental fortitude or independence to resist for long the waves of illusory suggestion which beat upon them from every side.

Comparison with lower organisms will help us to determine to what relative extent war results from the spontaneous movement of the young and from the expulsive activities of the old. In the most primitive aggregates of nuclei or cells, the gametes themselves appear to be attracted in conjugation by a specific chemotaxis. Even at this level, however, we find

complicated vegetative structures (gametangia, sporangia and the like) to assist a xenogamous dispersal. As we ascend the metazoan scale, we discover (in our own bodies, for example) that the ejaculation of the gametes is dependent to an increasingly great extent upon the somatic system. Carrying the argument back to human society, there is abundant evidence that the warlike expulsion of our own "gametic" males is, to put it mildly, *assisted* by the educative and political activities of their relatively "somatic" elders. But on the higher as on the lower level of integration, the "gametic" and "somatic" rôles are complementary. It is quite absurd to suppose, as some young men do, that our sexual males are conscripted and driven out, *against their will*, to die. Without their eager, impatient and superbly uncritical acquiescence, their warlike expulsion would clearly be impossible. Indeed, the gametes in our own bodies could scarcely wonder less at their ejaculation. Only to those defective social "gametes", for whom death has no allurements, is the inexorable compulsion of the process bitterly apparent. Internal peace, however, depends on the sons of any segregation being blind to *all* the expulsive activities of their fathers. They must believe in all good faith that their seniors derive no satisfaction from their death; that they abominate war; that their intelligence and imagination are devoted unstintedly to the preservation of international peace: they must believe all this, when in reality the exact opposite is the case. For the most part, natural selection, operating throughout the long social development of man and his sub-human forbears, has so cunningly equipped the human mind that this blind spot remains mercifully intact. It dawns upon us that our disinclination to look for, and our quite brilliant incapacity to find, the underlying cause of war have hitherto been the means of our survival. Only when the national "soma" becomes "trophologically" unsound (as happened in the case of Russia in the first world war) do its own "gametes" turn against it and effect its "endomictic" reconstruction. In every national group, the "gametic" males are carefully educated for their future rôle. Their unthinking acceptance

of that rôle, by slamming the door on any hope of fundamental change, testifies in itself to the continued and melancholy necessity for their destruction. How can we reasonably expect Nature to be anything but careless, wasteful and contemptuous in her handling of a creature that regards it as a virtue not to think?

The internal unity which comes from the turning outwards of pugnacity has, as its natural by-product, the altruistic sentiment. So long as this altruism does not conflict with the hierarchies and disciplines by which the "gametic" males are tamed and driven out, there is theoretically no limit to the extent to which we may love one another *within* our segregated groups. But the hierarchies and disciplines remain the stumbling-block. We can never get rid of them until we get rid of sexuality from the general body of society. We have now a lion-tamer's form of social peace, in which the socially disruptive forces are restrained only with the warlike whip. We shall never attain to any human counterpart of the equalitarian, economically perfect communism of the ant and bee until we ourselves develop a social soma. Our present economic inequality, which is to be found in Communist as in other forms of state, is itself a part, an adjunct, of the whip by which the disruptive younger males are held in awe. This fact should be pondered by those who imagine that we can have perfect economic equity without a biological transmutation of society.

As things are, it would seem to be undesirable for tribal altruism to be extended to our species as a whole. For such an extension not only weakens the partitions between our segregated groups but also brings the young males into immediate conflict with their governments. Universalism is thus automatically tantamount to revolution. Of course, the universalist accepts that revolution as a necessity, as the final war. But we must remember that the peace we have now inside our segregated groups is bought at the price of external war. The universalist, seeing and enjoying that peace, and forgetting its price, imagines that if all frontiers were dissolved, the same peace could exist among our species as a

whole. But, by doing away with divisions, he would be destroying the basis of even such peace as we now possess. Incidentally, it is amusing to note that even for the universalist there is always one war ahead, the last battle, world revolution, Armageddon. In this, he is exactly like the narrowest of narrow nationalists, who always claims that the current national war is to be the last one. We never seem to get to a stage where *la lutte finale* is finally done and finished with. Nor shall we ever get to such a stage until the biological root of war, which lies in the cell, is eradicated from the body of society.

For the most part, men behave with the utmost inhumanity towards other national groups. This inhumanity is perhaps the more odious and detestable in the democratic and so-called "peace-loving" groups, because there we find it varnished over and concealed. It was a "peace-loving" nation which, after loudly decrying indiscriminate methods of warfare, first employed that inhuman weapon, the atomic bomb. It is futile to put forward any pretext in this case, for "the other side" always does the same. Far better admit that nations are all equally inhuman, and be done with it. Nevertheless, in all nations there are a few who entertain some degree of altruistic feeling towards their species as a whole. These men, because they inevitably find themselves dissatisfied with the *status quo*, are valuable from the point of view of social evolution. A certain amount of emotional dissatisfaction is necessary before the mind can even begin to spin fresh thoughts about society. Dissatisfaction is the grain of sand that generates the pearl. It is nonsense, a mere convention, to suppose that emotion is entirely alien to scientific thought. Emotion is the very spur by which science makes its bold advances. The placid and contented souls simply tidy up the details. The early literature of Darwinism and Psycho-Analysis reads like a veritable battle ground of emotional dissatisfaction and revolt. Indeed, the original scientific thinker produces his generalization as a vent for his emotion, for his own mood of spiritual conflict and despair. Only, in his case, a sense of reality impels him to choose the most per-

manent and effective, perhaps even the most sweepingly destructive, vent: original scientific thought. And all this may lie behind a mask of meticulous objectivity. It is desirable, therefore, that there should be in every national group a *few* men whose feelings of altruism, by becoming attached to the species as a whole, produce a sense of dissatisfaction with the existing structure of society, and therefore the impetus to advance.

In another direction, the extension of tribal altruism has created the great religions of a single world, those universal systems to which men turn from the narrow hatreds and divisions of their lives. Christianity is a typical example. Despite its orthodox, its inevitable, emasculation, it is essentially a religion of revolt, a religion of the Son. Now, it is a very curious fact that Christianity symbolizes the most important biological factors in the human situation. Thus we have the Father giving His Son to die for the salvation of mankind. And in every war, our own human fathers do the same, give their own sons to die for the internal preservation of society. Indeed, the parallel is widely recognized, for we embellish our war memorials with the crucifix, implying thereby that our war-dead have behaved, in their own human way, like Christ. We cannot dismiss this parallel as accidental. For we have seen that, in the present biological condition of society, the periodic sacrifice of the sons is a condition of all continuing social life, a sheer necessity. Christianity exactly symbolizes that necessity. That, perhaps, was the secret of its long hold upon the human imagination. We might even risk the speculation that the Holy Ghost represents the transcendental individuality of the human group, the Group Soul, whose continuing life depends upon the recurrent sacrifice by the Father of the Son. The mystical yearning for union with the Holy Ghost could then be interpreted as the desire of every social creature for spiritual union with the group. The soul of the mystic might enter the Collective Soul in much the same way as a cell in our brain enters our own consciousness. There appears to be a scientific basis for mysticism itself.

Another strange and biologically interesting feature of Christianity is its postulate of virgin-birth. This, of course, it inherits from other and more ancient systems of religion. But it is very remarkable that the Messiah, the Redeemer, has always to be born in this peculiar way. It is not beyond the bounds of possibility that our own society, in some future epoch, will evolve a social soma, and that parthenogenesis or virgin-birth will then be adopted as a means of reproduction. We cannot exclude that possibility, for our society is as yet only in its infancy. We may have many millions of years ahead of us if we can escape from sexual self-destruction. Be that as it may, if parthenogenesis is to be the answer, it may well be the redemption of mankind, and the first parthenogenetic "man" may well be our Messiah and Redeemer. This is all rather fantastic, of course, but a few thousands of millions of years of future time can be expected to hold fantastic and unimaginable possibilities. The fact remains, however, that Christianity does contain this extraordinary idea that the saviour of the world is to be born in a manner other than normal sexual birth. Even if we subject the myth to psycho-analytical interpretation, we still leave its biological aspect unexplained. When we find a tradition such as this, running for thousands of years in one particular groove, we can scarcely dismiss it as meaningless and adventitious. It is tempting to imagine that there is a kind of unconscious wisdom in mankind, foreshadowing in symbolic form the future biological development of our race. But of course, there is no evidence to support such an idea. If we adopted it, we should at once expose ourselves to the taunt that we were falling into the age-old groove ourselves, that we were merely substituting a scientific myth for a religious one.

Christianity, as we have said, like every other universal system, is essentially a religion of revolt. Miraculously, we have turned it into a religion of resignation. But never forget that its founder was crucified for political sedition. He would again be executed for sedition if he returned to earth today. Indeed, it is an interesting speculation whether the wide display of the crucifix may not be subconsciously in-

tended as a warning, like the display of felons' bodies in mediæval towns. "This," the crucifix would seem to say, "is what the world still does to a man who loves it as one whole, who rejects every trace of segregated loyalty and segregated hatred. Be warned, and do not likewise." Of course, if any such warning be intended, that intention must be entirely unconscious. It is undeniable that the figure of Christ upon the cross does symbolize the revolutionary tendency in mankind, and the punishment of that tendency in the recurrent massacre of the sons. It embodies all the passion, grief and suffering of our biologically primitive society, and the cause of that grief in the revolutionary person of the Son. But here, the spirit of revolt has been exalted, placed upon a mystical plane. It has become like a flower, pressed between the pages of a book: a withered and desiccated vestige of its former self. It has been emasculated, and can be harmlessly worshipped as an unattainable ideal. Christianity itself postulates a world in which all political divisions are dissolved, in which the massacre of the sons would manifestly be impossible: a world, in fine, that will only be achieved when every man, like the Son of Man, is parthenogenetically produced. Although such an undivided world is as yet biologically unattainable, this Son-Religion, palely reflecting the splendour and unity of the future, has so irresistible an appeal for men that it has even been enlisted in the cause of national segregation. Think of it. Christ, crucified as a universalist, nails us to the sexual chiasma of national war today. This reconciliation by normal men of two political extremes has always filled the thoughtful with the profoundest admiration. Indeed, we can distort any universal doctrine until it fits the pattern and necessity of human segregation.

We have the same distortion in the case of Communism. As innumerable writers have pointed out, Communism, as a world-revolutionary and anti-segregational faith, was Christianity decked out in pseudo-science. It stressed the common interests of the proletariat everywhere, transcending national frontiers. And its high tide of universalism, arising from the collective sexual nausea and exhaustion of the first world

war, has already ebbed away. Communism has become as narrowly patriotic as Christianity before it. Its first futile universalism, we repeat, has gone for good. Yet even today older people shudder at the anti-patriotic connotation of its name. They need have no fear. Patriotic barriers have proved too high for class-conscious legs to climb; and quite a new sort of consciousness will be needed before these barriers can ever be dissolved. Human society, for the time being, survives by its division, and it is small wonder therefore that World Communism, as opposed to National Communism, has so abjectly petered out.

Communism's attempt to draw the phenomenon of war into its net of economic doctrine has altogether failed. War itself has no direct causal base in economics. On the other hand, it is quite possible that adverse economic conditions may *precipitate* a bout of collective sexuality, for precisely the same ultimate reasons that unfavourable conditions tend to increase the incidence of many sexual operations. We find this happening even in single-celled organisms. Experiments carried out on the slipper animalcule, *Paramecium*, show that poisoning of the water, or lack of food, can lead to an increase of sexual activity. It is almost as though the creature were striving to meet the deterioration of its environment by some adaptive variation. On the multicellular level, we have the well-known gardener's device of causing a plant to flower before time by placing it in a cramped or otherwise unfavourable situation. The same thing may even hold good on the social level in our own communities. We say that slumps and depressions produce bellicose dictators. Here, of course, commonsense suggests that economic misery, by increasing the danger of internal revolution, favours a bellicose foreign policy as an outlet and distraction, as a pretext for suppressing seditious and subversive activity. The malcontents are safely got rid of by killing them at the front. That is quite true. But it still does not explain why war, the source of further economic misery, should be the solution for whatever economic misery already exists. But if we regard the *whole* national organism as meeting a deterioration of its economic

surround by a speed-up of collective sexuality, much as a plant or paramecium does, then everything fits in very neatly, and even the commonsense interpretation supports our sexual view of war. In this view, adverse economic conditions are only a *precipitating* factor, which must be considered in regard to war prediction. But war itself, collective sexuality itself, is a function of the human genotype and not of its environment.

The Communist picture of protesting peace-loving proletarians being prodded out by Capital to die is about on a par with the notion that wars are engineered by Krupps and Vickers Armstrong. It is an attractive and widely acceptable idea just because it fatuously attempts to place the guilt of all upon a scapegoat few. It is enough to convert one to a fanatical Berkeleianism to see how the Communist can stand in the middle of a jingoistic, mafficking, flag-waving proletarian mob, howling hysterically for war, and yet see that mob as so many peace-loving, *unwilling* victims of the wicked Capitalist. Sound theories may increase our insight, but false theories, by blinding us to reality, by causing us to read into our surround things which do not exist there, are worse than none at all. It is infinitely more desirable in the long run to open our senses completely to experience, to take the facts at their perplexing and unpalatable worst, and then see what theories we can spin around them.

Nevertheless, Communist doctrine does bear a shadowy, superficial relation to reality. It can be likened to an ill-fitting garment which here and there reveals the general shape, while hiding the naked actuality of the form it clothes. Alter its terms a little, and you have a crude likeness to the sexual view of war. The following words were written by Lenin.¹ Not only was their writer an exponent of Communism in its purest revolutionary form, but he was writing, it should be remembered, at a time of collective sexual nausea, when the severe "gametic" depletion of World War I afforded a brief opportunity for World Communism to flourish.

¹ Lenin, V. I., *State and Revolution*, 1917.

“According to Marx, the State is the organ of class-domination, the organ of oppression of one class by another. Its aim is the creation of order which legalizes and perpetuates this oppression by moderating the collisions between the classes . . .

“The State is therefore formed. A special force is created in the form of special bodies of armed men, and every revolution, in shattering the State machinery, demonstrates to us how the governing class aims at the restoration of the special bodies of armed men in its service . . .”

And again, Lenin quotes from Engels:

“‘The above-mentioned public force increases with the intensification of class antagonisms within the State, and with the growth in size and population of the adjacent States. One has but to glance at present day¹ Europe in which the class struggle and rivalry in conquests have screwed up that public force to such a pitch that it threatens to swallow up the whole of Society and even the State itself . . .’”

Lenin continues:

“The bureaucracy and standing army constitute a ‘parasite’ on the body of capitalist society — a parasite born of the internal struggles which tear that society asunder, but essentially a parasite, ‘blocking up’ the pores of existence. The Kautskian opportunism prevalent at present among the official Social Democratic parties considers this view of the State as a parasitic organism to be the peculiar and exclusive property of anarchism. Naturally, this distortion of Marxism is extremely useful to those philistines who have brought Socialism to the unheard-of disgrace of trying to justify and gloss over an Imperialist war on the pretext of ‘defence of the fatherland’; but none the less it is an absolute distortion.”

So much for Lenin. Christianity had already been disgraced by an altogether similar, and biologically unavoidable, distortion. Lenin would turn in his Muscovite mausoleum if

¹ Engels was writing in 1891 (Author).

he could see the segregated nationalism in the "Communist" Russia of today. We have quoted at some length because we wish to show the curious parallel between Communist doctrine, with its idea of a "parasitic" army produced by an internal struggle in the State, and what we now perceive to be the biological facts of the situation. Alter the terms a little, and you have the sexual theory of war and the segregated State. The internal struggle lies essentially between the "somatic" and "gametic" elements in the State. And the army born of this internal struggle, like all sexual elements, is parasitic in literal fact. The tremendous hold of both Christianity and Communism upon the imagination of mankind is due to their symbolic representation of the biological tendencies in society. Lenin himself, like Christ—we mean no irreverence—was a typical example of the "contumacious gamete". Although he died in his fifties, he was one of those rare geniuses who can maintain their revolutionary ardour against what might be called the "endocrinal attrition" of an aging soma. He died just in time, however, for the tide of sexual nausea on which he came to power was already on the wane.

We see, then, that the essential theory contained in the above quotation is that the segregated State is "the organ of oppression of one class by another"; and that the standing army is "born of the internal struggles which tear society asunder". Compare this with the development of multicellular organisms, in which the sexual disruption of the early colonial forms came to be replaced by the extrusion of special sexual and parasitic elements. If we remember that the human State is invariably a segregation *among other segregations*, and if we regard its classes not as "bourgeois" and "proletarian" but as "somatic" and "gametic", Communist theory gives us a rough approximation to the truth. The internal struggles which tear society asunder, which also disturb the peace of our cousins on Monkey Hill, are, in the ultimate evolutionary analysis, the "struggles" of meiocyte with somatocyte, of disjunctive with non-disjunctive cell. And certainly the standing army is a parasite born of this

internal struggle, in literally and precisely the same sense that the gamete is parasitic on the soma, that our own germ-cells are parasitic upon ourselves.

Communist doctrine, like every other anthropomorphic theory, in so far as it endeavours to explain war, generalizes from abstractions which are *not* general, either in space or time, to that phenomenon. Like orthodox Christianity before it, it demands an unscientific faith to fit it to the facts. Experience has proved it to be helpless in the face of international war. Socialist States fight one another with the utmost readiness, and all the more dreadfully for their more efficient economic organization. This helplessness of Communism in face of war would not in itself constitute a condemnation—for revolutionary Communism is barely a hundred years old—if only we were offered some hope of concrete scientific action. True science, in the words of Robert Boyle, is such knowledge “as hath a tendency to use.” But Communism gives little hope of any practical tendency to use. Revolution and re-education and economic re-distribution have been talked of—ever since man could talk. Could the Communist but open his senses to the harsh logic of events, he would perceive that none of these things has availed to stave off war, and that until man deliberately modifies his own psycho-biological nature, society, deaf to all his exhortations, will continue periodically to “spawn” and “fertilize” its conquered segregations.

Nevertheless, Communism, though based on abstractions which are connected symptomatically rather than causally with the phenomena it endeavours to explain, is still significant: it is the first attempt to bring man's seemingly autonomous behaviour in society within the framework of a general scientific law. Like our own view of war, it completely transcends nationalism, has no truck with national prejudice, and is applied impartially to all national States. The fruit of an age of economic thought, Communism makes only a half-hearted attempt to incorporate the advances of biological and psychological knowledge within the body of its system. Now, science begins in particular research; it is

only gradually and painfully that general inductions of new-found mechanisms are achieved. Our previous failure to apply sexuality to war is a case in point. Men like Professor Haldane, who possess the profoundest knowledge of genetics, have yet failed to see that the very genetic mechanisms which they know so well to be dynamic in the individual must continue to be dynamic in the aggregate of these individuals. Unable to perceive that his own objective studies and researches disclose the cause of war, Haldane (in company with so many other geneticists, cytologists and the like) searches in the heated, and relatively unscientific, field of Communism for an explanation of that event. Like Poe's purloined letter, the answer all this while has lain beneath his nose. Take British policy in Spain and at Munich, for example. Haldane finds this inexplicable except in terms of Communist ideology. But a sexual and genetic view of war provides an adequate explanation of its own. Between the wars, Russian Communism was dreaded less as the opponent of private capital than as a world-revolutionary, *anti-segregational* system which, by transcending national sovereignties, would cut away the whole basis of internal peace and order. That is to say, this dread arose from political (and ultimately biological) considerations and not, as Communist theory would have it, from economic ones. Even today, when so many States have adopted public ownership, it is the universal, *anti-patriotic* aspect of World Communism which feeds the fires of opposition. And it was chiefly a fear of this spiritual universalism of the Left everywhere which determined the attitude of the British governing class towards the civil war in Spain, and again its policy at Munich. Fear of loss of economic privilege played a relatively minor part in forming that attitude and policy. And Germany was allowed to grow powerful between the wars, not only (consciously) as a bulwark against Red anti-patriotism, but also perhaps (unconsciously) *as a possible future foe against whom Britain might discharge her own sexual tension*. We have to understand that nations build up their future opponents to act as an anvil against which they may hammer and

destroy their *own* armies. In the case of Germany, she came to war-heat sooner than her Russian neighbour, and engaged the collective sexual attention of the British people. Ideological considerations, economic considerations, were completely swept aside. They were shown to be phantasmal, of no significance whatever in war causation. It mattered not a rap then that Germany, as far as her hyper-nationalism and her economic system were concerned, was ideologically aligned with the British governing class against the Comintern. She was ripe for warlike "conjugation", and that "conjugation" had, by any available national "partner", perforce to be achieved. The British moneyed classes even found themselves fighting alongside Russian Communists, those bitter opponents of private capital, to destroy the chief bulwark against Communism in Europe. It would be impossible to imagine a more crushing and cynical refutation of ideological and economic theories of war causation. Yet theorists of these schools, instead of casting about for a more fundamental theory of war which *would* fit the facts, merely averted their eyes from the discrepancy and went on believing their nonsensical theories as before.

Although, to hammer in an unfamiliar hypothesis, we have employed terms not strictly applicable to the phenomena we are describing, it should be clear that the concept of sexual war, taken together with its relation to the policies of Right and Left, provides us with all the materials we need to construct a scientific framework for events. We do not need to strain our credulity with the belief that wars are engineered for supposedly rational economic ends by a class of capitalists who, as experience proves, are in many cases as much disadvantaged by their prosecution as any other section of the population.

We come now to an exceedingly curious speculation. If war is indeed a collective sexual movement, a social ejaculation, we must, to be consistent, suppose that its conduct, like the conduct of any sexual function, is subjectively pleasurable to the "spawning" entity: that is, to the national group as a whole. It is not beyond the bounds of possibility that even

in so loosely organized an aggregate as a nation there is some kind of Group Soul, or Collective Psyche. As Haldane remarks:¹

“Now, if the co-operation of some thousands of millions of cells in our brain can produce our consciousness, the idea becomes vastly more plausible that the co-operation of humanity, or some sections of it, may determine what Comte called a Great Being. Just as, according to the teachings of physiology, the unity of the body is not due to a soul super-added to the life of the cells, so the super-human, if it existed, would be nothing external to man, or even existing apart from human co-operation. But to my mind the teaching of science is very emphatic that such a Great Being may be a fact as real as the individual consciousness, although, of course, there is no positive scientific evidence for the existence of such a being.”

Naturally, it would be a complete waste of time to try to imagine how that collective sexual ejaculation which we know as war might appear in the consciousness of the Great Being of the nation. For even if such a Great Being existed, and there is no positive evidence that it does, its “mind” would lie as far beyond our comprehension as our own minds lie beyond the “comprehension” of our cells. But if war, as a form of collective sexuality, is a biologically purposive phenomenon, we can at least risk the speculation that we, as members of the group, might be purposively endowed by Nature with the capacity to find war, or certain of its aspects, pleasurable.

Now, it is a matter of common experience that men enjoy war, despite the bloodshed and destruction which it entails. This enjoyment is, on the face of it, very strange. Its sources are manifold, and include both rational and irrational motives. As far as rational considerations go, there is no doubt that war brings great economic gain to certain groups and interests in the nation. It also brings economic security to large numbers of people by producing full employment.

¹ Haldane, *The Inequality of Man*, London, 1938, pp. 114, 115.

And it confers power and prestige on the military caste. Less rational sources of pleasure are the "excitement", "adventure" and "glory" afforded by war. There is also the convention that war is "fun". The younger generation displays an ostentatious eagerness, expected from it by its elders, to "join in the fun". Of course, this convention that war is a form of healthy sport, considerably arranged by governments for the entertainment and recreation of their armies, serves to mask its gruesome and terrifying aspects, and so assists its prosecution. But we must remember that unadmitted terror of war remains active in the unconscious mind. How little the younger generation, for all its pathetic eagerness and acquiescence, is really taken in by the idea that war is "fun", is shown by the prevalence of war-neuroses among soldiers.

In certain national groups, war is frankly extolled as the highest function of man, as something which is therefore to be enjoyed and longed for. This bizarre but immensely popular belief slots very neatly into our own view that war is a sexual orgasm of the group. We find a blindly compulsive and mechanical quality in Fascist (and also in some Democratic) literature on the subject of war which leads us to suspect the operation of inhuman, elemental and immensely powerful forces. Indeed, the typical dictator would appear to be a kind of spokesman of the national germ-tract, frenziedly possessed and driven intuitively by its sexual need to gain release. Thus he can carry whole nations with him, and break down every trace of rational and scientific opposition. He would seem to have a maniacal wisdom of his own, to which even the scientist will prostitute his knowledge. That, perhaps, is why nations honour their dictators, however ruthlessly they may be plunged by their actions into death and devastation. Mankind, in its present form, has always paid the highest honour to its own murderers and butchers, to its Alexanders and Napoleons, as though it perceived unconsciously the desirability of its own extermination and replacement by a less disintegrated race.

Then again, war provides many aimless men and women

with a purpose in life. In wartime every individual "matters" to the State. Barriers between classes become less forbidding, and the common danger revives sympathy and fellow-feeling throughout the warring group. We find that despite danger and privation there is a curious glitter and sparkle, an ecstatic tempo, 'about life in wartime. This, of course, ties in completely with the view that war is a *collective* sexual movement, a larger sexual *ecstasy*. War uproots and mixes populations, jostles together people who would not otherwise have met. The dangers of war, and perhaps its very biological nature, encourage sexual licence. The result of all this is that many people look back with a sense almost of nostalgia on the war period, as the brightest and most vital in their lives. That is not strange, for, as we have already said, the communal orgasm must react upon the individual. The definitely non-rational sources of pleasure in war include its gratification of sadistic, masochistic and homosexual impulses. These tendencies are all sexual in origin and character. In his *Death of a Hero*, Richard Aldington shows us vividly how the contemplation of another's death in war (in this case, of a son) may erotically stimulate the individual. The thought of large numbers of young men being slaughtered in the sexual prime of life is unquestionably exciting to many women, however much that slaughter may limit their own opportunities for normal sexual gratification. War provides people with endless orgies of gloating and self-congratulation. Under this head, we must place in a position of pre-eminence the satisfaction of those unconscious death-wishes which arise from the oedipal situation.

These are only a few of the reasons for which men consciously or unconsciously desire war, and derive pleasure from it. They have all been mentioned by other writers, and they only interest us here as tying in with our own sexual view of war. Some of these reasons, clearly, have no connexion whatever with *individual* sexual pleasure, while others have only a remote connexion. But we are dealing here with war as a *collective* sexual act, as something on quite a different plane from individual sexuality. Therefore we can lump to-

gether the various sources of pleasure in war under the single head of *collective* sexual pleasure. That is not nearly so fantastic as it sounds, for not one of these sources of enjoyment would be conceivable or could exist in the absence of war itself. That is to say, the biological and genetical causes of war are primary, and alone permit and give significance to the sources of warlike pleasure which we have mentioned.

Now, war, however wasteful it may be, is not in a biological sense irrational. This brings us to the unpleasant possibility that even the sadistic and masochistic impulses at work in war may have a strange inhuman rationality of their own. Were these impulses merely vestigial or adventitious, such a speculation would be absurd; but, as we have seen, the collective sexual selection produced by war automatically sets a premium on their development.

In view of all this, why is the belief so prevalent that men wholeheartedly desire peace? We seldom encounter a leading article on foreign affairs which does not insist in the first few sentences that the peoples of the world are thirsting for peace. Why all this insistence, all these repeated protestations? Unless, perhaps, they are unconsciously intended to conceal quite contrary desires. And the leader-writer, having made his ritualistic salutation to the pacific yearnings of mankind, invariably proceeds, with a large "but", and in a tone almost of relief, to stress the impossibility of maintaining peace because of some threat emanating from the "other side". Such an approach can be summed up in the words: "We all long for peace. Granted. But we cannot have peace (and please make no mistake about it) because of the intransigence of those unspeakable Ruritians." Naturally, we find this sort of thing going on on both sides of the fence. It looks far more like an unconscious attempt to publish pretexts for war than a conscious effort to prevent it.

Then again, we have that mythical creature, the man in the street, who desires only to be left alone to enjoy the simple pleasures of his little home. This is the guileless pawn of the Hidden Hand, of scheming politicians and power-drunk dictators. Touching illusion. That little home breeds the very

domestic tensions from which wars spring. In the aggregate, it is the inhabitants of just these little homes who whirl dictators and politicians into war like straws upon a flood. If we take the trouble to listen to him, as so few intellectuals do, we shall hear the man in the street expressing the most openly bellicose and chauvinistic sentiments. If anything, his leaders, compelled to be responsible, and dimly aware of their own scapegoat rôle, lag timorously behind him on the road to war. Even so, many national leaders, perhaps the majority, whatever lip-service they may pay to peace, conduct affairs exactly as if they *knew* that the man in the street unconsciously desires war. Were the idea not absurd, we might almost imagine that statesmen on coming to power were secretly initiated into the art of government as being simply the leading of the nation from one war into the next. In reality, the politician stumbles upon the popular policy of war-promotion by trial and error, or by natural inclination. He discovers that genuine effort to secure peace, by alienating his supporters, does not pay. There also occurs an automatic sifting-out from the fact that men will not elect pacific representatives, but only those who can be trusted to bring about a war. If a leader displays lack of energy in war-promotion, or a pacific tendency, he is immediately removed from power, as happened in the case of the unfortunate Mr. Henry Wallace in America. It is only rarely, however, that we find national representatives who, by swallowing the peace-loving convention in its entirety, act in complete opposition to underlying tendencies, and so meet with political disaster. But there are some. It is to be hoped that these pages may help them to retrieve their error and follow the right road to political success.

Perhaps the most weighty reason for the persisting belief that men are fundamentally peace-loving is that there has not previously been propounded any sufficiently massive explanation of why they should be the *opposite*, that is, fundamentally war-loving. Of course, even now, when he is driven into a corner, the average man may tell you that he supposes that he enjoys war for its glory and adventure. But he does

not really believe this himself. It is only the best explanation he can find. In face of the very real disadvantages of war, it seems to him but a slender reason why he should be war-loving. Or he may assure you that he is the dupe of dictators and the like, who exploit his vanity for their ends. This also he does not wholeheartedly believe. No one admits personal vanity or exploitation by others unless he is first tolerably certain that he is free from these things. No one, sincerely believing, will say: "I, and millions like me, allow ourselves to be butchered repeatedly, and our wealth to be destroyed, for some dubious satisfaction to our vanity". No: this is merely the least derogatory explanation the normal man can offer for his own unaccountable desire for war, and a very slight and disingenuous explanation at that. In effect, he finds himself in the humiliating position of acting repeatedly and compulsively in a certain collective fashion, *he knows not why*. This is an eerie and disconcerting state of affairs, and so he tends to withdraw his thoughts from it. If he is a really profound thinker, he calls war irrational, and settles the matter conclusively at that. But there is remarkably little in animate Nature that is irrational in the sense of being entirely purposeless from the point of view of survival. Species are always too close to extinction to afford the luxury of completely inutile behaviour. Vestigial mechanisms there may be, which have outlived their original utility; but war is far too massive, too increasingly predominant a fact in human life, to be regarded as vestigial. And so the average man, unable to discover any convincing reason why he should be war-loving, concludes that he is the opposite. The sexual theory of war clears up this difficulty immediately. We see that it is perfectly possible for men to desire war for a reason (in this case, genetical recombination) of which they are not even aware, which does not present itself spontaneously to their minds; for a reason, that is to say, which can only be elucidated indirectly by logical and abstracted paths of thought.

A more immediate motive for the convention that man is peace-loving arises from the need to preserve *internal* peace.

This convention, clearly, enables us to blame everything on the "other side", or on its leaders, and so reduces domestic dissatisfaction to a minimum. We project our own war-wishes upon the chosen enemy, who is seen to form an exception to the rule that man is peace-loving. There is a remarkable parallel here between collective (warlike) sexuality and sexuality in the individual. We have already mentioned, and cannot too often repeat, that sexuality is mechanically disruptive of all protoplasmic aggregation, whether multicellular or social. On the individual level, it strives to disturb *intranational* peace, and on the social level it manifestly does disturb *international* peace. Now, we are only enabled to co-operate in society, and avoid the constant sexual bickering of our primate cousins, by means of a great deal of sexual inhibition and concealment. Forming part of this necessary inhibition is the convention that the individual lacks any sexual desire that may not be satisfied in a legal and socially innocuous fashion. We are educated to hide our more promiscuous and socially disruptive urges under a mask of pudency and morality. As a result of this education, many people if questioned would hotly deny that their sexual aspirations run in any but authorized channels, and some would regard it as indecent or immoral to acknowledge even those. But we know that promiscuous appetites exist, and that despite their concealment they remain immensely powerful. At once there springs to our mind the parallel between this individual sexual concealment and the concealment of collective (sexual) war-wishes under the convention that the group as a whole is peace-loving. There is the same superficial affirmation, stubbornly maintained, masking a quite opposite and immensely powerful *sexual* impulse. The motive of concealment is the same on both levels of integration: the preservation of internal peace, that is, of living aggregation. This parallelism is extraordinarily significant. It throws an intense light on the warlike situation. For example, in nations which frankly proclaim their desire for war we see a clear parallel to uninhibited sexual behaviour in the individual.

We see that the mechanism of sexual "projection" operates on the social as on the individual level of integration. The individual, as we know, frequently projects his or her own painful or unadmitted sexual desire upon the very object of that desire, who then assumes the burden of guilt and the rôle of the seducer. So with nations: each will assure you it is peaceable and guiltless, the innocent victim of rapine and ravishment on the part of other nations. Indeed, *every* national segregation is a peace-loving people, tolerant, kindly, simple and unsuspecting, but, alack and alas, much afflicted by aggressive neighbours (other peace-loving peoples). If it is forced into war, it tells you, it is forced innocently by the "seducer's" lustful guile: a statement which never fails to arouse indignation and astonishment in the "seducer"; who supposed himself "seduced"!

When we examine the policies of these supposedly peace-loving peoples in any detail, we find an eager preparation by press, by educational precept and by subtle propaganda for their future wars. Possible enemies are carefully marked and singled out, ideological "incompatibilities" are invented, and the only-too-willing citizens are taught the "inevitability" of another war. Attempts to frustrate or defer the collective orgasm by appeasement, by world-unification or by any other means are met with howls of (collective sexual?) rage. The nation, no less than the individual, resents any obstruction of its "lust". This, of course, is as Nature would have it. Let us make no further bones about the fact, obvious to any objective thinker, and proven by the inescapable logic of events, that every nation strives unconsciously to disseminate its genes. Or, to put it otherwise, let us admit that the collective germ-tract has created in the somatic aggregate of the nation that bellicose behaviour by which it gains release.

In the human individual, the ejaculation of sexual cells (gametes) is accompanied by pleasure in the mortal body (soma). The soma, while it initiates by muscular contraction, takes no direct part in the streaming of the individual gametes. In the human collectivity, as regards the phenomenon of war, it is possible to distinguish relatively "somatic" and

relatively "gametic" portions. The elder generation — the "soma" of the nation—initiates by policy and education, but takes no direct part in, the active streaming of the "gametic" national armies. Nevertheless, such organized pleasure as accompanies the sexual assuagement of the group must be felt most keenly by the elder generation. The heightened animation of the elders, their sense of national purpose and importance, their grim tenacity from their arm-chairs, their natural appetite for vicarious suffering, are all constituent of a larger sexual pleasure. Indeed, the sexuality in the national "soma" largely compensates for the waning of sexuality in the elderly and "somatic" individual. This last point is very interesting. We see the same sort of thing happening, though of course in a more extreme way, in the collective behaviour of the insect state. Here, the sterile and somatic workers appear to derive a *collective* orgasmic pleasure from the nuptial flight of reproductives from the group, which pleasure may, so to speak, compensate them for their own condition of sterility. We find the same thing in our own bodies, where the somatic cells, although individually deprived of sexuality, collectively "enjoy" (in our total personality) the outpouring of the gametes. These are extreme cases, where the soma is distinctly separate from the germ-plasm. Human society is not like that. All the same, in the fact that elderly people do seem to derive a peculiar pleasure from war we see the germ, the first hint, of that collective sexual enjoyment which has been carried to such extremes in our own somatic cells and in the somatic workers of the insect state. After all, the elder generation is, so to speak, *all soma*. The germ-tract has dried up in them, passed into their children. Therefore, all their bodies (which are made of somatic cells) can be lumped together to form a single communal soma. This is the part of the nation which stays at home in war, and out of which the bodies of the young men, which contain the active germ-tract, are ejaculated. Try to remember that all these things we are talking of are matters of fact. They do undeniably exist in the warlike situation, beneath the surface of our commonplace theories and ideas about war. We are not

making these things up. You may say that they have nothing to do with the causes of war. If that is so, it is certainly very strange that there should be so much in the actual *flesh* of the warlike situation which *looks* like a collective sexual process. We have to decide which is the more real, the more tangible: this *flesh* and its collective sexual movements, or our commonplace thoughts and ideas about war.

To continue. It would appear that the collective orgasm of war affords an unconscious compensation, on a higher level of integration, for the waning of sexuality in the elderly human individual. Old people become very bright, brisk and animated, and seem often to gain a new lease of life, in war-time. It is as though they were infected with a larger ecstasy. These are strange and disturbing ideas, and perhaps we have made too much of them. But we are not confusing individual with collective sexuality. In the behaviour of the nation at war we see at the most an enlarged and distorted reflection of states of sexuality in the individual body. Even that distorted reflection, however, throws an intense light on many hitherto unaccountable features of bellicose behaviour. Those of us who were able to keep somewhat aloof from the hysteria of war-periods must on occasion have felt that there was more in this collective hysteria than could be fully accounted for on the theory that the herd was fighting a rational battle for survival.

To take only one example, consider the behaviour of crowds which gather on railway platforms and quay-sides to watch the troops depart for the war. There is a kind of collective ecstasy and delirium in these crowds. Their rejoicings are too hysterically exuberant, altogether too unbalanced, to be accounted for by commonly-accepted theories of war. If war were merely a tragic but necessary struggle for self-preservation of the group, as we are told it is, a silent and resolute temper in these crowds would be more understandable and appropriate. A sombre atmosphere might be expected to prevail. But we find just the opposite. In spite of the fact that the soldiers are being transported to the scene of wounds and death, from which many will never return, there

is an unmistakable rapture and exultation in the crowds which see them off. There is far more here than a rational effort to keep the spirits up, to put a brave face on things. There is real joy, real ecstasy. This behaviour is not made the less strange, but stranger, because we ourselves so readily succumb to and become infected by the fever of the crowd. Indeed, we can scarcely begin to think scientifically about society until we begin to hold ourselves aloof from it, until we begin to find it strange. Now, if we picture these crowds gathered on railway platforms and quaysides as forming part of a larger sexual entity in process of *collective* ejaculation, their delirium immediately becomes explicable, significant and even, in a certain sense, rational. Alternatively, we can juxtapose the behaviour of these ecstatic human crowds and the febrile behaviour of the insect workers when the reproductives leave the hive. We can do this without losing our sense of proportion. The genuine scientific spirit can distil underlying uniformity from superficial diversity without neglecting or minimising the importance of that diversity. Conversely, there is no merit in ignoring the uniformities of Nature, or in extolling a mere imaginative exiguity as scientific caution. If, then, we offer the concept of *collective* sexuality to explain the behaviour of our wartime crowds, we do it with the reservation that the exact copy of this behaviour is to be found nowhere else in Nature.

To continue. It must not be thought that pleasure in war is confined entirely to the relatively "somatic" portions of the human group, that is, to the elder generation of individuals. In human collectivities the separation of germinal and somatic elements is in no way comparable to the clear-cut separation found in the individual body, or in the insect state. The collective soma of the human group is really the aggregate of all the individual somata of that group. In the same way, the collective germ-tract is the sum of individual germ-tracts. We can employ an image here. Let us picture a forest in which each tree represents a human individual. The roots can be taken to represent germinal elements, and the parts of trees above ground to represent somatic elements.

As the forest stands, it gives us an image of the human group. Here there is a "vertical" division of germ-plasm from somatoplasm, which cuts through each individual. To represent the condition of the individual body or the insect state, we should have to fell the trees at ground level and pile them all together in one area of the clearing, and pile all their roots together in another area. That is to say, we should have to divide the germ-plasm "horizontally" from the somatoplasm.

Another way of looking at the human group is this. Each individual soma in the group contains a strand of the collective germ-tract. The stage of development, and the sexual differentiation of these germinal strands largely determine what part their containing somata shall play in war. Roughly speaking, only those somata containing germinal strands at an active peak of forming *microgametes* move combatantly beyond the confines of the group. The remaining somata are relatively non-combatant, and remain relatively stationary in space. While we are about it, we can ask the reader again how this movement of cell-categories can possibly be interpreted except as a sexual movement. Or, if he insists that war is something completely different, he will perhaps concede that on the cellular level it *also* looks remarkably like a sexual movement. On the whole, the most logical refutation of our argument, even more logically destructive than flinging it into the fire, would be to demonstrate that the human body is not composed of cells.

The cellular organization of the human body being what it is, we may expect that whatever sexual pleasure is collectively experienced by the communal "soma" is felt also at the level of its "gametic" armies and expeditions. Shortly before the declaration of war, the nation comes into a state of ferment. Its mounting "crises" of collective sexual tension are loosely comparable to the crescendo of erethistic feeling which immediately precedes sexual detumescence in the individual. There is the same chain of peaks and valleys, each peak higher than the last. The bellicose meetings and demonstrations of the nation, its drums and banners, its

torchlight processions and the like, all fit very neatly into the idea of a mounting sexual tension of the group. The actual declaration of war, with its wave of hysterical patriotism, and the strange feeling of relief which it brings to the majority of people, might be described as the first spasm of ejaculation from the collectivity. Thereafter, the "gametic" armies stream outwards along the various "somatic" ducts in a state of great erethistic exaltation, like marshalled sperms along communal *vasa deferentia*. Few can resist the pleasure of marching to the strains of martial music in a mass. Just such a pleasure might be felt, had they the wherewithal to feel with, by the plates of flagellated microgametes expelled from algal antheridia. The fact that a human soldier is no jot more aware of the genetical causes of his expulsion than is a microgamete in no way affects his intuitive sense of the essential rightness of the expulsion. In fact, the genetical mechanism may be regarded as creating the "sense of rightness". There is, indeed, something so lusty, quick and vital about a "spermatic" soldier that even the nursery can show its drums and trumpets and its Lilliputian battles.

Here again we must pause and again explain that we are perfectly aware that some of the terms we have used, which relate to individual sexuality, are not strictly applicable to sexuality in the group. This difficulty cannot be avoided at the moment. All we can do is to lump two systems of ideas together in the reader's mind, and leave it to him to adjust them in detail until they fit. Given any sort of willingness to explore a new avenue of thought, that adjustment should not be difficult. It will, of course, be found impossible where a merely "instinctive" conservatism overrides the rational faculty. We always deride conservatism in previous generations, and always dismally repeat it in our own. Intensive thought on the subject has convinced us that however crude this first association of war with sexuality may be, the idea itself is sound and firmly based, and will therefore admit an unlimited degree of scientific elaboration and refinement in the future. Unfortunately, in a first naïve exposition such as this, we have to go in constant trepidation of over-taxing our

reader's patience and credulity. We have to advance our argument in a series of short rushes and consolidations, with the spectre of unbelief following always at our heels. There is no more disagreeable sensation than that which accompanies the propounding of a new idea. For although we read no factor into the warlike situation which is not already there, and which has not already been demonstrated by abler thinkers than ourselves, our total patterning of these factors must inevitably appear improbable and strange. We can only beg the reader to believe that this strangeness rapidly wears off, is succeeded even by a sense of commonplace, when we give sincere and protracted thought to the pattern as a whole. When that is done, the only remaining strangeness about the sexual view of war is that it can conceivably appear strange.

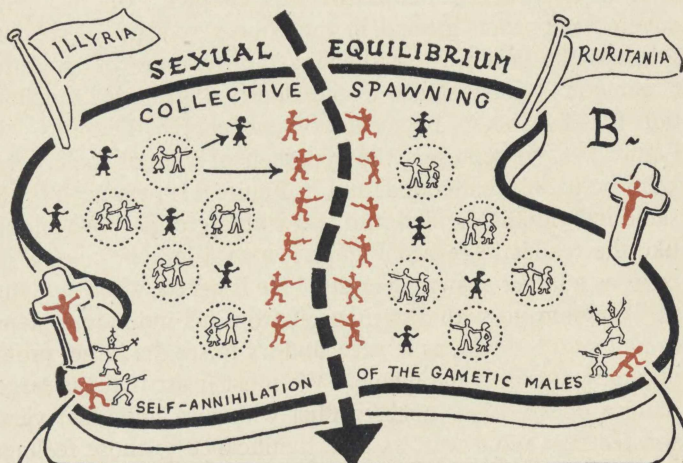
We have wandered rather far from the ideological discussion which forms the subject of this chapter. But we have covered important ground in the course of the digression. Perhaps the best way of showing the relation of youthful ("gametic") universalism to the elderly ("somatic") inclination for division, is by means of two simple diagrams. In Figure 11A, we represent the hypothetical state of society if it were politically undivided, and in Figure 11B, we portray the same individuals divided into two stable groups. We should like the reader to regard Figure 11B as a larger "colony" of cells, as a larger spawning entity. He is asked, when studying this diagram, to withdraw himself from his individual plane, to half shut his eyes, as it were, and try to see the larger protoplasmic pattern of the whole. We must insist that the larger pattern does not so much conflict with our individual views and feelings about war, as give significance to those feelings, and make biological "sense" of them where no "sense" has hitherto existed.

As we have seen, the sexual hypothesis of war, however improbable it may sound at first, throws fresh light on many questions. Among those questions is that of the liberty of the individual in the modern State. Now, the restriction by the State of individual freedom is caused to a great extent by the necessity of sexual extroversion through political division.

SEXUAL ANARCHY

FIGURE
11.

A.



B.

GAMETIC MALE : Why do you kill us with this division ? Why do you refuse to unite the world, unless to kill us ?

SOMATIC MALE : We cannot unite the world. For in order to preserve the nation from disruption, you, the disruptive element, must be caused by this very division to annihilate yourselves.



GAMETIC MALE.



GAMETIC FEMALE.



SOMATIC COUPLE.

N.W.

Hitler, in his *Mein Kampf*, makes clear the attitude of the normal nationalist to any attempt to dissolve political partitions. His wholesale persecution of Communists and Jews (both of whom he regarded as a single enemy) was an attempt to rid the nation of supposedly international and cosmopolitan elements which could not be incorporated in a wholehearted national war, in a wholehearted collective ejaculation, that is to say. The restriction of their liberties, the loss even of their lives, suffered by Communists and Jews in Nazi Germany, and on a lesser scale elsewhere, would have been obviated in a hypothetically unpartitioned world, and was therefore attributable in the very last and ultimate analysis to the molecular basis of collective sexuality. We find the same kind of thing in the widespread suspicion of Freemasonry and the Roman Catholic Church. For many people, there is something definitely sinister and repellent about any organization or group that transcends nationalism. The international bogey is the subject of many cheap, sensational novels. Although it has lately become fashionable to pay lip-service to world-government, there is nothing more frowned upon and persecuted than genuine or realistic effort to bring it into being.

Now, since human society in its present biological condition appears to survive as numerously as it does through being divided, there is a natural, understandable and perfectly healthy tendency to keep the vital issue of this division safely in the background when discussing the relation of the individual to the State. The one really decisive factor is left right out of the discussion. The problem of the individual's relation to the State is tacitly conceived of as *internal*, as occurring within what is, to all the intents and purposes of the discussion, an *isolated* State. It seems never to be realized that the coercion of the individual results almost entirely from his being a member of a State *set in opposition to other States*.¹ Indeed, the mutual opposition of States exists only as a device by which the individual may be coerced. *Inter-*

¹ For an exception to this, see Emery Reves' *The Anatomy of Peace*.

national anarchy is the only means by which, in our present biological condition, *intranational* anarchy is prevented.

The question of economic apportionment to classes and individuals is also, for the most part, considered as a purely domestic problem. Having regard to our hypothesis, however, we must take the view that just as the organized modern State exists for, and is made possible by, the extroversion of its internally disruptive sexuality, so also its economic hierarchies arise in part from this same fundamental need. Earlier Socialism, for example, basing war on economic factors, and regarding a domestic redistribution of the instruments of production as the only remaining step to the attainment of perpetual peace, blandly ignored the issue of national segregation. How indeed such a purely internal redistribution, which has in any case occurred time and again throughout our history, can be supposed to do away with war, it is very difficult to conceive. The fact that Socialist States fight one another with the utmost readiness today shows how nonsensical was this earlier economic view of war. Our own view is totally opposed. It seems to us that until the biological causes of collective sexuality are removed, until, that is, national divisions are dissolved, there can be no radical advance either in economic equity or in individual freedom. Economic inequality is itself a means by which the younger and socially disruptive males are cowed and held in awe. Society slumbers uneasily, between its cyclic eruptions, upon the volcano of its own internal sexuality. The harsh hierarchies and disciplined gradations needed to maintain, by external rivalry, an uneasy internal peace, are by nature and necessity economically acquisitive. Nor, while periodic war continues to demand patriotic subordination, can there be any sustained or effective resistance to unequal economic distribution.

Totalitarianism, then, is *not* the last desperate attempt of Capitalist Civilization to stave off its own decay. That idea is unadulterated nonsense. Totalitarianism can be just as much a feature of Socialist as of other economic forms of national State. Instead, we must regard the totalitarian ten-

dency as biological in its essence, a hardening and "encystment" of the national group against the dreaded solvent of internationalism. All national States nowadays are virtually totalitarian. The bandying of this word is simply in the nature of a war-cry. Nationalism in *any* form demands the complete abrogation not only of liberty but of life itself by the individual in the interests of his segregated State. Fascism itself was, however, an unequivocal acceptance of this universal individual slavery and an undisguised delight in the sexual panoply of war. It bore comparatively little relation to economic factors. It was opposed to Socialism only because the latter in its heyday preached a nationless and impossibly undivided world.

As the development of physical communications and scientific thought progressively undermines our rationalizations of human segregation, we may expect a further constraint of the individual mind in the service of sexual extroversion, if any further constraint is possible indeed. If we insist on having a divided world, let us at least acknowledge and accept the mental chains that go with it. But to pretend that complete human rights and the liberty of the individual can exist in a framework of national segregation, entailing, as it must, the social approval of wholesale bloodshed and persecution, is not merely nonsensical but a flagrant and outrageous lie. Only when Scientific Man has the courage to grapple with his own biological nature will his individual dignity and freedom be any better than a name.

CHAPTER X

CONCLUSION

THE time having now come to round off and complete this first tentative discussion of war as a collective sexual movement, it is desirable to take stock of our position. The obvious advantage of a comprehensive theory is that it admits elaboration, has a capacity for drawing much extraneous matter into its system, and economizes scientific thought. The bacteriological theory, for example, narrowed considerably the field in which men thought it profitable to search for the causation of certain types of disease. The present theory, we hope, will effect a similar economy in the search for the *ultimate* causes of war, though the subject of secondary causes will be less affected by it. Our deductions are certainly not original. Ever since men began to record their speculations about the causes of human disunity and war, they have displayed a perception of the very mechanisms which we have placed here on a comprehensive footing. The reader, once his mind becomes adjusted and, so to speak, sensitized to the sexual view of war, will discover that for himself. He will continually encounter references in literature, and even in the day-to-day speech of ordinary folk, which will astonish him for their uncanny similarity to the theory here propounded. It is quite remarkable, for example, how often we use sexual expressions in connection with war.¹ It is almost as though there were a kind of unconscious wisdom in ordinary unreflective people that is not to be met with in many intellectuals. But that wisdom is random and chaotic; there is no outline or pattern to it. It emerges to give

¹ Psycho-analytic doctrine, of course, traces this usage to the oedipal situation. But since the oedipal situation itself is an essential link in the present theory, we may say that the usage of sexual expressions in connection with war is traceable to an even more literal and fundamental order of sexuality.

us a startling glimpse of reality, and then sinks back into obscurity and confusion. But we can now take all these petty indications and marshal them into a comprehensive shape.

We have said that this theory will economize thought about war. But that is only partially true. There will certainly be an economy to the extent that the broad outlines of war-causation are brought into focus by it. This alone is of incalculable value. But the theory certainly does not exclude or simplify the secondary and more superficial strands of war-causation. It leaves parallel psychological and economic factors virtually untouched. The study of those must go on. But now we have at least a common frame of reference within which these other factors can be brought into association with one another. There are some who demand exclusiveness in scientific theory, who interpret accommodation as a sign of weakness. And we can assume beforehand that opponents of this theory will in any case misinterpret it as being exclusive, will dismiss it contemptuously as "the theory which claims that war is a collective sexual movement, and nothing else." But after all, we have to treat this theory as occupying only the same relative position in regard to collective sexuality as purely *biological* theory occupies in the case of individual sexuality: that is, as admitting the most complex psychological and other epiphenomena. It makes no more claim than that.

Linked with the normal exclusiveness of scientific theories, is the regrettable tendency to dogmatism. The mind hardens round the dogma, and then demands a course of action. So the reader, though unjustifiably, may ask: "Suppose that war is indeed a collective sexual movement, what *good* is this idea, what does it tell us, and what are we to do about it?"

Apart from the more immediate possibility of war-prediction, this theory can only offer the unwelcome deduction that so long as there is no vegetative separation from the germ-tract of whole human individuals, it seems very likely that political division and warfare will continue unabated. It is possible that they will continue no matter how terrible the destruction of human life and wealth by warfare may

become, because the alternative to them, in man's present psycho-biological condition, might entail a destruction by internal anarchy that would be not merely terrible but, to all intents and purposes, total and complete. That is the only way in which we can interpret the present fixity and blind compulsiveness of war behaviour: that it forms an alternative to something infinitely worse. It would seem therefore that we must, however regretfully, dismiss as biologically unfeasible all those dreams of an undivided brotherhood of man which do not directly stipulate the creation of a social soma. That is not because we ourselves, who write these words, would not welcome such an undivided state, but because men, as we find them about us now, appear to hate the prospect very bitterly. And so Mr. Wells' serenely united, but still sexual, *Men Like Gods* would appear to be beyond the bounds of biological possibility. This harsh view receives so overpowering a vindication in the deepening political division of the world today, in which men, deaf to all Utopias, prepare with an insect-like automaticity for their own large-scale destruction by atomic energy, that it can scarcely fail to commend itself to any but the most hopelessly sanguine minds. Like Mr. Wells, we detest human division: so much so indeed, that, *unlike* him, having been impressed with the uselessness of exhortation, we have taken the trouble to search for the underlying causes of that division.

Let us once again, for the purpose of discussion, postulate a politically undivided world, achieved either by Mr. Wells' own idea of an open and peaceful conspiracy of mankind, or by a violent world-wide revolution of whatever colour. Let us assume for the moment that such an upheaval has in fact brought about world unity. Now, revolution, the internal disruption and reconstitution of the aggregate, is an activity of the younger and actively sexual males. Disruption is a function of sexuality. We are to imagine, then, that these younger males have replaced their sovereign governments by a single government of the world. They have agreed to join hands across all national frontiers, and by that agreement have dissolved those frontiers utterly and created a single

global nation. We are to imagine next that within this larger and worldwide "brother-horde" the organs of propaganda and mass-suggestion instil loyalty to the One World in the minds of the rising generation, together with a fear and hatred of the political division of the past. So far, so good. But meanwhile, the revolutionary sons, who once united to dissolve the nationalism of their fathers, have become fathers in their turn. That is to say, they are again confronted in the persons of their sons with the same disruptive energy which characterized their own revolutionary youth. But the world, you must remember, is now united. Nowhere in the whole length and breadth of it is there any potential enemy to be found; nowhere the clash of collective national interests; nowhere a menace to enjoin subordination; nowhere a graveyard for the disruptive energy of youth. Of course, it may be argued that the new education will create in the young a rational recognition of the necessity of obedience and hierarchic organization for the survival of the race; and that the young, for the sake of social peace, will submit without further compulsion to the sexual disciplines which form part and parcel of that peace. We doubt it. The very fixity of our divisions, which never allows the experiment to be tried, forms the most massive and crushing refutation of the argument. Remember that the sexual choler of the individual, prompting to social insurrection by the subtle alchemy of the blood, not by the temperate motion of the brain, will still remain unchanged. Can we realistically suppose that a mere generation of education will suffice to constrain the dark legacy of an immemorial past? When we reflect that even now the claims of so-called national self-preservation, enlisting our basal instincts in the cause of *internal* national peace, are still unable to prevent occasional revolutions, it is not easy to see how reason and education, stripped in a united world of all the weapons of division, could be any more successful. It has been claimed, as almost anything can be claimed, that the sexual ferocity of the younger males could be sublimated and profitably diverted into strenuous social enterprise, into Herculean

feats of engineering, hazardous exploration, interplanetary travel and the like. Again, we are not convinced. If these things could be done, they would surely already have been done. Man's biological nature has not altered appreciably since pre-historic times. Social developments since then have consisted essentially in the creation of ever more sanguinary outlets for his disruptive energy, not in the extirpation of that energy or in the closure of its outlets. And in any case, social existence now imposes humdrum, tedious work upon the majority of mankind. A world in which every citizen could participate in perilous and heroic tasks is immeasurably remote. Nor can we conceive of any bloodless social venture comparable to the stern and terrible extremities of modern war in its capacity to absorb the heat and violence of every reproductive male. It is a melancholy fact that the younger generation does not consist of serene and unimpassioned scientific thinkers (would to God it did!): it would seem to consist, if reality is to be faced, of rank, infuriate brutes who have periodically to be disparted at the cannon's mouth to keep the peace.

In our hypothetically united world, therefore, the new fathers would be compelled to re-impose political divisions in order to discipline and destroy their own disruptive sons. That is to say, they would be ignominiously forced to re-create our wasteful, untidy patches of internal sexual peace. The alternative would be universal anarchy and death. There is every indication that mankind has already an unconscious perception of this grim necessity; for only thus can we explain its bitter and strenuous resistance to any and every attempt to unify the race. Or is there any other massive explanation? Or are we to suppose that mankind is collectively insane? Men display a lively energy in guarding against the minor hazards of their lives. Why have they not long ago risen in wrath against the political divisions which destroy them on an enormous scale? There must be some adequate explanation. It is no use saying that men enjoy being blotted out. Nature instils no love of suicide in her creatures, unless perhaps to guard against some greater form

of waste. And the only possible sense that we can make of war, apart from not thinking about it at all, which is what ninety-nine out of every hundred people do, is to regard it as an alternative to something worse, as the only means we have of preserving *internal* national peace.

Remembering this, it is interesting to note that some of the greatest minds in every age have regarded political division as being in the very nature of things. Plato, for example, says:

“All states are in a perpetual war with all. For that which we call peace is no more than a name, while in reality Nature has set all communities in an unproclaimed but everlasting war against each other.”¹

Mr. Winston Churchill (whose policies, it should be remembered, are enthusiastically endorsed by a large section of the human population), speaking recently² in the House of Commons, displayed an unconscious recognition of the biological facts of the human situation when he said:³ “It is better to have a world united than divided, but it is better to have a world divided than a world destroyed.” Now, although our own attitude to the human problem is essentially dissatisfied and dynamic, while Mr. Churchill’s is satisfied and static, we find ourselves in agreement upon the crude necessities of the present situation; upon the necessities, that is, binding mankind in its sexually unspecialized condition. We differ from Mr. Churchill only in that we dare to believe that this present condition of ours is neither desirable nor unchangeable. But of course, the feeling that political division is necessary for the preservation of the human race is very widespread indeed. General Ludendorff, for example, talked of the “world-destroying activities of super and international powers, of the Jewish people and the Roman Church, with their political ways and means, who are striving for universal power above and over the nations.”⁴ Adolf

¹ Plato, as quoted by Maxim Hudson, *Defenceless America*, p. 282.

² This was written in 1946 (Author).

³ Speech during foreign affairs debate, 5th June, 1946.

⁴ General Ludendorff, *The Nation at War*, p. 24.

Hitler, again, said of Marxism that "it impugns the teaching that nationhood and race have a primary significance, and by doing this it takes away the very foundation of human existence and human civilization. If the Marxist teaching were to be accepted as the foundation of the life of the universe, it would lead to the disappearance of all order that is conceivable to the human mind. And thus the adoption of such a law would provoke chaos in the structure of the greatest organism that we know, with the result that the inhabitants of this earthly planet would finally disappear."¹ Here we have three men, each speaking in his own way, but all preaching the same essential doctrine: human division. Which leads invariably and inevitably to war. We must suppose that they have felt their doctrine on their pulses; that they have come to it instinctively, without reasoning the matter out. In themselves, and in their enormous influence, these calamitous automata require to be scientifically explained. And that explanation is provided by this book.

In conclusion, let us briefly recapitulate the main argument of our theory, so that it may remain freshly in the reader's mind.

Our contention is that since the cell or nucleus is the unit of the individual man, it is *ipso facto* a unit of any community of individual men: just as a city of brick-built houses is itself built of bricks. This fact is surely incontestable. It is equally logical to say that society is built of molecules or atoms. Our theory is unique only in that it strives to trace the causation of certain *broad* movements occurring at the level of the society of human individuals to mechanisms in the cells of which these individuals are indubitably composed. The emphasis in the last sentence is on the word *broad*. There is nothing to be said against this way of looking at things, except that our minds have not yet become adjusted to it. Consider the matter in this light: sexuality, first manifested in the behaviour of the unicells, is widespread in *all* the higher forms of life, including individual man himself. In

¹ Hitler, *Mein Kampf*, Eng. Trans., London, 1942, p. 46.

cellular aggregates, whether vegetable or animal, we find complex structural adaptations, or behaviour, which we unhesitatingly associate with the sexual process. In man, it is beyond doubt that sexuality in its general sense profoundly affects the most intimate structure and behaviour of the *individual*. Now, since human society is simply an aggregate of sexual individuals, it is eminently reasonable to suppose that sexuality will not only affect the individual in society, but will also affect the structure and behaviour of society *as a whole*. For example, if society came to consist of sexless individuals who propagated entirely by vegetative fission, it cannot be denied that the structure and behaviour of the family group, and therefore of society as a whole, would undergo an almost unimaginable alteration. Therefore, the present structure and behaviour of society is determined, in part at least, by the existence of a sexual process in its constituent human individuals. But the sexual process, in a finer analysis, is a function of the cells or nuclei of which these human individuals are composed. Therefore, the structure and behaviour of society is in part determined by the existence of a sexual process *in its constituent cells*.

We start, then, from the indisputable fact that our cells are units of society as a whole. As we gaze at the bewildering variety of forms assumed by animal life in the course of evolution, we note and isolate certain processes common to all. Sexuality is one such common process, and one to which we might almost give the central position in the mechanisms of life, so important is it. As Goldschmidt says:¹ "There is scarcely an example of which we can say with certainty that its only means of reproduction is asexual. Early or late there comes, for all animal organisms, a moment when a sexual act of some kind takes place." Now, a community of animals is itself an organism, a body, however low its level of individuation. That is to say, such a statement does not in the least require us to postulate any marked degree of individuality for the community as a whole. A primitive algal coenobium, such

¹ Goldschmidt, R., *Mechanism and Physiology of Sex-Determination*, London, 1922, pp. 1, 2.

as *Pandorina*, is legitimately regarded as an organic body, although it possesses only the rudiments of individuation. In the individual cells there is a definite rhythm of sexuality, which, for convenience, we regard as a rhythm of sexuality in the coenobium as a whole.

Let us for the moment try to picture the human group as an organism, as a larger body. For the use that we shall make of this illustration, we need to postulate little, if any, individuality for the group. Next, let us abstract that quality of each human individual which consists in his or her being a multiplicity of cells or nuclei. Let us further clear our minds by excluding from the picture all human "outlines" and characteristics, and all the cultural and psychological aspects of society. We are not forgetting what we have excluded, or minimising its importance. We have only laid these things aside for the moment, and for a limited purpose. And so we have now before our eyes, not the human group as we commonly visualize it, but a vast aggregation of microscopic cells, being the cells into which the human members of the group have been dissolved. The question now arises: what is there in this larger body of cells *as a whole* that corresponds to a sexual process? These are animal cells; and the fact that a sexual process of some sort does invariably occur in all bodies of animal cells, gives us the right to expect such a process in that larger organism which is our own society. The human group lies upon one level of integration; beneath it, there are two other levels: the multicellular and the cellular itself. On both these lower levels, inside the human group, sexuality is plainly in evidence. This endorses our right to expect a sexual process on the uppermost level, that is, one pertaining to the group *as a whole*; for sexuality, to be a feature of the whole, must also be a feature of the part. In every animal organism in which a sexual process has been established, this process is found not as an insignificant phenomenon, but as one occupying a prominent position in the life-cycle, and modifying considerably the structure and behaviour of the organism as a whole. When searching for a sexual process in the larger body of our own society, there-

fore, we shall look first for some conspicuous phenomenon in the life of the group, for some movement, in other words, that is *collective* in relation to the human individual.

Having posed the question: What is there in the larger organism of the human group that corresponds to a sexual process pertaining to the whole? we shall proceed to answer it with another question: If what we term "warfare" does *not* meet the requirements exactly of such a larger sexual process, then in what other *collective* movement of human individuals is such a process to be found? We have abstracted the human group as a multiplicity of cells; we have induced a sexual process into this larger organic body as a whole; and we have picked on war as the phenomenon most nearly corresponding to such a larger sexual process. Let us now see what evidence of correspondence we can adduce in support of this conclusion.

1. Sexual processes tend to be *periodic*, and to alternate with vegetative states. A sexual process pertaining to the human group should therefore conform to this condition. Consider warfare: active hostilities, involving the outpouring of potent males, do, in fact, alternate with periods of warlike preparation. In many organisms on the metazoan level, the vegetative period is also a period of gametic replenishment; one gamogony is followed by sexual preparation for another. And after one human war, there follows a period of replenishment of living material for the next. As far as our normal rationalizations of war are concerned, there is no adequate reason why open hostilities, in a less exhausting form, should not be incessant. Nor, indeed, from the normal viewpoint, is there any reason why hostilities need come about at all. If we can live at peace at one moment, why not at the next? What happens in the inter-wars, to bring our wars about? The answer can only be: *the accumulation of living material to be outpoured in war*. And in fact, the alternation of war and peace is a universal characteristic of the life of groups. As to an *inherent* periodicity in human warfare, that is, a periodicity linked up with sexual periodicities on the

lower levels of integration¹ inside the human group, we cannot speak with absolute certitude until we have unravelled the mechanism fully. It is almost certain, however, that such an inherent periodicity exists, and we have made a first rough attempt to establish it in a previous chapter of this work under the head of "Political Deductions". The reader is referred back to that chapter. While we are on this point, it is interesting to note that Ernest Jones, the Psycho-Analytic writer, believes that wars are bound to occur *periodically* as the result of *accumulated* tensions, in this case psychological tensions. It is, of course, a fact that psychological states run parallel in many cases to biological transactions, the former being epiphenomenal to the latter. This is particularly true in the case of sexual mechanisms. It is most significant that Ernest Jones, approaching our subject from quite a different direction, should verge so closely on our own position, even to the extent of employing terms that are applicable to sexual movements. He writes (the italics are our own):²

"The question arises whether there is not in the human mind some . . . set of *recurrently acting agents* which tends to . . . find or create pretexts for wars whatever the external situation may be [and] that man *cannot live for more than a certain period without indulging his warlike impulses* . . . Another possibility . . . is that man tends to prefer the solution of various socio-political problems by means of war to their solution in any other way . . . it might be very plaus-

¹ It is possible that some kind of *internal accumulation* lies at the root of *all* sexual periodicities, on all levels of integration. Thus, in the single cell, there may be some form of particulate accumulation that determines the sexual periodicity of the cell as a whole. In certain multicellular bodies, it would seem that the accumulation of lesser particles, the sexual cells, determines the sexual periodicity of the multicellular unit as a whole. And in aggregates of multicellular bodies, animal communities, it may be that the accumulation of lesser particles, in this case the sexual members of the community, determines the sexual periodicity of the community as a whole. But clearly, even on the uppermost level, on the communal plane, the sexual periodicities on the cellular and multicellular levels are still in operation, and in fact determine the sexual periodicity of the communal whole.

² Jones, E., *War and Individual Psychology*, Sociological Review, 1905, vol. VIII., p. 167. Republished in his *Essays in Applied Psycho-Analysis*, 1923, p. 368.

ibly argued that what happens historically is *a periodic* outburst of warlike impulses followed by a *revulsion* against war . . . which is again succeeded by a forgetting of the horrors involved and a *gradually accumulating tension* that once again leads to an *explosion*."

It should be quite clear that the viewpoint expressed in the above quotation is in no way repugnant to our own. On the contrary, we have here a remarkable convergence of the biological and psychological angles of approach to reach the same truth by widely different paths. Ernest Jones is dealing with the psychological aspects of a periodicity which we believe is *also*, on a more fundamental plane, biological. And the use of such expressions as "revulsion", which is followed by a "gradually accumulating tension", that once again leads to an "explosion", is most significant when related to our own hypothesis. It will already have struck the reader that these expressions could be applied exactly to states of sexuality in the individual body. It surely needs no great stretch of the imagination to see in the revulsion which follows an over-costly war an enormous counterpart of the revulsion which follows excessive sexual activity in the individual. In the pacifist wave, in the mood of "Never again!" we can only too readily draw the parallel. We note that after the second world war, *which was far less costly than the first*, there has been no pacifist wave such as we witnessed in the '30's. Pacifism is at a discount. "Realism" and "scepticism" are the fashionable moods of the hour. All the talk is eagerly for the third world war into which we are now rapidly drifting. Here again we can draw the parallel with individual sexuality. The whole trouble with this theory, which will most hinder its acceptance, is that it fits the facts too closely, corresponds too perfectly with experience. It is *too* sound and sensible. Men have a decided preference for unreal and fantastic modes of thought; they love excessive and artificial complications, and hate the sweeping simplicity of truth. That, however, is beside the point. We have included this quotation from Ernest Jones to anticipate the objection that the sexual theory of war excludes psychological considera-

tions. War is obviously a psycho-biological phenomenon, and this theory opens up a fresh and fertile field for the psychologist.

2. A second normal feature of the sexual process is the extrusion from the organism of specialized sexual cells, or gametes. How far does war conform to this condition? It is clear that the bulk of the combatants extruded from the nation in its cyclic wars are males in whom the production of sexual cells, or microgametes, is at its height. War makes comparatively little combatant use of males before their production of gametes has begun, or when their sexuality is on the wane.¹ War can thus legitimately be regarded as an extrusion from the group of active gametes, *carried within the active somata of the combatants*. This, in any case, is what we should expect to find in a sexual process on the social level of integration. We have the same thing in the case of the social insects, where the drone, himself a larger "gamete", is a winged *vehicle* for disseminating the microscopic gametes of the hive. In our own case, we can gain a vivid insight into the warlike situation if we exclude from the picture everything but the gametes which lie hidden in the bodies of human individuals. If we note the categories of these gametes, and which categories move across the map in war, and

¹ Natural selection must automatically favour active and energetic gametes, whether unicellular (as human spermatozoa), or multicellular (as sperm-bearing human soldiers). The cult of physical fitness, an integral part of aggressive nationalism, might possibly be regarded, apart from its obvious utility to human life, as an unconscious effort by the group to equip itself with energetic "soldier-gametes" in order that it may break down the sexual resistance of its neighbours, as the preliminary to the dissemination of its own genes. Political rationalizations, while naturally making no mention of these biological ends, serve none the less to ensure their consummation.

In the same way, national groups (contradicting their favourite rationalized incitement to war: lack of "lebensraum") endeavour to rock the cradle in what is perhaps an unconscious effort to increase their own "potency" in gametic males. Whether or not the bodies, the somata, of these gametic males are destined to become cannon-fodder is immaterial, so long as they recombine their germ-plasm before their death. A national flood of conquest ineradicably implants the national genes in the territories that are overrun. Even when this flood is followed by an ebb-tide of defeat, the defeat relates only to the somata of the gametic males, not to their

how they unite with other gametes at a distance from their point of origin, we see that on this level of integration, war is unmistakably a sexual process. Once we have obtained that glimpse into reality, the explanations of war which we hear on the upper levels of integration become so much somnambulistic chatter. Of course, the fact that the sexually potent males are physically the most able to endure the rigours of war provides the normal explanation of their combatant employment. This explanation need not deter us here. The fact remains that war is accompanied by the extrusion from the social organism of active sexual cells. Thus it conforms to the second condition of a sexual process.

3. A third normal feature of the sexual process is genetical recombination. How far does war conform to this condition? There is a well-known tendency for living organisms, when isolated, to develop divergent variations. The fact that mankind is an interbreeding whole is due in part to our incessant migrations since palæolithic times. But it is also attributable to the fact that human communities, latterly much expanded and pressed together, have waged war upon and interbred with one another. We need only ask the reader what part was played by war in producing genetical recombination in the British Islands, for example, or in the plains of

immortal germ-plasm, which remains behind, and whose recombination, the unconscious purpose of the conquest, has already been achieved. Our human preoccupation with the relatively unimportant somata of our species, blinds us to Nature's preoccupation with the vitally important recombination of the human germ-tract.

The fact that most national governments endeavour to increase their national birth-rate, is wholly repugnant to the theory that wars are waged with the unconscious purpose of relieving over-population. Even if a war resulted in a halving of our present numbers, and such a relief should satisfy the wildest over-population theorist, human numbers would merely drop to their level somewhere in the eighteenth century, when wars had already been taking place for many thousands of years! In point of fact, the casualties of war are negligible in relation to population trends. As Pearl says: "Those persons who see in war and pestilence any absolute solution of the world problem of population . . . are optimists indeed. As a matter of fact, all history tells us, and recent history fairly shouts in its emphasis, that such events make the merest ephemeral flicker in the steady onward march of population growth." (Pearl, Raymond, 1921, "A Further Note on War and Population", *Science*, 55: 120-21.)

northern India. Man's transition from a scarce migrating species to his numerous and localized condition of today is clearly reflected in his collective sexual movements. His migrant interbreeding in palæolithic times was analogous to the chance encounters of small, drifting, unstable coenobia on a lower level of integration. His warlike interbreeding of today is comparable to the concerted and co-ordinated sexual commerce of larger rooted organisms.

In so far as one can read utility into living mechanisms, one of the uses of war to our species is hybridization¹ in its broadest sense. The popular belief that perpetual peace would lead to degeneration, finds some slight corroboration in the fact that sexuality, by throwing up useful variations, leads in a certain sense to the invigoration of the species. There can, of course, be no doubt that war leads, through collective sexual selection, to the dissemination of the warlike character, which is, by exceedingly unpleasant standards, more "vigorous" than the peaceful character. These facts do not rule out the possibility that recombination could be more accurately and economically achieved without recourse

¹ The word "hybridization" might be extended from its genetical connotation to cover cultural hybridization also, the latter being, in fact, scarcely less important than the former from a biological point of view. Purely cultural hybridization, the blending by culture-contact of two social systems to create a third, is analogous to the creation of a new human soma by the union of the gametes to form a diploid zygote. The building of a new individual soma in itself requires no intranuclear pairing of the chromosomes, for physical intercrossing (chiasma pairing) is confined solely to the parasitic germ-tract. The building up of the soma consists rather in the general pooling and compromise and interplay of two distinct sets of ontosomatic (cell-social) experience, brought together at the fertilization of the ovum. And just as an auspicious union of two distinct sets of "somatic experience" may produce a new individual soma better fitted to preserve and transmit its contained portion of the germ-tract, so also a fortunate blending of two distinct social systems, achieved by war and occupation, may produce a new social structure better fitted to preserve and transmit those portions of the germ-tract contained in its constituent individuals. The warlike and colonizing movement of modern European science and technology into every portion of the globe is significant in this connexion. It is possible that modern warfare may achieve less purely physical hybridization than warfare in the past, but it cannot be denied that modern armies of occupation bring about considerable hybridization on the political and cultural (phylosomatic) level.

to war; but in the present biological condition of our race such a rational possibility is unhappily remote.¹ The fact that war tends to lead to physical intercrossing may have some bearing on the superstition of racial superiority which appears in some form or other in every human group. Although the idea of a distinctive "racial" purity and excellence receives little scientific corroboration, the scientist would be ill-advised to ignore the attraction which this superstition possesses for vast masses of unthinking people. To put the matter metaphorically, but with perhaps a more literal truth than might at first sight appear, it is almost as though the national spermatozoa, speaking through the mouths of the ignorant masses and their witless leaders, were advertising their own excellence to the alien ova in which presently they intended to imbed their heads. It is remarkable how closely the Fascist leaders, in their hysterical pseudo-scientific outpourings, verged upon the sexual character of war. Perhaps that is why that sort of thing, in one form or another, is so immensely popular in every country. Because it forms a distorted reflection of the truth. But we digress. War, then, conforms to the third condition of a sexual process in that it very definitely results in genetical recombination.

It may, of course, be objected that the actual amount of genetical recombination achieved by modern war and con-

¹ Nature has not been able to wait upon the development of modern science for a rational achievement of hybridization in the human species. Both Darwin and Freud have supposed that she aboriginally brought about the cross-fertilization of our sub-human progenitors by means of the expulsive sexual jealousies of the old males toward the young. The same expulsive hatreds, leading to organized and concerted warfare in historic times and today, were already resulting in hybridization long before this word was even coined. The primitive and purely instinctive sexual mechanism, in no way dependent on knowledge or culture for its working, is infinitely more certain and infallible than the groping and disputatious faculty of scientific reason. That it achieves its object of hybridization in a clumsy and collective fashion, showing little solicitude for the life and happiness of the individual, is beside the point: Nature concerns herself only with the overall survival of the race. Unfortunately, this same instinctive and compulsive mechanism, remaining fully active today and in the coming era, will automatically militate against any alternative method of hybridization proposed by the scientific reason.

quest is not commensurate with the size of the disturbance. The upheaval, that is to say, would seem to be too vast to be aimed, even unconsciously, at such a small result. Leaving aside the probability that there is more warlike interbreeding, even nowadays, than we are commonly aware of, we can deal with this objection by drawing the obvious parallel between war and other sexual mechanisms. Although every animal body and plant throws out an immense store of germ-cells, few of these may effect a conjugation, and sometimes none at all. Here, it could equally well be argued that scale of the sexual disturbance in the plant or animal is too great to be commensurate with the small amount of recombination achieved. But Nature is always wasteful in her sexual mechanisms. She is quite prepared to provoke a prodigious convulsion in her sexual organisms on the chance of a few gametes winning through. And so it is with war: Nature hopefully explodes the human group; fate or hazard decides the recombinative result.

These three points of likeness of war to a sexual process are firm and fundamental ones. They cannot be gainsaid. They go right down into the grain and texture, into the very flesh and cells, of which the warlike situation is composed. It is impossible to go beneath them, to probe any deeper into the problem. That means that any points of dissimilarity of war to a collective sexual movement which may be adduced will be superficial to the points of likeness, and for that reason will be less firmly established, more questionable. The problem remains of how to adjust our ideas to this concept; and, it need scarcely be said, the adjustment needed is tremendous. We can, of course, ostrich-like, admit the "theoretical" resemblance of war to a sexual movement of the group, treat it, that is, simply as an amusing freak of thought, and then go on thinking about the problem in the same superficial and indefinite fashion as before. But the likeness is not theoretical: it is *actual*, as actual as the cells of which our bodies are composed. And in fact, whatever we may think about it, war itself will go on being a sexual process, outside our thoughts. The alternative is to hold the concept unflinch-

ingly in our minds and deliberately adjust our world-view to it, however intellectually painful that may be. And it *is* painful. We know, for we have made the adjustment in ourselves. Men felt the same intellectual pain a hundred years ago when their relation to the lower animals was pointed out. On the one hand, there were hard facts insisting on being heard, and on the other, there were mental systems, subjective associations, which had perforce to be scrapped and re-assembled. And here also, there is that same feeling of humiliation, that sense of being the puppet of impersonal forces. But after all, those impersonal forces are in us, and we are made of them. On the other hand, it might be justly argued that the sexual view of war, so far from humbling our pretensions, gives a fresh significance to our warlike actions, which before were utterly senseless and chaotic. Now, at last, we can walk through our bombed and devastated cities without being humbled into their dust. Men are wont to say that their suffering in war is not without its purpose; and now, dimly, we begin to see what the purpose of that suffering is.

FIGURE : 8

