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HEALTH and DEVELOPMENT
in the MALTESE ISLANDS

Yana Mintoff

AUTHOR

UNIVERSITY ^(NAA) City of London Polytechnic

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HEALTH and DEVELOPMENT
in the MALTESE ISLANDS

a thesis presented by

Yana Mintoff

in partial fulfillment of the requirements for

the degree of

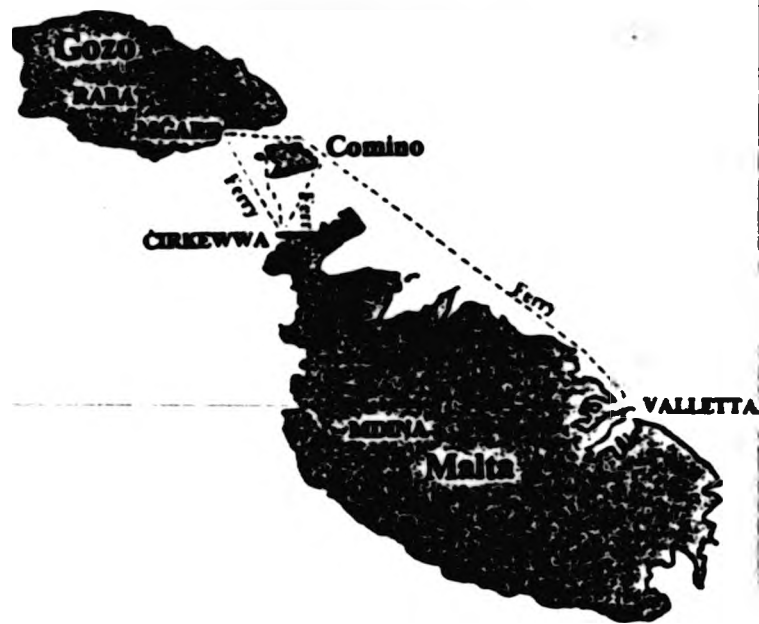
Doctor of Philosophy

of the CNAA

Department of Economics
City of London Polytechnic
London, Britain
University of Malta, Malta

July 1990

(1)



To Anna, Vanessa, Chris,
Cetta and Danny.

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Note: Malta incorporates the Maltese Islands unless otherwise specified.

Abstract

Yana Mintoff

Health and Development in the Maltese Islands

After analysing the major theoretical contributions to health and development, the author develops a dialectical materialist approach. Health, both physical and mental, is defined as a movement of energy that is simultaneously conserved and expanded. It is reality in movement. It is the vital ingredient of labour power and the capacity to create. Fundamental to humanity's health, both on a personal and public level, is productive activity. The relations and forces of production are the main determinants of public health. The relative power of the oppressed and the contemporary means of production affect both the type and spread of disease.

In the specific historic investigation of health and development in the Maltese Islands, the prevalence of contemporary diseases is appraised with reference to the balance of forces between nations, classes and the sexes. The particular significance of imperialism, merchant capital and religion is discussed. Examination of three major diseases, cholera, undulant fever and cancer, between 1837 and 1987, is the empirical basis of the thesis. The transition from high mortality rates to high morbidity rates in the past forty years reflects Malta's late and uneven development. Health policy to overcome disease is limited because health and disease are manifestations of the mode of production. Health in developing countries is placed in the dialectic of imperialism and development, chauvinism and development and, essentially, the dialectic of capitalism and development.

PREFACE

This thesis began for both negative and positive reasons. Firstly, while lecturing on the economics of health, I became increasingly dissatisfied with both the dominant neo-classical model and with its critique. Health viewed as a personal investment commodity or health viewed as a part of a whole cannot throw light on historic changes or guide us, faced with urgent contemporary challenges, to improve health and development for all. Secondly, the chance came to develop an alternative approach to the understanding of health and development, whilst simultaneously rediscovering my roots in the Maltese Islands.

After thousands of years of imperial rule, Malta at last gained its freedom. In 1974, without any blood being shed, it took its place as a democratic republic within the Commonwealth. By 1979 it was free of all military bases and obligations. The economic transformation of the 1970s, from dependence on Britain and British and NATO military services, to manufacturing, shipbuilding and tourist industries has enabled the islands to develop very fast. Gross domestic product at market prices rose annually by over eleven per cent from 1970 to 1981 compared to an annual average of just over five per cent from 1960 to 1970 and three per cent from 1950 to 1960.(a) Improvements in health and nutrition were such that by 1980, Malta's infant mortality rate was 15.5 per thousand compared to 13 per thousand in the United Kingdom. Malta's protein supply per capita, grams per day, was 117 compared to 133 in the United Kingdom. The momentum for this development was a radical labour

(a) Recent Demographic Developments in the Member States of the Council of Europe, Strasbourg (1989) pp60,116,130.

government policy of increased workers' participation and control and establishment of reciprocal agreements, especially within the Mediterranean region. The three main pillars of Malta's economy became manufacturing, tourism and shipyard work.

The 1980s recession, exacerbated by OPEC'S limitations on oil production and Europe's protectionism, saw Mediterranean shipyards starved of work. The fragility of Malta's manufacturing industry, largely owned by overseas parent companies, was also of concern. Tourism increased, but was dealt a blow by the United States military attack on nearby Libya in 1986. After sixteen years of Labour rule, the Nationalist, Christian Democrat, Party won the 1987 elections on a platform of increased private enterprise, pro-European, pro-American agreements and laissez-faire. A significant move was to choose not to draw up a development plan.

The transition made in Malta's socio-economic and political status after the second world war was reflected in and was aided by improvements in health. Infectious diseases, such as tuberculosis, ... 'fevers' and enteritis died out, while heart disease, cancer and diabetes became the main causes of death. This transition in the level of public health cannot be understood without reference to the changing forces and relations of production. The ^{aim of the} thesis is to explore the relationship between the level of public health, or conversely the main causes of death, and changes in the mode of production. It takes Malta's historical experiences as its basis. It finds the paradigm of dialectical materialism, or the interaction, contradiction and transcension of opposing interests, is the strongest approach to understanding encountered phenomena.

The material contribution of women to society, especially to production, reproduction and health care is analysed. The changing means of production and workers' economic power over them are outlined. The relationship between Malta and the Mediterranean region and the relationship between colonial Malta and the imperial state are examined.

The aim is to recognise health as an integral part of productive activity. In the process of collecting and studying data, I came to realise that the major killers today, like those of yesterday, cannot be overcome without changing socio-economic relations of class, gender and nation-state. The recent increase in cancer mortality and morbidity rates, especially of lung cancer in the 1960s and 1980s and breast cancer in the 1970s and 1980s, are clearly associated with industrialisation and with industrial pollution. It has become clearer and clearer that survival of the fittest in a free market economy involves much unnecessary disease and destruction. Most people agree, despite the growing inequalities, that we live in one world and to change it requires a common effort. To ensure that common effort, the oppressed must not only become more aware of the hazards they and their children face but they must also have more power to prevent destructive activities and to ensure sustainable development for all.

This thesis could not have been written without the unfailing interest, support and guidance of my supervisors, Dr Mike Cowen and Dr Len Stafford, at City of London Polytechnic. The library staff at the City Poly, at Malta University, at Malta National Library, at the Wellcome Institute of the History of Medicine and the British Public Records Office were exceptionally patient and helpful.

In Malta, the shipyard workers, the General Workers Union and the statisticians at the Health Department all opened their books to me and to them I am more than grateful. Finally, I would like to thank many friends, relatives and colleagues for their encouragement and interest and to thank the children for their laughter and love.

CHAPTER ONE

THEORIES REVISITED

Introduction

Health in capitalist society at first sight appears to be determined by individual consumption or personal habits. Health improvement is seen as an individual task - personal challenge or purchasable commodity. This has not always been how people viewed health and results from both the commodification and individualisation of society. The cure has become the necessary commodity when sick. Ill-health itself is seen as an individual malfunctioning. The prevalence of this view is part of the process of capitalist mystification and evasion of social responsibility. It has deep historic and class roots.

Linguistics add validity to the orthodox framework. The contemporary definition of illness as a highly individual response to a set of physiologic and psychological stimuli⁽¹⁾, reinforces the individual-passive conceptualisation of ill-health. The definition of disease, by contrast, is a professional construct. It is precise and is used as a means for doctors 'to decide on a course of treatment' and 'to compare the results of therapy'. So, between individual illness and professionally-defined disease the collective experience of and reaction to diswelfare is denied.

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Axiomatic to differentiating between contemporary views of health and development is the contrast between their chosen determinants of health and development. Having set the basis of analysis, theorists - whether mechanistic-neoclassical; holistic-structuralist; or dialectic-marxist - are then limited in their perceptions of the relation between the body, the person and society. For instance, the engineering or mechanistic model of health and medicine isolates individual biological determinants as central to a person's health. The body is separated from the person and becomes an object of consumption. The object inverted, or the subject, is then presumed the prime motivator. The conclusion reached is that the individual's choice in consumption and investment and, in particular, in medical attention given to her/his body is central to health improvement. This view of health is paralleled in development analysis. The neo-classical school isolates market forces as central to economic development and within these the individual's supply and demand are the prime motivators. The individual firm, acting rationally, minimises its costs and maximises its profits and will continually expand and update its output to ensure individual and market equilibrium. This equilibrium is reached when supply meets consumer demand at a certain equalising price. Consumer demand is thus the be-all and end-all. So, in neo-classical rationality axioms which are the prevailing ideology in capitalist systems, the consumer is mind and body, the person is disembodied and the dissociated body, dissected into feelings, movements, organs and cells, becomes an object of consumption. Ill-health occurs when the wrong personal choices are taken. Thus both the mechanistic model of health and the neo-classical school of economics reach the common conclusion that ill-health arises from the maldistribution of personal resources.

In contrast, the holistic model of health and medicine argues that determinants of health are systemic. A person is circumscribed by the system and the state's choice whether it be local, national or international, is central to health improvement. The structural school of economics argues that development is structurally determined by ownership patterns and dominant institutions. Market forces are not dominant and there is no single, commanding rationality of individual self-interest but reasons are multiple, shifting according to different identities within the same person. The structuralist and holistic views dovetail into the same perception of the relation between body, person and society and result in similar policy prescriptions, involving interventions at different levels of the system.

In the forthcoming pages (Part I), I submit a review of the conventional, mechanistic view of health: its definition, its development and its class base. This is followed by a similar treatment of the holistic view and the negative view. In the same vein, the main determinants and contrasts in contemporary theories of economic development are then analysed.

The shortcomings of these approaches lead to my development of a dialectical materialist view of health and development where I suggest that the main determinant of health is the mode of production : a relation between classes which reproduces the domination of one class over another and which is appropriate to a given stage in the development of the material forces of production(2). In the capitalist mode of production - which is characterised by commodity production, wage labour and the accumulation of capital - health is part of labour power. In Marx's schema, the value of labour power, or the wage,

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is the labour required to reproduce a day's labour power or the value of the commodities needed for the subsistence of the worker and his family. This value or wage rate is not only determined by physiological needs but also by historical and moral elements in the specific history of class relations. The level of personal health is therefore generally determined by a person's capacity to sell their labour power and the specific historical balance of class forces and specific stage of development of forces of production in which s/he is situated. Capacity is a concept that I will discuss in detail. It is characterised by both freedom and ability and dependent on the relative power of one's nation, class and sex. This perspective necessarily entails a detailed historic analysis of Malta's health and development, which I attempt in the following chapters. But to conclude this chapter on theory there is a brief review of contemporary thought concerning state and welfare policy, population, patriarchy and relative smallness, with particular reference to the Maltese Islands.

The history of Malta cannot be separated from that of the Mediterranean. I have, therefore, given a political-economic regional background before going into demographic and economic detail concerning the Maltese Islands. My approach does not presume the West to be the main influence on the lives of the people. It does not presume the passive acceptance by victims of national, class and gender oppression but gives importance to the reality of resistance in development. It isolates some of the main known illnesses of each period, treating them as socio-economic products. In particular, malaria, the plague, cholera, undulant fever and cancer, are seen to be manifestations of the mode

of production. Health care policy is, therefore, limited, if it does not address the contradictions in the forces and relations of production.

PART ONE

THEORIES OF HEALTH AND DEVELOPMENT

The engineering or mechanistic approach:

The development of this approach coincided with the rise of industrial capitalism - the increasing application of new machinery and the extension of the capitalist mode of production based on wage-labour. It is a view that was nourished in the seventeenth century, with the rise of physics and biology, by the analysis of living things as sets of minute parts or mechanical bits. The resulting definition of health is the absence of incapacitating and externally verifiable pathology. Or in other words, if one is functioning as expected, running to tune like an efficient engine, then one is healthy: but if one has an obvious bodily malfunction, one is ill or in-valid.(3)

Among the 'enlightened' was Giovanni Alfonso Borelli, writing in seventeenth century Italy, who made a clear exposition of mechanist thought as applied to medicine. He described disease as a physico-chemical disorder in opposition to the long prevalent belief that it is a psychic disorder of the soul. Borelli was one part of the wider movement of science against religion begun by Galileo (4) and later advanced by philosophers such as Hobbes and Descartes. It was in this long dual between church hegemony and the spread of the

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scientific industrial revolution that the mind and the body became strictly separated. The new scientists agreed that the church may be left to look after the soul but the body and its labour power was to be analysed, commodified and subject to increasing ruling class control.

Descartes, for example, argued not only that the human body must be assumed to work in the same way as the machine but also that the mind and body of a given individual could be separated into two substances - one 'corporal' or material and the other 'incorporal' or immaterial.⁽⁵⁾ Resolution was found in contradictory unity. Newton, while revolutionising concepts of how bodies move in time and space still believed in absolute time and absolute rest because these accorded with his faith in an absolute God.

Thus there was a polarisation between the thesis - that disorders are spiritual, psychic or cosmic; and the antithesis - that disorders are simply material and individual. As Doyal and Pennel note, 'medicine came to be viewed as concerned only with the ^{latter} and this mechanistic model remains the basis for medical thought today.' It is only recently that scientists have begun searching for a synthesis in the realisation that diseases result from individuals' reactions to the environment and are often psychosomatic. In the nineteenth century, the French chemist, Louis Pasteur, who advanced the control of bacteria, recognised that the medical science of germ theory was limited when he stated, 'The germ is nothing: the terrain is everything'. However, scientific investment increasingly concentrated on the germ, the cell and the virus to the neglect of the overall environment and working conditions. The victory of the mechanistic world view in the latter half of the nineteenth century led to

biological reductionism from the interdependence of organs to the central focus - the individual cell. It reduced the sick person to millions of cells and in their malfunctioning isolated the origin of diseases. Mechanistic medicine has had genuine successes both in curing and preventing disease through, for instance, the introduction of vaccinations, anaesthesia and antibiotics. This has contributed to the persistence of the clinical paradigm. But, with the limited effectiveness of curative medicine on the main killers today and the growing contradictions of capitalism, criticisms of western medical science have increased, contributing to the emergence of the holistic and dialectic approaches and to the practise of alternative medicine.

Just as the new thinking today has a material basis that preceded it, so too the engineering or conventional approach was preceded by the emergence of the capitalist mode of production. With the introduction of the steam engine and machines for spinning and weaving cotton, the industrial working class grew. In the interests of capital accumulation, man's ability and health was measured with reference to his capacity to operate the new machinery. It was then a very short step indeed to the comparison of man's body to the machine. Class interest was and still is of vital importance to this approach because both in medical care and in medical products, huge profits are to be made. Technological advances, specialisation, centralisation and increasing wealth in the hands of skilled and well-equipped doctors all contributed to the strength of the clinical paradigm.

In brief, some factors that have contributed to the lasting strength of the engineering approach include the spread of the capitalist mode of production

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and the application of more and more refined medical equipment and growing medical expertise in 'delicate penetration of the individual' both in dissection and surgery.(6) The mode of health care - the forces and relations of health production - changed, becoming more and more capitalised and centralised, and quantitative tended to replace qualitative methods of analysis. In the nineteenth century, the rise of the germ theory of disease also contributed to the dominance of the engineering approach because in identifying specific external causal agents of diseases, the medical profession tended to look for specific cures rather than a general resistance to the infection. The belief became prevalent that people can be made better by means of a technological fix.

Religious adherence to the belief that the body and the soul (or mind) are separate aided this process of evasion of the whole state of well being . In particular, the church's focus on the individual and his venality converged with the ruling class view that individual and not social factors determined death and disease.

To summarise: the engineering approach adheres to the view that health is determined biologically and that disease is a discrete entity separate both from the character and the biography of its host and from the socio-economic conditions that prevail; that medical science is value free, separate from the class structure and vested interests inherent in our society; and health care is an individual consumption *good*, while the individual body is an object of investment; and, therefore, where ill health persists the main reason lies in resource mis-allocation.(7) It is not surprising that neo-classical economists

also reached this conclusion and concentrate their analysis on individual and social distribution of human capital investments and cost-benefit analysis. But more of this later.

The holistic approach:

In opposition to this restricted view of health, a holistic approach has gained increasing popularity. It is rooted in the late nineteenth century Fabian socialists' world view of the social machine, the interdependence between individuals and institutions, or in other words the body politic as opposed to the separate organism of the body or the cell. The World Health Office definition is: 'Health is a state of complete physical and mental well being and not merely the absence of disease or infirmity'.(8) Health here is all-embracing and returns to its anglo-saxon root - 'hale' meaning whole or sound. Likewise, the Maltese-Arabic word for health is 'sahha' and comes from the verb isehh meaning to succeed or stabilise; and is activated in the verb isahhah meaning to make sound or invigorate. The holistic view of health has deep historic roots. At the very dawn of history, Greco-Roman physicians viewed health as the expression of harmony or equilibrium between the environment, ways of life and the various components of man's nature. The Hippocratic model of health thus went far beyond the individual internal physique.

Today, this approach is variously called holistic, systemic(9), radical or ecologist. Among its leading protagonists are Dubos, Mckeown and the McKinlays. Dubos(10) epitomises the holistic view thus: 'The interdependence of

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living forms is a highly integrated web only as strong as the weakest of its constituent threads'. Mutual adaptation is a healthy accommodation to this interdependence and symbiosis is common. This is manifested in 'biological associations in which each organism contributes to the survival and welfare of its partner.'

In discussing 'the whole man', Dubos asserts:

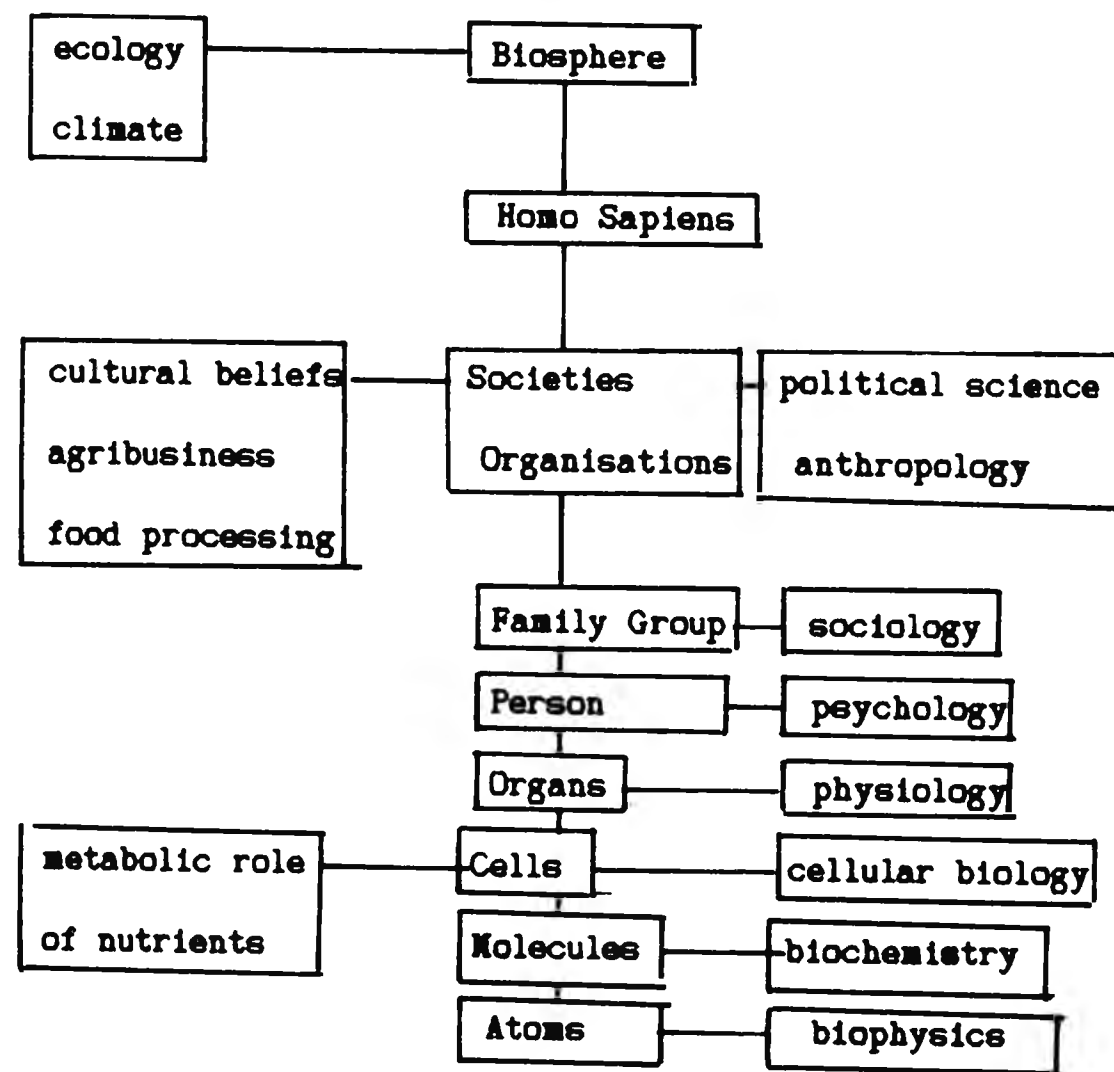
All manifestations of human disease are the consequence of the interplay between body, mind and environment... All problems of health and disease are the expressions of the effects of the environment on the genetic apparatus... Today, as in Hippocrates time, good medical care implies attention not only to the body but to the whole person and to his environment.(11)

It follows then that health is 'The ability of a system to respond adaptively to a wide variety of environmental challenges'. While disease is: 'a failure to respond adaptively to environmental challenges resulting in a disruption to the overall equilibrium of the system.' So diseases are not discrete entities localised in one organ or tissue but patterns of disruption that are multiply caused. 'Perturbations in the environment may take the form of excessive stress (germs, toxins) or a lack of necessary stimuli (food, love).' Within this paradigm, it follows that changes in major diseases are then ascribed to environmental changes, for instance the growing pollution of air and water and toxic aspects of industrial work environments. (12)

Thus it is argued that a broader picture of health and disease is necessary.'intervention at multiple levels must be systematically integrated as part of total patient care'. In the Hierarchy of Living Systems(13), as outlined below, there is interaction between all levels, from atoms to the biosphere. For instance what we eat is influenced by the agribusiness and by

advertisements and indeed by every factor listed in the left column. In *Beyond Reductionism*, Arthur Koestler, creates the word 'holon' to characterise this broad system of relations. With this concept he attempts to bridge the gap between atomism and holism : 'holos' meaning whole and 'on' meaning a particle. His combination of dualism in one is reminiscent of the dialectic. For instance, when viewing a person as a holon s/he is seen to have both a tendency to self-assertion and to integration. 'under normal conditions, the two opposites balance, but under conditions of stress, the equilibrium is upset'. The person falls ill. The importance of psychology and psychiatry and the present popularity of therapists and counsellors is resultant from this model and highlighted on the righthand side of the following diagram.

Figure 1 A Hierarchy of Living Systems



Source: D.S. Sobel (1979)

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This schematic summary of the systemic approach highlights its interdisciplinary nature. With this 'whole' picture, the systemics argue for assessment of the relative costs and benefits of various strategies. For instance, 'it could be proven that to combat lung cancer it is more efficacious in the long run to buy up tobacco land and grow soya beans than to administer chemotherapy'.(13) Production is addressed but its centrality is not recognised. The resultant methodology is the measuring of social costs and benefits over the long term. But the question is not asked why, in a capitalist system or in the daily reality that we live or die, long term social costs and benefits are not on the agenda. Thus little light is thrown on short- and long- term conflicts between health and profit.

The holistic approach is critical of the clinical paradigm in particular in its dissociation of the body from the person and the person from the environment. For instance, Dubos notes that scientists are objective in their reporting but in the selection of the objects that they study they are 'profoundly influenced by the social environment and by the spirit of the age'.(14) Dubos goes on to elaborate his opposition to contemporary scientific search for specific causation when etiology is multifactorial and the condition of the patient is vital. McKeown goes further in his criticism of modern medicine and the mechanistic view of health. He argues that the advance in health in the past 300 years is due not to medical intervention in the working of the man-machine but to improvements in the conditions under which it operates. The change in people's living standards, especially their improved nutrition, is fundamental. This resulted, McKeown argues, not from medical intervention but from higher agricultural productivities and new sources of food supply due to

the rise of British imperialism. In an impressive analysis of the decline of deaths from infectious diseases in England and Wales, McKeown shows that this was not due to a change in the character of the diseases and owed little to reduced exposure to micro-organisms or to increased immunisation therapy. Rather, the provision of cheap and better quality food, sanitary control and the regulation of births are the three central factors determining health improvements.

The holistic view of health thus revolves around three ensembles : adequate nutrition, protection from a wide range of environmental hazards and personal behaviour. In the economic and political field, this first and basic ensemble became part of the 'basic needs approach' to development in the Third World. National income figures have been supplemented by a whole gamut of social indicators such as infant mortality rates, the incidence of various diseases, and dietary statistics. Growing recognition of the importance of the second ensemble -that of environmental hazards- has contributed to the growth of the green movement and the philosophy of sustainable development (15). But it is the third ensemble - that of personal behaviour - which has had most propoganda value in recent times. It has become part of the rationale of sterilisation programmes in the Third World and the rundown of health services in Highly Developed Countries. It has merged with the mechanistic paradigm to emphasise the individual origin of disease and personal responsibility for health care.

The holistic view, by its very definition, accommodates many brands of thought and action. But for the purpose of juxtaposition with the conventional-

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mechanistic approach, I will now summarise the radical position of the holistic view. This considers the main determinant of health is not biological but socio-economic; medical science is not value free but biased to preserve the status quo and advance capital accumulation; that health care is monopolised by a medical elite in the interests of the ruling class. Radicals, many of whom were influenced by the strength of the 1970's movement for control by woman of her own body, argue that real health care would necessitate science coming under social collective control and a transformation of capitalist society. Medicine is of secondary and even marginal importance to health. It is sometimes good and sometimes bad i.e. it has a dual and contradictory nature. This is reflected in the origin of the word drug or pharmakon (Greek) which does not distinguish between the power to cure or the power to kill. Far more important in determining health and life expectancy are income, thus adequate nutrition, and education, thus informed personal behaviour.(16)

The negative approach:

A third approach to the study of health may be identified, though it is not as powerful as the engineering or the holistic approach and contains strands of both. I have named it the negative approach because it has developed from a systematic critique of the nature and practice of modern medicine and the 'medicalisation of life'. Its main protagonist was and remains Ivan Illich, who centres his analysis around three categories of iatrogenesis - damage caused by the medical system. First, he identifies 'clinical iatrogenesis' - the physical damage caused by doctors in their intervention; 'social iatrogenesis' - the addiction of many people to medical care as a solution to all their

problems; 'structural iatrogenesis' - the destruction of a patient's autonomy, along with the removal of her or his responsibility for individual health care. In sum, modern medicine has led to physical damage, diagnostic imperialism and the destruction of people's autonomy.

Illich defines health as, 'the ability to adapt to changing environments: the inner resources to grow up, age, heal when damaged, to suffer and to peacefully accept death'. Thus health is seen as a personal task : a subjective responsibility:

Health designates a process by which each person is responsible, but only in part responsible to others....The level of public health corresponds to the degree to which the means and responsibility for coping with illness are distributed among the total population.(17)

Again, this tends to the engineering approach in focusing on resource allocation as the problem and solution. But it also sees as central the deprofessionalisation; the debureaucratisation and the decentralisation of health care.(18) In industrialised society, Illich assumes that all institutions must be organised on an authoritarian, bureaucratic and hierarchical basis. 'Hence he sees the only solution as lying in the de-industrialisation of society. He sees all bureaucracies as manipulating individuals for their own advantage and, therefore, demands their removal'. (19) 'The main source of pain, of disability and of death, is now engineered harassment' of which modern medicine is a prime example, argues Illich in Chapter 3, *The Killing of Pain*. The main cause of the present pattern of diseases is, then, medical technology.(20)

Engineered harassment is part of industrialised society and to regain one's autonomy, one must choose to change one's lifestyle. In the negative paradigm,

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culture is vital. The culture of acceptance and addiction is a major factor leading to a high level of ill-health. The culture of personal responsibility and autonomy is necessary to raise the level of health. In this analysis, the person is given promethean powers to secure and advance her/his health in a politico-economic vacuum.

The dialectic approach:

In contrast to the previous approaches, I will now attempt to develop a dialectical view of health. This will be enriched by the subsequent review of development theory and discourse on dialectical materialism.

Let us start with the definition. Health is fulfilment. It gives life, it is the basis of potential and it is the vital ingredient of labour power or the capacity to create. It is therefore a human right. Health is not a 'thing' at rest but a movement: the movement of energy that is simultaneously conserved and expanded. It is reality in movement.

Health has a twofold aspect : physical and mental. A broken leg or a broken heart, each can be equally incapacitating. That physical and mental health are often interlinked is proven, taking two distinct examples, by the success of placebos and the physical repercussions of mental stress.

Health can be considered on the individual and on the public level. Fundamental to humanity's health, both on a personal and social level, is productive activity. Productive activity mediates between humans and humans; and between

humans and nature. It brings us into unity but also into struggles with nature, while developing productive forces and our own and society's potential.(21)

The determinants of health

It follows that the main determinant of public health is the mode of production.(22) This has a twofold aspect : the relations of production and the forces of production. The relations of production are the relations of economic power determining the degree of exploitation. In the mines, in the docks, in the offices and in the kitchens of this world, people work under different conditions, determined not just by the available means of production but also by their relative power. In a capitalist system, workers have economic power over their own labour to a greater degree than did serfs and to which slaves were denied.(23) But capitalists own the means of production - the fixed and working capital- that workers use to produce. Thus workers, as opposed to serfs, have no economic power over the means of production they use. In every society it is this economic structure or the way in which things are produced that primarily determines how well the mass of people are. 'Through material production humanity comes to be what it is', writes C.J. Arthur(24). Whilst not every illness can be directly related to these conditions, the overall pattern of health and illness is determined by and becomes an integral part of the mode of production.

In a class society, in the specific Marxist problematic, labour power refers to the capacity of a member of the producing class to perform surplus labour that

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the ruling class appropriates. Now, labour power includes people's health and knowledge. In the past, health has been overlooked perhaps because according to Cohen (25), *'the part most capable of development is knowledge'*. However, no amount of knowledge is functional unless one is healthy enough to apply it. Health must therefore be viewed as a vital part of the productive forces. These include on the one hand labour power 'v', and on the other hand physical means of production such as tools, raw materials and machinery 'c'. Health is obviously affected by the degree of development of these tools and of knowledge and the development of the productive forces presupposes a healthy workforce.

Let us consider, using Marx's definitions, how exploitation deteriorates the health of the many while it increases the profits of the few. Labour power has a twofold character in a class society. It is made up of surplus labour, the value of which is pocketed by the dominant group, and necessary labour, the value of which is returned to the worker to maintain himself and his family. Now surplus value can be raised in two ways. Either by making workers work longer, raising absolute surplus value, or by making workers produce more in the same time, raising relative surplus value. Marxists generally posit that the increase of absolute surplus value has a limit set by physical exhaustion whereas the increase of relative surplus value, or productivity, has not. This however is questionable in the light of increasing stress-related deaths and diseases, setting it seems a limit on productivity increases.

Assuming a primary motive of the system is the accumulation of capital, or maximisation of profit, capitalists will seek cheap labour (low v), and continually strive to increase surpluses (high s).

The rate of surplus value is s/v (the relation between surplus and necessary labour or the rate of exploitation)

The rate of profit is $s/c+v$ (the relation between the surplus and the total amount of capital invested in both means of production, like machinery, and in the purchase of labour power.)

Dividing top and bottom by v : $\frac{s/v}{c/v+1}$

We can see that the rate of profit will have a tendency to fall as the organic composition of capital c/v rises, in other words as firms become more capital intensive. Of crucial importance to the capitalist then is the raising of the rate of surplus value s/v , very often by attempts to raise productivity and to cut costs, even if these are health-preserving costs.

In Vincente Navarro's words (25), 'The fight for the realisation of health is very much at the centre of the conflict between labour and capital, which takes place at the workplace and heightens in moments of crisis'. Exploitation deteriorates the health of the many while it increases the profits of the few. Conflicts between the accumulation of capital and the improvement of health recur within the relations of production, while the development of forces of production bring both negative and positive effects to health. For instance, the manufacture of the car and the growth of the chemical industry have raised productivity, workers' ability to sell their labour power and, therefore, workers' incomes, but they have also increased health hazards in production and consumption. Whether or not conflicts deepen between the imperatives of capital accumulation and the improvement or preservation of workers' health primarily rests upon the organisation and consciousness of workers and the

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size and suitability of the reserve army of labour. Where and when workers are united and well-informed and where and when the number of unemployed is small and inappropriate, then there tends to be a coincidence of interests between capital and labour over health. For health is one of the main determinants of labour productivity and, therefore, of the rate of profit.

The primacy of production is vital. The economic reality is the basis on which health fails or flourishes. Peoples actions and aims are limited by their material existence in a way that Illich to cite just one of many, refuses to acknowledge. In the preface to *A Contribution to the Critique of Political Economy*, Marx summarises his theoretical position thus:

In the social production of their existence men inevitably enter into definite relations which are independent of their will, namely relations of production appropriate to a given stage in the development of their material forces of production. The totality of these relations of production constitutes the economic structure of society, the real *basis*, on which arises a legal and political superstructure and to which correspond definite forms of social consciousness. The mode of production of material life conditions the general process of social, political and intellectual life. It is not the consciousness of men that determines their existence, but their social existence that determines their consciousness. (26)

In these sentences Marx not only emphasises that the relations of production, or distribution of economic power, correspond to a certain stage in the development of productive forces and are the foundation of man's existence, his life and well-being: or in other words his health. He also argues that it is not the individual but the social relations within which an individual exists that shape our lives.

Health is therefore determined, above all, by 'the relations of production appropriate to a given stage in the development of their material forces of production'. People's socio-economic existence defines their abilities. But

class and productive forces co-exist with sex and reproductive forces. Both class and sex oppression limit health and development, both productive and reproductive conditions are the basis of life. Women's socio-economic existence delineates their abilities and, being the most important sex in the reproduction and maintenance of labour power, their condition is a central and continuing determinant of health.

Our first, too often overlooked, relationship is with our mother. She not only gives birth to us, thus in the long term replenishing the labour force, but also, being the one we have most contact with in our early years, she provides the basis of our mental and physical capabilities, our capacity for labour power. Throughout the ages, common to all economic systems, women and mothers have cared for the health and well being of their families and friends. They have learnt the arts of nutrition, hygiene and healing and passed on their acquired knowledge to their children.(27) Pivotal to the first agricultural revolution, some 7,000 years ago, women later moved from agricultural production to agro-industrial production and to this day predominate in clothing and food manufacture. Both their domestic and paid labour is thus predominantly centred on health care - on enhancing people's capabilities. This essential thread weaves through the following chapters : our mothers health and capabilities have been the pediment to our health.

But health, being part of labour power, being the very source of power is therefore the quality that is most sought and exploited, in ways that are specific to particular economic systems. Mothers can only do so much. Their capabilities are circumscribed by their socio-economic existence, by the degree

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of class, national and sex oppression. Capability here refers to both the ability and freedom to do something. This dualism becomes more contradictory the more people are oppressed and exploited and the more able and productive they are.

Male dominance has limited women's ability and freedom. Sen gives the example of a veiled Arab woman not being free to socialise and develop her abilities. On the other hand a woman may be free to take her child to the clinic but not be able to get there. Her child's health depends not only on whether the mother is free to look after him but also on whether she is able. Of relevance here is the question raised by Cohen concerning force and freedom. He labours the point that 'one is free to do what one is forced to do' for if one were not free to do it one could not be forced to do it. Cohen's contrast is between the Rightist and Leftist view of John taking a hazardous job. Rightists contend that John is free to take or not to take the job, while Leftists contend that John is forced into hazardous situations. Analogously, consider the contrast between the male chauvinist and feminist view of Anne marrying a violent man. To counter the argument that Anne was forced to marry X, the male chauvinist must show that Anne had an acceptable and reasonable alternative. This cannot be done definitively. So the question, as Cohen concluded, whether workers are forced to take hazardous jobs or whether women are forced into subordinate positions remain indeterminate in a general sense. But whether free or forced, without ability to choose another path the question becomes semantic. And ability presupposes power. Therefore, of crucial importance is not freedom of choice but relative power as this sets the parameters of the debate. Personal assets, such as saleable labour power, and private property, such as a car, can

greatly increase one's freedom and one's abilities thus increasing one's capabilities, for instance, to chose a safer job, to chose a gentler husband or to get one's child to the clinic. Many women are denied this relative power and therefore find themselves in adverse circumstances of restricted freedom and limited abilities. Thus, throughout history, masses of women have been denied the basic capabilities of survival, sustenance, procreation and child-care because of their collective subordination in class society. This has been a central limiting factor to health improvements.

Health and the role of women in pre-capitalist societies.

As we developed from primitive communism- from hunting and gathering- to agricultural and feudal societies people's lives and their health came under varying degrees of control and exploitation by landowners, priests and nobles. In pre-capitalist societies, the meagreness of production and therefore consumption: the frugality and harshness of life: led to low life expectancy, low vitality and therefore high vulnerability. Life was a tight small circle often punctured by debilitating and fatal endemic diseases.(28)

One of the main roles of women in pre-capitalist class society, as indeed it remains in contemporary society, was to replace and maintain the indispensable force that kept society going - labour power. They also participated to a greater or lesser extent in surplus, as opposed to necessary production. The conditions under which most women gave birth, raised families and participated in production were predominantly harsh. Health improvements were consequently limited.

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The epidemics of malaria and plague that raged through the Maltese Islands were only the obvious tip of the iceberg. The local people, captive as they were to foreign interests through successive imperial occupations and restricted in space and opportunities, had to use all their wits to sustain their families. The slaves fared badly, having no economic power over their labour or the means of production; the serfs fared slightly better on both counts, having more control over their bodies and productive activities. The recurring droughts and the meagreness of agricultural surpluses were continual curbs on their development, as Braudel has shown in brilliant detail. Frugality in consumption and flexibility in production were therefore the main characteristics of the Maltese way of life for thousands of years. The merchants, the landowners and the professional elite, including the clergy, variously shared in the spoils of exploitation. They were, however, despite their privileged positions inescapably vulnerable to dirt, disease and early deaths.

Transitions

The question of transitions arises. When, for instance did the local merchant move into the production process : buying up and putting out work from and to household industries. Were there recurring periods when merchant capital aided the growth of the local cotton industry and was this internal development curtailed by Malta's vulnerability to changing trade routes and to imperial and class exploitation, which brought in their wake, dispossession, ruin and ill-health? When did the independent craftsman turn into a dependent handicraft worker, thus becoming alienated from his work? A historic study of productive activity : of the changing forces and relations of production in the Maltese Islands has yet to be written. What becomes clearer and clearer in the

following chapters is that its unique past and specific mixtures of modes of production often foil attempts to strictly categorise transitions from say slavery to serfdom to proletarianisation. The contemporary debate on development and underdevelopment, in particular in relation to colonial and neo-colonial economies, provide useful tools for such an analysis. (29)

Health in capitalist society

Over the past 150 years, the major contradictions of capitalist production giving rise to contemporary diseases and dis-harmony have been investigated historically and factually. The growth of historical materialist epidemiology (HME) has been vital to this developing perspective. It maintains that the physics and chemistry of a disease may recur again and again but the causes of these phenomena and the reason for their spread are socially rooted and historical in nature. The necessary social conditions for the pandemic diseases of early capitalism were malnourishment and overcrowded, insanitary housing conditions. Tuberculosis and cholera were social products of early capital accumulation and wage labour. People needed to sell their labour power and had to concentrate in port/urban areas to do so. These areas were the epicentres of disease. In *The Social Origins of Illness*, Howard Waitzkin (30) summarises how Engels, Virchow and Allende contributed to Marxist thinking in this field. Of interest to us here is that Salvadore Allende, like Virchow and Engels before him, indicted capitalist exploitation, manifested in low wages, malnutrition and poor housing, as the major causal factors in illness. But he also placed Chilean reality in the context of international capitalism and realised that its undevelopment and its people's poor health ultimately resulted from imperialist control of production, pricing and distribution. Allende introduced

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the dialectic of imperialism and underdevelopment as a basic contradiction affecting 'medico-social' reality in the Third World.

In later capitalist society, advances in the forces of production and massive accumulation of profits have drawn more and more workers into this specific class relation. Labour has become an appendage to the machine, it has been transformed from concrete to abstract power - alienated through commodity exchange to the owner of the means of production.(31) It is less dependent on diurnal and seasonal changes and more dependent on the competitive and short-sighted decisions of a few capitalists. This has positive and negative effects on health. The increased demand for efficient labour for both capitalist production and expansion together with the united demands of workers themselves, have led to higher standards of living in advanced capitalist countries than were ever experienced before. Nature has been subjugated. Levels of nutrition and hygiene have been revolutionised.

However, the conflicts between the interests of capital and labour and between profit and health, continually recur and have deepened. Inequalities have increased. While the rich get richer, the people of less developed countries die of malnutrition and disease in greater numbers than ever before and the workers in developed countries are exposed to more and more industrial and environmental health hazards.(32)

The imperatives of capital accumulation necessitate for most workers a labour-process based on monotonous repetitions, high levels of hazards from machine noise; toxic chemicals ; dust and carcinogens; and intense competition

and consequent stress in both buying and selling markets. The chronic diseases of today are a 'unique social product of the new forces of production and the social relations of production under capitalism in its late stage'.(33) Eyer posits that heart disease and cancer are 'the end result of the progressive loss of control over work experienced by the work force'. In *Changes Characteristic of the Mode of Production in the Twentieth Century*, Eyer notes the 'marked changes in the forces of production in the period 1880-1910', in particular the development of the internal combustion engine, electricity, the beginnings of modern communication, the exploitation of oil and the widespread use of metals and chemicals. The process of production became increasingly fast and alienating . The development of scientific management (Taylorism) led to an even greater loss of control over the process of production by the worker.

Increased productivity per worker means increased rates of exploitation in spite of higher wages...The outcome is a state of chronic arousal and alienation which leads biologically to elevations of certain circulating hormones e.g. epinephrine elevations of blood cholesterol, increased clotting tendency in the blood and hypertension, all of which contribute to the development of coronary heart disease. (33)

The physical effects of the production process extend beyond the workplace itself. Environmentalists have begun exposing some of the health hazards or negative externalities of commodity production in today's capitalist system.

For instance, Doyal and Pennel write:

Damage to the surrounding environment and pollution of various kinds are often by-products of industrialised production. Finally, commodity production may damage health through the nature of the commodities themselves. (34)

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Summary

The view that health is a fundamental part of labour power and determined in the last analysis by the mode of production is upheld in this thesis. It might seem that health is won or lost in the conflicts between nations, races or religious sects but fundamental to all these conflicts is economic exploitation. A major contradiction in class society lies in the fact that raising labour productivity and extracting more surplus value from workers entails deterioration of workers' health. But work is only as efficient as physical and mental health permits. Pivotal to the improvement of worker's health is their relative power as a class and women's relative power as a sex.

In this framework, the person and the body are a dualistic whole. Personal identities are multiples of a person and the body can also have different meanings for the same person. Choices about life and labour are circumscribed by ability: and will is determined by strength - both individual and in solidarity. Thus health means different things to different people, it means different things to the same person and the different conditions of one's own body directly affects one's perception of health but finally the level of public health is dependent on the forces and relations of production. This realisation of health's determinants means nothing if a person is not capable - able and free - to overcome contradictions and thus have the power to avoid hazards and improve health. In this paradigm, the health of the masses is not determined by market forces, nor by improvements in distribution and structural reforms, nor by personal culture, though all these factors may contribute to improvements; rather, health is determined by the relative power of the oppressed.

But here we must pause to review contemporary theories of development for without this background we cannot deepen our understanding of the relationship between health and development.

THEORIES OF DEVELOPMENT

What is development economics?

The study of development economics, like health economics, is a post second world war phenomena. Whilst health economics is of the same genre, it has not moved from the short-run neoclassical framework as far as has development economics. To development economics there has been a richer contribution. But it is a sign of continuing under development and the underdevelopment of development economics that health economics has hardly been questioned, revised or replaced.

Development economics is based on the assumption that less developed countries provide sufficient homogeneity in aspects of their development, underdevelopment or undevelopment, for comparisons and generalisations to be made. It reflects to some extent the upsurge in nationalism and increased unity of 'Third World ' countries. In an attempt to clarify the difference between development economics and mainstream economics, I.M.D. Little notes that: 'the work of development economists has concentrated on the medium and long run to an extent that is not true of the work of economists focusing on developed countries.'(35)

What is economic development?

In contrast to the simple quantitative objective of faster growth in production or exports per head, economic development is defined in a multidimensional way. In Kindleberger's overview, it is seen to include:

- a) improvements in material welfare, especially for persons with the lowest incomes;
- b) the eradication of mass poverty with its correlates of illiteracy, disease and death;
- c) changes in the composition of inputs and outputs that generally include shifts in the underlying structure of production away from agricultural toward industrial activities;
- d) full employment;
- e) participation in decision making. (36)

It is obviously difficult to measure such a broadly defined concept of development. Failure to do so means that , levels and rates of growth of "real" per capita GNP are normally used to measure the overall well-being of a population. Some structuralists would emphasis the importance of point c) above and measure development by the decline in agriculture's share of production and employment. Recently, these measures have been supplemented by social indicators such as the infant mortality rate and the percentage of the population that is literate.

The observation that there can be growth without development: a rise in exports per head without gains in real income for the mass of people; has led many development economists to emphasise the importance of structural and social changes. Development, asserts Thirlwell(37), is 'life-sustenance, self-esteem and freedom'. It is the provision of basic needs, increase in self-respect and independence and freedom from the evils of want, ignorance and

squalor. While Professor Sen argues that, 'The process of economic development can be seen as a process of expanding the capabilities of people'. (38)

Theories and analyses of development are as diffuse as these definitions suggest. However, after addressing the classical view of development, it will be useful to take Little's essential antithesis between neoclassical and structural development economics so as to review their respective contributions to the understanding of health and development. Thirdly, I will review some recent radical or Marxist contributions, before developing upon the theme of the dialectics of health and development.

Rational Action and Laissez-Faire

The essence of the classical view of the economy and its development is based on two assumptions- the second assumption being partly deduced from the first- : that human nature is inherently rational and that people will practice rational economic behaviour in 'regard to their own interest'. (Adam Smith 1812) (39). Moved solely by the mere incentive of their private self-interest, unshackled individuals will create a system of perfect competition which will benefit the whole community. Competition does not imply conflict but harmonious adjustment - an invisible and rational hand.

All systems either of preference or of restraint, therefore, being thus completely taken away, the obvious and simple system of natural liberty establishes itself of its own accord. Every man as long as he does not violate the laws of justice is free to pursue his own interest his own way, and to bring both his industry and capital into competition with those of any other man, or order of men. (40)

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In a free market economy, men are best able to quantify the ends and the means of their actions and so maximise their private wealth while correlatively benefiting the whole community.

Every individual necessarily labours to render the annual revenue of the society as great as he can... He is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. (41).

So the general principle of rational action leads to perfect and harmonious competition as long as neither the sovereign nor the state interfere. Laissez-faire or the doctrine of liberalism ensures health and development of each and all.

A few decades after the publication of *The Wealth of Nations* and shortly after the 1789 French Revolution, Reverend Thomas Robert Malthus, wrote an *Essay on the Principle of Population* (42) in which he also argued for the free play of checks and balances to population or laissez faire. His was not a theory of economic development but one of population and income distribution. It is of relevance here because it drew from the classical view of market equilibrium to put forward a theory of long term population equilibrium, if natural forces were left untampered. But while Smith's theory is of progress with nature beneficent, Malthus' is of regress with nature malevolent, requiring a perpetual struggle of the human population against nature. Malthus, fearful of the example of the French uprising, predicted that, because of rapid population increase, social disorder and political turmoil were imminent. There is a natural tendency, he posited, for the population to increase: it is a fundamental "scientific" principle that human numbers expand geometrically while food supplies increase only arithmetically. Two important assumptions

are made here : first that the motive force of history lies in fundamental biological facts; second that agricultural productivity cannot rise. On these axiomatic assumptions, Malthus developed the theory that became so dear to colonial administrators.

As the indigent multiply, so there are diminishing returns in agriculture, due to declining fertility of the soil and the occupation of increasingly marginal land. Demand will outrun supply. Food prices will rise, wages will fall and rents will rise. A crisis of over-population exists with overcrowding of holdings and ever greater subdivision and the exhaustion of resources. But this long-term dynamic will be broken by natural checks and balances : increasing disease, starvation/famine. The consequent fall in population turns the wheels of fate again and opposites trends in income distribution, consequent on falling food prices, falling rents and rising wages, will develop.

In Malthus' two-phase model there is then a built-in mechanism of self-correction. The state must not meddle with this automatic safety-valve, the poor must not be assisted :

The poor laws of England tend to depress the general condition of the poor in these two ways, their first obvious tendency is to increase population without increasing the food for its support, A poor man may marry with little or no prospect of being able to support a family without parish assistance... Secondly, the quantity of provisions consumed in work-houses upon a part of society that cannot be considered the most valuable part diminishes the shares that would otherwise belong to more industrious and more worthy members, and thus, in the same manner, forces more to become dependent. (43)

The 'general condition of the poor', or in other words the health and well-being of the masses, falls with their natural tendency to multiply and over-

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populate; it improves only as population declines. Thus neo-Malthusians have since argued that:

- * The size of world population is (or is rapidly becoming) too large in relation to the size of the earth and its limited resources.
- * The developing countries are overpopulated.
- * Rapid population growth makes it impossible to achieve satisfactory social and economic progress. (44)

Pivotal to health and development is then a low or zero population growth. Conversely, this primacy of population has been used by nationalists and religious orders, from France to Roumania and from Africa to Asia, to argue that multiplication of numbers will ensure well-being and development.

Neoclassical economics : health and development

Neoclassical economics...is a paradigm that tells one to investigate markets and prices,...expecting them often to work well. A neoclassical vision of the world is one of flexibility. In their own or their families' interests, people adapt readily to changing opportunities and prices, even if they do not like doing so and even though they may take their time.(45)

The school of 'orthodox' economics, since the marginalist revolution of the 1870's, starts from the confrontation of individuals' preferences in a market situation. Prices are exchange rates and these determine the value of products and of factors of production. Consumer sovereignty reigns. As Godelier succinctly summarises:

The subjective utility of goods for each consumer is thus taken as the basis for explaining how the capitalist economy works, and for determining, one after another, the content of the categories and laws of this economy. (46)

For the followers of Alfred Marshall, Lionel Robbins, Lipsey & Samuelson(47) it is the study of forms of individual behaviour. Society is assumed to be made up of independent, equal, fully informed individuals maximising their

satisfaction. Man exists in relation to commodities. His demand is the economy's command. Thus distribution is determined by natural economic forces and not by social conflict.

Neoclassical attempts to explain growth turn to the doctrine of comparative advantage and conventional production functions(48). In the latter, they found that physical capital and labour inputs account for only a small part of growth of output. Attempts to measure the 'residual factor' led to discussion of the role of technology and education. It was only one step further to attempt to measure human capital and to try to trace the contours of its market.

The essential idea is that differentials in earnings over life can be related to differentials in amounts spent on education and health. Investment in human capital for long-term monetary returns was said to include health care and nutrition, schooling, and on the job training.(49) For instance, M. Nadiri(50), showed in studies of total factor productivity in twenty-five countries, from 1950 to 1965, that the gains to growth from improved health conditions were, if not repeatable, considerable. Reduction in death rates and in work-loss days contributed to the rise in the productivity of labour. Previously, A. Maddison(51) attempted to measure the growth of the 'effective' labour force in developing countries by adjusting for internal migration and for improvements in health and education.

But even in this limited sense of analysing contributions to the production function, it is 'literacy' and 'education' that have dominated economic and

econometric human capital and cost/benefit analysis of the past thirty years.(52) Indeed, the works written on health presume a considerable degree of individual knowledge and foresight in that they quantify the value that individuals place on avoiding increased risks (the cost of risk concept) and presume individual action is based on the discounted present value of expected loss or gain.(53) This failure to seriously address the question of health and development highlights the inadequacy of this model.

However, the neoclassical paradigm remains the most powerful influence on studies of health and development and in particular on the economics of health care. In the *Economics of Health*(54), Cullis and West, introduce their examination as part of the economics of human resources in which the basic unit of analysis is the individual suspended in time.

It is clear that every day, everyone makes choices that may influence adversely their expected health state. They implicitly trade off decreased health against increased benefits of other kinds. The smoker who smokes an additional cigarette is implicitly saying that the marginal cost, which includes not only the price of the cigarette but also the discounted present value of the expected lost time (because of an earlier death) and general reduced fitness consequent on smoking and additional cigarette, is less than the marginal benefit.(55)

First, health is abstracted from socio-economic conditions. Secondly, the individual is assumed to have herculean powers of foresight, rationality and in particular, absolute control over his/her own life. Conceptual analysis goes little further than the individual and the commodity.

It comes as no surprise that Cullis and West can then only make general sweeping statements about the possible relationship between health and development. Improvements in health, they say, can increase productivity but

they can also increase population, and if there are insufficient resources for development therefore lead to less consumption per head. Improvements in health, they say, can influence attitudes and increase individual motivation to produce and develop. Such statements mean little.

Summary

In treating health as an individual investment commodity, the body becomes an object of investment and the inverted object, the subject or person, becomes the embodiment of human capital. Problems of ill-health are then seen as arising from the mal-distribution of personal resources. This view has led to much discussion of the uneven individual consumption of medical services and medical products, the fear of 'insatiable health needs', and the view that health and health policy are synonymous with the consumption of health services and medicines.(56)

The framework of analysis is ahistoric and therefore unreal. It makes human capital part of labour and in this equivalency denies the differences and conflicts between labour and capital. The market paradigm, in making individual demand for and supply of health care and consequent price the starting point of analysis, attempts to commodify what cannot be commodified: to dehumanise humans; to separate the body from the person and the person from her/his nation, class or sex. It sees the world as a dehumanised, declassed, desexed consumption unit.

But let us now leave the neoclassical paradigm and the view that health is an individual investment for perceivable monetary returns and turn to the structuralist view of development and the role it gives to health.

Structuralism: health and development

The initial set of structural hypotheses was formulated in the 1950s by writers such as Paul Rodenstein Rodan, Ragnar Nurske, W. Arthur Lewis, Paul Prebisch, Hans Singer and Gunnar Myrdal. (57)

In the structuralist paradigm, people and resources are not flexible and the supply of and demand for most things are inelastic. 'Such general inflexibility was thought to apply particularly to less developed countries. Peasants were hardly economic men and were stuck in the mud; people were ruled by custom and authority; entrepreneurs were lacking; and communications were poor.'(58) The primacy of the market is overturned. It is the structure of socio-economic relations that is paramount.

With reference to health, Myrdal's 'vicious circle'(59) highlights market failures and the obstacles to development. Low income per head leads to malnutrition which leads to low productivity and work efficiency which leads to low income per head. Thus disadvantages are perpetuated. The dual economy or centre-periphery models(60) recognising the stark differences between one region and another attempt to explain the origin, existence and persistence of this gap. According to some structuralists, the basic origin of dualism is the introduction of money into a fettered structure, such as the subsistence barter economy. For others, past and present dependence and unequal exchange brought about dual development(61). In nearly all, the conclusion is reached that the

state, and not the market, is vital to breaking through obstacles to development. (62)

In a similar vein, Professor Sen(63) in analysing the determinants of want and famine, concludes that lack of supply is not the major problem, it is ownership patterns and exchange entitlements. Malnutrition is more a distribution than a supply problem. Thus the direct provision of basic goods and services is more successful than the market mechanism in alleviating poverty. He, also, emphasises that the majority of people must first be capable of sustenance and self-development.

Sen's focus on capability is very close to a realisation of the importance of health in development.

The constituent part of the standard of living is not the good, nor its characteristics, but the ability to do various things by using that good or those characteristics, and it is that ability rather than the mental reaction to that ability in the form of happiness that in this view reflects the standard of living.(64)

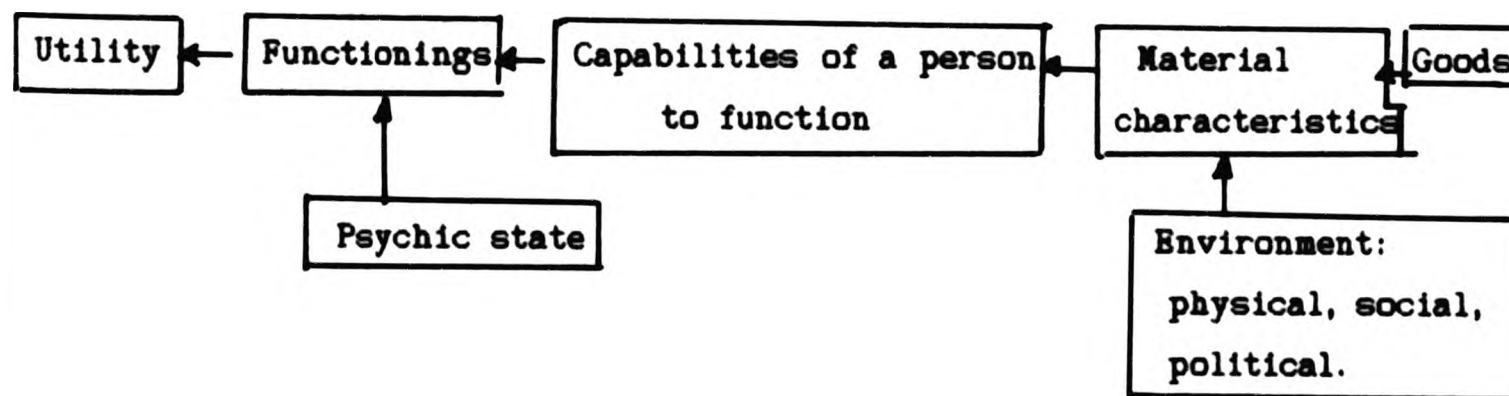
Thus Sen argues that there is more to the standard of living than the relative amount of goods one has. A bicycle is of no value unless one can ride it. Sen posits 'capability' as the measure of standard of living; the criteria for welfare and development policy and the basis of freedom.

In focusing on potential, or the ability to do things, Sen is in fact bringing the notion of health and capability into the mainstream of welfare and development economics. In his reply to critics of the Tanner Lectures 1985, he discusses what determines capability or functionings, 'Many of the functionings (e.g. living a life free from cholera or smallpox) are 'produced' at least as much outside the household as inside it (through public policy against

epidemics).(65) In juxtaposition to this statement, consider Rene Dubos' definition of health as the ability of an individual to function in a manner acceptable to himself: 'Health and disease cannot be defined merely in terms of anatomical physiological or mental attributes. Their real measure is the ability of the individual to function in a manner acceptable to himself and to the group of which he is part.' (66)

But whilst health is fundamental to Sen's concept of capability he does not recognise it as such. Whilst 'capability' is addressed again and again, its dualistic essence in ability and freedom is not revealed. Whilst the mode of production and class structure are seen to affect one's capabilities these are only mentioned in passing. In fact Sen is locked within the utilitarian framework that he himself finds normative and deficient.(67) He is trapped by the concept of a relation between person and commodity and thus the relation of person to bodily functions. This is highlighted by his definition of capability as a feature of a person in relation to a good and his concentration on paths to individual consumption, as illustrated by John Muellbauer.(68)

Fig 2 Utility, functionings, capabilities and their sources



Source: A. Sen (1987)

This essentially shows that the links between goods and satisfaction are quite complicated and 'several distinctions are crucial'. Of crucial importance to development is the enhancement of people's capabilities to function for without them, returning to the example of the bike, the commodity has no utility. But if, like Professor Sen, one sets capabilities within a framework of commodities on the one hand and personal satisfactions on the other hand, one is trapped in neo-classical individualism. The fact remains that whilst the free development of all is dependant on the free development of each, it is determined by the forces and relations of production.

Structural Marxists

Structural Marxists, unlike structuralists, address the on-going contradiction between the interests of labour and those of capitalists, between the forces and the relations of production, but reject the idea that there is only one dominant or determining contradiction.(69) Among the leading protagonists of this school of thought, Althusser, Poulantzis and Godelier (70), rejected both the simple economism of traditional Marxists and the humanism of Gramsci and Sartre. For them, what is vital to understanding human society is not the conscious activities of the human subject but the unconscious structure which these activities presuppose.

Thus, Althusser writes in *For Marx* that society is a totality, 'whose unity is constituted by a certain specific type of complexity, which introduces instances , that, following Engels, we can very schematically, reduce to three: the economy, politics and ideology.'⁽⁷¹⁾

Each level has its own peculiar time, its own rhythm of development. This complex and uneven relationship of the instances or levels to each other at a specific time was called by Althusser a 'conjuncture'. Every conjuncture was said to be 'overdetermined'

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in that each of the levels contributed to determining the structure as well as being determined by it ; determination was always complex. (72)

The chief problematic for Althusser and Godelier, is to explain change in the structure - development or undevelopment. Gregory Elliott, in his study of Althusser's work, shows how he rejected both expressive and transitive causality. 'Unlike transitive causality, structural causality describes the effectivity of a whole on its parts, unlike expressive causality it does not 'essentialise' the whole and is not reductive of the parts.'(73)

Expressive or Hegelian totality is 'one whose parts express each other and the totality's simple essence'(74) whereas Althusser's totality is 'simultaneously complex and unified, decentred and determined, heterogenous and heirarchical(75)...Unity discussed by Marxism is the unity of complexity itself ... The complex whole has the unity of a structure articulated in dominance.'(76)

To understand what Althusser was getting at let us quote from Elliott:

Every social formation is a 'structure in dominance' insofar as each contains a dominant element which organises the heirarchy and interrelations of the various social practices. This dominant element, however, does not override the causal primacy of the economic. The economic is not always *dominant*, but it is always *determinant* in the last instance, responsible for the coordination of the instances, allotting the dominant role within the totality to one of them and subordinate roles to the others, fixing the degree of relative autonomy and efficacy . In capitalist social formations , it determines its own dominance. In other social formations, the allocation can vary.(77)

In feudalism, for instance, Althusser posits the political structure as dominant in the social whole. From this standpoint, Althusser argues against both Hegelian and empiricist's concept of historical time. 'For Hegel, it is

suggested, history is a continuum - a succession of expressive totalities instantiating the various phases of the Absolute Spirit's 'development'(78). Neither is history evolutionary. In his thesis of potential regression, Althusser argued like Mao Tse Tung, that societies can regress from socialism to capitalism, especially if they allow themselves to be dominated economically by imperialism and hampered by the continuance of petty commodity production and the persistence of large inequalities of income.(79)

Godelier, in *System, Structure and Contradiction in Capital*, reviews how initially there 'was a functional compatibility between accumulation of industrial capital in a few hands and the development of productive forces.' (80) But now, 'the productive forces, that ceaselessly develop are limited by the unchanging relations of production (private ownership, domination and exploitation)'. Godelier argues that the fundamental contradiction, the one that 'has to account for the evolution of capitalism and for the necessity of its disappearance', is between the forces and relations of capitalist production. While the internal contradiction, the conflict of interests between the capitalist and the worker, is specific, 'it is characteristic of the system from its beginning, and the very working of the system endlessly reproduces it.' (81) Therefore, Godelier sees capitalist exploitation and consequent ill-health as inherent to the system and they will only be overcome when the contradictions between the forces and relations of production are resolved. This resolution, he terms, 'genesis'.

The question for us here is then posed: is a country's level of public health finally determined by the particular historic development of the forces and

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relations of production and are transitions in public health the result of a resolution in the contradiction between the forces and relations of production? Are present chronic diseases a manifestation of the functional incompatibility between continued accumulation of capital in a few hands and the development of productive forces? Or on another level, is personal ill-health often a manifestation of the growing contradiction between ability and freedom?

Let us reach a summary of the Marxist-Structuralist paradigm by turning lastly to the question of how it views the individual and the relation between the person, body and society. In his historic analysis of discipline and punishment, Michel Foucault illuminates the changing concepts of individuality, and the changing political technology of the body with the emergence and spread of capitalism. Foucault writes: 'In every society the body was in the grip of very strict powers which imposed on it constraints, prohibitions or obligations'. (82)

In the Middle Ages and up to the eighteenth century, Foucault argues, that the body was treated wholesale, en masse, as if it were an indissociable unity. It was the target of torture and execution as a public spectacle. But the classical age, with the new sciences and new army, school, hospital and prison regulations, worked the body 'retail, individually, as object and target of power. It was a question of exercising upon the body a subtle coercion:

of obtaining holds on it at the level of the mechanism itself -movements, gestures, attitudes, rapidity; an infinitesimal power over the active body. Then there was the object of control; it was not or was no longer the signifying elements of behaviour or the language of the body, but the economy, the efficiency of movements, their internal organisation; constraint bears upon the forces rather than the signs; the only truly important ceremony is that of exercise. Lastly there is the modality: it implies an uninterrupted, constant coercion, supervising the process of the activity rather than its results and it is exercised according to a codification that partitions as closely as possible time, space, movement. These methods, which made possible the meticulous control of the operations of the body, which assured the constant subjection of its forces and imposed upon them a relation of docility-utility, might be called

'disciplines'.(83)

The human body was entering a machinery of power which explores it, breaks it down and rearranges it. A 'political anatomy' which was also a 'mechanics of power' was being born; it defined how one may have a hold over others' bodies, not only so that they may do what one wishes, but so that they may operate as one wishes, with the techniques, the speed and the efficiency that one determines...Discipline increases the forces of the body (in economic terms of utility) and diminishes these same forces (in political terms of obedience). In short, it dissociates power from the body; on the one hand, it turns it into 'aptitude', a 'capacity', which it seeks to increase; on the other hand, it reverses the course of energy, the power that might result from it, and turns it into a relation of strict subjection...
Disciplinary coercion established in the body the constricting link between an increased aptitude and an increased domination.(84)

The contradiction lies in the increase in personal ability and simultaneous decrease in freedom. It resulted at the beginning of capitalism in an increase in social capacity, in hitherto unknown economic development. Today this contradiction has deepened, leading to daily crises in individual capacities, in personal identities and in health. Of relevance here is the previous discussion of personal capacity in health and development and its twofold and often contradictory elements - ability and freedom. Of relevance too is increased power to buy but increased manipulation of consumers. The fundamental contradiction identified by Godelier, between the forces and relations of production, "is crystallised in the individual contradiction between ability and freedom and manifested in psychological and physical malaise. This sick society is called by Foucault a culture of docile utility and by Illich a culture of acceptance and addiction. They identify many levels of disciplinary coercion or engineered harassment, developing in response, as Foucault outlines: 'to particular needs, an industrial innovation, a renewed outbreak of certain epidemic diseases, the invention of the rifle or the victories of Prussia.'(85) They do not focus on the growth and the fundamental

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contradictions of capitalism. Reflecting the holistic view of health, Foucault perceives the body as both machine and organ and individuality is defined in the cell, in the organism and in genesis.

Of particular relevance is Foucault's discussion of epidemics and disciplinary coercion. He elaborates on the measures prescribed in the event of a plague outbreak in late seventeenth century France. They include strict spatial partitioning of the inhabitants; surveillance; registration and fumigation(86). 'The plague as a form, at once real and imaginary, of disorder has as its medical and political correlative discipline.'

Foucault contrasts the reaction to leprosy in earlier days - the ritual exclusion of the leper and the binary division between one set of people and another - to that of plague in later days - the multiple separations, individualising distributions, an organisation in depth of surveillance and control, an intensification and a ramification of power. 'The leper and his separation; the plague and its segmentations. The first is marked; the second is analysed and distributed.'(87)

These two different methods are today combined in a double mode: 'that of binary division and branding (mad/sane; dangerous/harmless; normal/abnormal); and that of coercive assignment, of differential distribution (who he is, where he must be; how he is to be characterised; how is he to be recognized; how a constant surveillance over him is to be exercised in an individual way'(88). A dramatic contemporary example of this dual reaction to epidemics lies in present policies to combat AIDS. Whilst the branding and surveilling, incising and experimenting on cancer patients continues apace.

For Foucault, being a structuralist, the formation of today's disciplinary society and its inherent contradictions 'is connected with a number of broad historical processes - economic, juridico-political and lastly, scientific'(89). He identifies the large demographic thrust of the eighteenth century and the growth in the apparatus of production as important aspects of the conjuncture that led to the development of disciplinary methods over the individual. He gives historic importance to the role of the church, state and police in the particular correlative emergence of discipline and development as a continuous individualising pyramid of complex power relations.

To summarise: the structural school of Marxist thought sees the ensemble of social relations and the complex wide-ranging mechanisms of domination as central to understanding both the person and the stage of development. Human nature cannot be abstracted as something inherent or rational and the individual is not the active subject of history. Socio-economic and technico-political relations determine people's places and functions. Within this complex framework, the specific forces and relations of production are addressed and given a greater or lesser degree of importance.

Marxist Views of Development

Development, for Marx, is a transformation in the social relations of production. Capital is a specific social relation. So in his study of the emergence of capitalism in Britain, Marx countered the individualistic views of Adam Smith and the demographic views of Reverend Malthus, focusing his historical investigation on how the capitalist class, owning the means of

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production, and the working class owning only its labour power, came into being.

Marx identified two pre-capitalist modes of production : Feudal and Asiatic. Europe and Japan were dominated by the feudal mode while India and China were characterised by the Asiatic mode. In the latter, because of its communal rather than private ownership of land and because of its despotic rather than parcellized rule (90), the preconditions for the emergence of capitalism did not exist. Of crucial importance, as the feudal order began to disintegrate in Europe was the conversion of feudal rights into private property ownership in the land, including the right to disposses the occupiers. Landlords could enlarge their holdings and they began acting as capitalist farmers, renting out land to tenant farmers who employed agricultural wage labour. Thus, means of production were transformed into capital. As agricultural production became more and more centralised, more peasants were expelled and the productivity of the remaining agricultural workers increased. The expelled peasants concentrated around towns becoming the new industrial proletariat. Thus, capitalism emerged.

Labour, under capitalism, is alienated. As Arthur points out in his *Dialectics of Labour*, it is not 'productive activity organically united with its object and recognizing itself in its product,' but it is an 'alienating mediator' producing the product as loss of the object, activity as hateful, 'not as self-fulfilment but merely as a source of livelihood.'

Because the worker has no property in the means of production his labour-power is excluded from the instrument and object of production owned by another; his labour realizes itself only through the wage-contract whereby it is alienated to the master and works on his behalf. The labourer treats his labour as a commodity...he produces palaces but lives in hovels; his labour creates beauty but deforms himself. (91)

Capital is value in process. It is the cycle of money spent on means of production that when combined, produce commodities, which when sold return more money to the capitalist. The following is Marx's general formula for capital or production for exchange:

$$m \text{ ----} \rightarrow c \text{ ----} \rightarrow m' \quad \text{where } m' > m$$

Money, (m), when invested in certain means and relations of production result in commodities (c) that when sold are worth more money (m').

Contrast this to 'the simple circulation of commodities' or production for use:-

$$c \text{ ----} \rightarrow m \text{ ----} \rightarrow c' \quad \text{where } c' > c$$

Household based production in stone age or feudal economies aimed to produce commodities to use or with which to obtain other commodities. But in England, Marx recognised that agricultural, industrial and merchant capital achieved a certain compatibility in the eighteenth century enabling a process of successful investment or primitive accumulation of capital. For the forthcoming analysis of development in Malta, Marxist views on the role of merchant capital and of colonial policy are of particular interest.

Merchant capital

The role of merchant capital is defined by Marx as being unproductive because its profits are made only from the exchange of commodities. Merchant capital exploits, even destroys, but it does not transform. 'The independent development of merchant's capital stands in inverse proportion to the general economic development of society. (92)

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The merchant may establish direct sway over production, dominating small-scale producers and developing outwork, but this does not necessarily lead to the centralisation or increase of production nor to the reinvestment of profits. Rather it tends to 'preserve and retain' the old mode of production. Thus, Marx argued that where merchant capital remains the dominant form of capital, the development of manufacture and of capitalism is hampered. The main reason being that merchant capital does not create value in process rather its basis is trade, plunder and monopoly. This is not to say that wealth obtained from commerce was not vital to the emergence of capitalism in England but it was not a sufficient reason for its emergence.

Colonial Policy

In clarifying the regressive and progressive effects of colonial policy, Marx and Engels concentrated largely on Ireland and India. These countries' trade and industry could not survive British competition. Marx concluded that in India, the effects of British penetration had four consequences:- the neglect of public works; the plunder of the interior, leading to a growth in the Finance Department of the Colonial Government; the plunder of the exterior, leading to growth in the War Department of the Colonial Government; and the destruction of the local textile industry by the mechanised cotton manufacture of Lancashire. How relevant is this criticism of British imperialism will be borne out in the forthcoming specific details of Malta's colonisation.

However, Marx realised that in India there was a contradiction between subjective intentions to 'dominate' and exploit for immediate gain and objective long term consequences. The importance of the latent Indian market

and of more efficient extraction of raw materials, led to large British investments in railway communications and in integrating and modernising the interior. A trained army and an educated middle class were by-products. Capitalism, although atavistic, could be a powerful engine of progress. It could create the conditions for health and development.

Lenin expanded Marx's analysis of colonialism, arguing that monopoly had grown out of colonial domination and that the monopoly of the most important sources of raw materials has enormously increased the power of big capital. Thus the process of colonial exploitation aided the development of capitalism. 'In its economic essence, imperialism is monopoly capitalism,' concludes Lenin in *Imperialism: the Highest Stage of Capitalism*(93). Monopoly capital has sprung, too, from the way in which finance capital seeks the safest and highest returns. As early as 1916, Lenin assessed that finance capital has come to dominate over industrial capital and with great foresight he stated that imperialism means the establishment of a creditor-debtor relationship as this is stronger than a buyer-seller relationship. Thus, Lenin foresaw the growing inequalities and increased poverty and disease suffered by masses of people in the third world.

However, Lenin did not renounce Marx's emphasis on both destructive and creative aspects of colonialism. Whilst power and wealth is more and more concentrated at the centre, nevertheless 'capitalism is growing with the greatest rapidity in the colonies and in overseas countries, developing productive forces and creating a true proletariat.(94)

Monopoly capitalism

In contrast, most Marxist economists after the second world war argued that the process of internationalisation of capital was uneven but not combined - that the domination of the metropolis over the satellite sustains underdevelopment and does not encourage development. Faced with the unprecedented growth of international capital but the continuing underdevelopment of many parts of the world, the pioneering Marxist development economist - Paul Baran - asserted :

The dominant fact of our time is that the institution of private property in the means of production - once a powerful engine of progress - has now come into irreconcilable contradiction with the economic and social advancement of the people in the underdeveloped countries and with the growth, development and liberation of people in advanced countries.(95)

Monopoly capital, according to Baran, does not need to invest in new techniques nor does it need to increase output for it is not forced to by competing firms. Here lies an essential ideological difference with Marx and classical Marxists who saw monopolies as intensifying rather than suppressing competition. But according to Baran, in monopoly capitalism the main problem is underinvestment and wasting of the surplus, and thus the waste of labour power, underemployment and ill-health.

In fact, Baran's whole approach to development is essentially quantitative, determined by the size and use of the surplus. He deduces that :-

In any given situation the volume of investment tends to be smaller than the volume of economic surplus that would be forthcoming under full employment. In other words an "underemployment equilibrium" is reached. (96)

In advanced capitalist countries, this system is primarily given stability and momentum through government intervention, especially government expenditure on

military outlays and on imperialist policies. Because of the low rate of investment, the state's military and imperial policies are crucial as they absorb the surplus capital, raise demand and therefore improve health. Meanwhile, the big corporations collect vast profits from military contracts and government-backed dealings abroad, and as a result more people are employed at home and more people are unified into the system.(97)

Thus, Baran argues that advanced capitalist development depends on the continuing growth of the military-industrial complex and on the world division of labour. This is responsible for the continuing backwardness of the Less Developed Countries. His analysis of the essential elements of this backwardness turns to three main destructive effects of Western capitalism:

- 1) massive removal of LDC's accumulated wealth and current output (*plunder*);
- 2) ruthless suppression and distortion of all indigenous economic growth;
- 3) systematic corruption of their social, political and cultural life.

He concludes, 'The violent, destructive and predatory opening up of the weaker countries by Western capitalism immeasurably distorted their development. (98)

And Baran's thesis is that these destructive features of monopoly capitalism: leading to hunger, disease, war, myths and barbarism; are the very foundations of its continuing existence. Irrationality not rationality is inherent in the structure of society - the unavoidable growth of a social system based on exploitation, national prejudice and incessantly cultivated superstition (99). He concludes that the only way to respect 'humanity's claim to life, development, to happiness' is to end exploitation of men by men, eliminate classes and introduce rational state planning and policies.(100)

But Baran's concept of the 'ideal rate of investment' was based more on what is rational than, as his conclusion exhorts, on the freedom from exploitation

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of one class by another. His 'Smithian' tendency is dual: first in arguing that competitive firms have a rationale to invest that monopolies do not have, so the system is now irrational; secondly in seeing growth in quantitative (the increase in the physical volume of output) rather than qualitative terms (the transformation in the social relations of production)- in using a Smithian concept of physical surplus or net product over and above the part of output needed to maintain the population and capital stock intact.(101)

However, his importance persists in that he made the internal workings of underdeveloped countries a central issue. The internal structure of underdeveloped countries was, he argued, blocking their future development. The lack of productive investment is the main problem. The surplus is either drained away to the advanced countries or absorbed in unproductive uses. Many factors are posited in explanation. Competition from abroad attracts capital to higher returns; the narrow home market is a barrier to large scale industrial growth; foreign firms retard the growth of a national bourgeoisie and easily uproot and move elsewhere. Foreign firms are primarily interested in low wages and low taxation, both of which are barriers to internal development. In fact, foreign firms are not alone in opposing indigenous development so are their local suppliers and agents. Local landed interests and local monopoly capital are also cited by Baran as having interests in preserving the status quo and therefore in opposing development. At the heart of Baran's argument, and indeed of many subsequent 'Smithian' Marxist economists such as Frank & Wallerstein is that state policy is crucial to economic development - in controlling foreign firms, in mediating between conflicting local interests and

in making productive rather than unproductive use of the potential economic surplus and, therefore, in advancing health and development. (102)

It should be clear that in the view of most recent Marxist economists, imperialism is destructive and monopoly capitalism is fettered. It does not allow the advance of the mass of humanity because it is based on worldwide exploitation and the concentration and accumulation of capital in the hands of a few. Within this framework, imperialism does not permit less developed countries' autonomous development. National oppression and exploitation persist in varying forms but always in the interests of capital accumulation by the multi-national corporations that have greatest influence in that country. Of particular relevance here is the work of Samir Amin (103) on the international division of labour, unequal specialisation and increasing inequality in wage levels between advanced and less developed countries. Where development occurs, it is uneven. It tends to remain dependent on the export of a few commodities and services and is therefore partial. Spatial contrasts or dual economies are the manifestations of this process of uneven development, or what Kay calls the 'new phase in the history of underdevelopment' (104), and they cannot be understood apart from the spread of monopoly capitalism and imperialism. Thus the exploitation of the working classes and the oppression of nations are the central obstacles to development. Therefore, their resistance, often articulated in the radical nation state, is crucial to health and development. Recently, Taplin has criticised this world system/dependency view for its failure to show 'how the household/women may affect the world system'. She posits a 'bottom-up paradigm of social change' and a combination modes approach to

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include the organisation of kinship and related resources in the analysis of development. (105)

In opposition to the emphasis on continuing dependence and distortion, is Bill Warren's posthumous work *Imperialism: Pioneer of Capitalism*. He points out that capitalism has developed the productive forces and called for the emergence of a working class in ex-colonies. he devotes the second part of his book to 'a polemic against views that imperialism (and subsequently neo-colonialism) is and has been a socially retrogressive force preventing or distorting economic development' (106). The kernal of his vision is encapsulated on the next page where he asserts: 'We are in an era of declining imperialism and advancing capitalism'. In his consequent argument against Lenin's analysis, he redefines imperialism as 'the product of young and vigorous capitalist economies, newly emerging into the international arena to challenge their rivals in trade'. (107) Warren gives here a centrality to commodity exchange rather than the accumulation of capital thus leading him to state:

The relationship between imperialist countries and colonies was not one of simple robbery but a dynamic process of two-sided capitalist development, the typical combination of exploitation and expansion of productive forces.(108)

On the basis of this supposed inter-locking equality (109), Warren denounces the 'fiction of underdevelopment'.

There is no evidence that any process of underdevelopment has occurred in modern times, and particularly in the period since the West made its impact on other countries.(110) On the contrary, Warren poses the thesis that 'a process of development' has been taking place. Western capitalism, he says, generally stimulated productive forces, brought modern transport, hygiene and medicine and generally improved material welfare. Central to Warren's argument is health. He asserts:

The most dramatic, significant and conclusive proof of the advantages of Western

colonisation.. is the improvement in health brought about by the colonisers. In nearly all cases, mortality rates were on the decline and population growth in unprecedented expansion within a few decades of the onset of colonial rule.(111) But to those of us who have removed ourselves from the imperialist pedestal and reflected on the actual historic facts, this dramatic, significant and conclusive proof does not exist.

However, Warren must be criticised on conceptual as well and empirical grounds. Gulalp (112) rightly points out that Warren separates the development of the productive forces from the nature of the relations of production and therefore he does not refer to classes and their struggles. For him, capitalism is simply an abstract process with a historic, positive mission. Both Warren and Amin, Gulalp observes, make the mistake of not separating colonialism from capitalism.

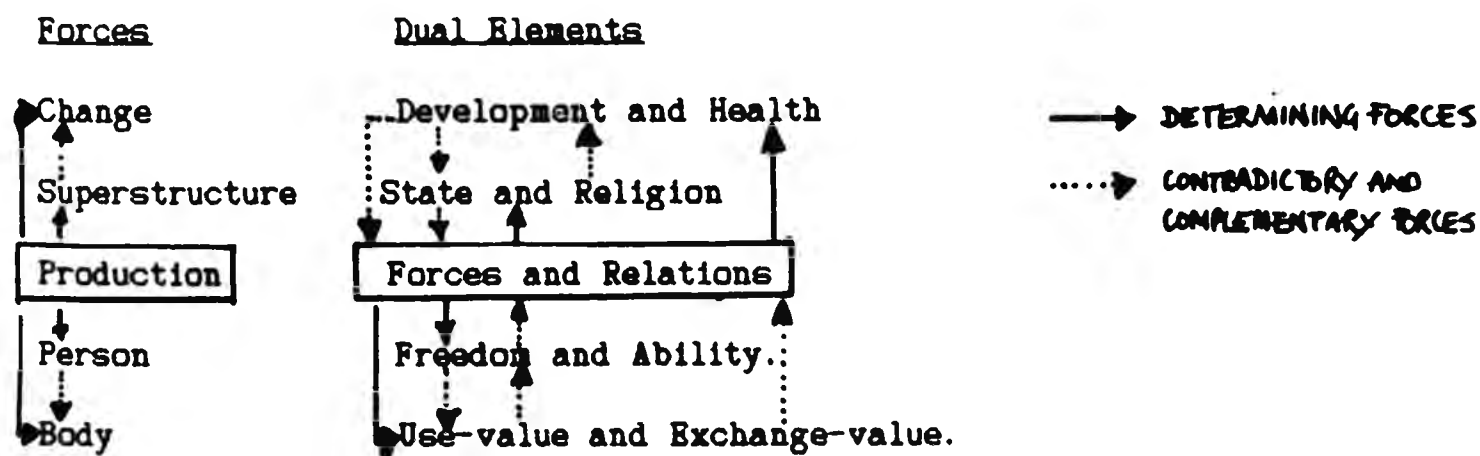
Gulalp suggested that to avoid abstraction and polarisation of views it would be useful to differentiate between development as defined by the ruling class and that which is in fact in the interest of the masses. For capitalists, ownership of the productive forces leads to accumulation of capital or 'growth'. For workers, both the productive forces and the relations of production are important to the enhancement of life and liberty. Development occurs when most people are living healthy, fulfilling lives and less people are exploited and deprived. Such development cannot be explained by the forces of demand and supply whether commercial or demographic in origin. The issues of class exploitation and class struggle are fundamental.

Summary

In contrast to Marxist Structuralists, Marxists emphasise the centrality of capitalist production to our lives. The question of how far the spread of capitalism is constructive or destructive and the lively contemporary debates over stages and definitions of modes of production have recently been lucidly surveyed by Anthony Brewer. He summarises that for some authors the relations of production are central to explaining underdevelopment and for others underdevelopment is explained in terms of factors such as the extraction of surplus or lack of technology and natural resources. His own view is that a 'single explanation is unlikely to apply to all cases at all stages of development, so that a complete theory may draw on both views'. (113)

Marxist literature on the relation between the person, body and society is vast but for the purpose of differentiating its paradigm from the classical, neo-classical and structuralist approaches, let us consider the following diagram:

Figure 3 The Centrality of the Production Process in the Relation between Individual and General Health and Development



In capitalist society, the person is subjected to capital. Workers must commodify themselves. The family is not the last refuge from the demands of capitalist society as romantics would like, but as Marx and Engels argued it is continually transformed by the needs of the dominant class.(114) As Figure 3 shows, the production process is central to determining a person's ability and freedom and to defining a body's use-value and exchange-value. As women were transformed with the development of capitalism into a marginal labour force: the 'housewife' emerging along with the 'proletarian'; so their labour was devalued. In the extreme sexual division of labour, housewives have use-value but husbands have exchange-value. And as women's labour was devalued so personal consumption, for instance of medicines, was enhanced. Women's ability to take may have increased but their ability to make and their creative freedom has tended to decrease.

The dual elements in the figure are both complementary and contradictory. The forces interact in multiple ways but central to dialectical inter-relationships is the production process. The upper half of Figure 3 indicates how the power of the state and the influence of religion are determined, in the last analysis, by the way things are produced and by class relations. Again, the type of development and changes in public health are fundamentally, centrally determined by the mode of production. But the interaction between these elements cannot be explained in a diagram. For this we need to discuss the dialectic.

PART TWO

Dialectical Materialism : Health and Development

Dialectical materialism, put very simply, is a theory of events as due to conflicts of class interests. It is an analysis of development through inherent contradictions. Essentially, the economy is made up of social relations between people that are engendered by the process of production. Economic exploitation and the privilege of property ownership are central to all conflicts, even when they are overlaid by religious, racial or national alliances. Economic theory has to be dynamic. It must analyse the inner logic of systems-in particular the conditions of production and reproduction. Marxists have, for instance, analysed the amount of economic power a slave, serf or proletariat has over his labour and over the means of production to distinguish the specific relations of production and to understand how they have changed over time.(1)

Development is not considered a unilinear process. It revolves around the resolution of conflicts and of prime importance are conflicts of material interests or economic power. Development is then a process of structural change through conflict. Interdependence exists between structures. But of determining force in this organic system is the mode of production and the contradictions within it.

Dialectical thinking aims to grasp the unity of a process through its very contradictions. Consumption realises production by destroying the product, but it thereby reproduces the need for production and its preconditions.

Development realises health by destroying it. Thus it creates the need for health and its preconditions.

In *On Contradiction* (1937), Mao Tse Tung outlines two essentially opposing world outlooks : metaphysical and dialectical. According to the former, development is a repetitive increase or decrease. According to the latter development is a unity of opposites that arises from contradictions inside a thing. The metaphysicists, in Mao's categorisation, see things as isolated, static and one-sided: 'In their opinion, capitalist exploitation, capitalist competition, the individualist ideology of capitalist society, and so on, can all be found in ancient slave society, or even in primitive society, and will exist forever unchanged.'

The metaphysicists therefore ascribe the causes of social development to factors external to society, such as geography and climate. But the dialecticians argue that :-

Changes in society are due chiefly to the development of the internal contradictions in society; that is the contradiction between the productive forces and the relations of production, the contradiction between classes and the contradiction between the old and the new; it is the development of these contradictions that pushes society forward and gives the impetus... External causes are the condition of change and internal causes are the basis of change... external causes become operative through internal causes. (2)

In this dialectical materialist model, development is then the unity of opposites and their transcension.

Engels affirmed dialectical materialism through three 'laws' : the interaction of opposites, the transformation of quantity into quality; and the negation of the negation.(3) He claimed universality for these laws both in nature and in society. The legitimate scope of this claim has been circumscribed by recent critics(4) and I do not intend to try to fit an analysis of the changes in health with respect to development into the operation of one or another of the

said 'laws'. However, I submit that the dialectical materialist framework, particularly as developed by Arthur and Cohen, is most useful for understanding the changes in the pattern of diseases in relation to political economies.

1) The interaction of opposites

Let us turn now to Hegel's pioneering work *The Dialectic of Matter* (5) where he argued that the finite (a thing) is not a true independent being. It has its essence and its foundation in that which is 'other' than itself - the infinite, the immaterial thought. The finite's essence is its opposite- the infinite. It is dialectical.

According to Colletti's scholarly assessment(6), Hegel is in continuity with the Platonic-Christian tradition in having a negative conception of the sensible world. The spirit or truth is the logical unity or coexistence of opposites: sameness and otherness, finite and infinite, and in the infinite lie 'Reason' and 'Truth'. The truth is dialectic. But Hegel was also opposing the traditional Christian view that the world is finite because it was created and its negativity results from its sinfulness. To Hegel, the world is finite because this is its inherent quality.

The finite is internally self-contradictory. It is itself and the negative (opposite) of itself at one and the same time, it sublates itself and ceases to be. 'A living thing is at each moment itself and yet something else', wrote Hegel. And as Engels expanded in *Anti-Duhring*, 'the actual contains the

potential'. (7) It is this potential that is vital. This conclusion is common to all Marxists.

But Hegel's dialectical reasoning, being based on two cornerstones: the finite is abstract, ideal and the infinite or whole is concrete, real (8); is set within a religious framework. The whole is the universal God and 'religion is the consciousness that a people has of what it itself is and of the essence of supreme being.' It is in this particular interaction of opposites that Hegel saw most potential. Thus in the Hegelian dialectic we move from the abstract-finite to the concrete-infinite, but Marx moved from the concrete (an analysis of the commodity) to the abstract (use values and exchange values). The commodity is the materialisation of labour in the sense of its exchange value. Here the concrete-sensate exists and harbours the phenomenal form of the abstract-universal. (9)

Marx gave the example of a loaf of bread to show, not that this could be transubstantiated to the Spirit, but that it is and it is not a use-value; it has use-value to the buyer but to the baker it has only exchange-value. It fulfils a subjective, material need while harbouring within itself non-material objective exchange-value (10). It is unity of opposites. This analogy can be extended to the body. (a) The body harbours a unity of opposites - it has both use-value - in a subjective material sense, and exchange value - on selling one's labour power. It too is a unity of opposites.

(a) See Figure 3 on page 58.

we see here in a nutshell (or to be more accurate, in a person's body and in a loaf of bread) the twofold or dialectical interaction of subjective intentions and objective consequences that runs through the social and political thought of Karl Marx. Bread, being at one and the same time use-value and exchange-value, when realised as these, is eaten or abolished. *Aufhebung* or abolition, as used here, means both realising and overcoming. The body, being at one and the same time use-value and exchange-value, when realised as these, is exploited, even destroyed. This is the truth about the commodification of life. The emphasis on exchange-values puts use-values into disuse. And for many women their lack of exchange-value puts their use-value into overuse. Understanding the dual and contradictory nature of the body gives us a deeper understanding of both women's oppression and class oppression.

2. The transformation of quantity into quality

Engels described how increasing or decreasing quantities lead to qualitative changes. 'The fusion of many forces into one single force creates a new power which is essentially different from the sum of its separate forces.' (11) Marx had found that a definite, though varying, minimum sum of exchange-values is necessary to make possible their transformation into capital. Braudel in *The Structures of Everyday Life* notes a critical demographic threshold: 'when a population increases, its relationship to the space it occupies and the wealth at its disposal is altered...it crosses *critical thresholds*, and at each one its entire structure is questioned afresh'. (12)

Meanwhile, it is clear that a definite, though varying sum of nutritional inputs is necessary to make possible a person's transformation from weak to

sound health. Conversely, increased exposure to carcinogens beyond a 'varying minimum sum' or threshold value, cause our cells to transform and become malignant. Physical and psychic limits exist to the amount of stress and poisons to which we can adapt. Once over the brink we experience a qualitative change in our lives.

3. The negation of the negation

Engels gives extreme importance and generality to the 'law' of the negation of the negation, for through it social relations of production are transformed and a new synthesis is reached. He asserts, 'Every kind of thing has a peculiar way of being negated in such a manner that it gives rise to a development and it is just the same with every kind of concept and idea'. (13)

Each victory over nature, argues Engels, leads to unforeseen effects which often cancel out the first victory. As examples he cites the mass production of crops leading to American dustbowls and the deforestation of Italian alps leading to massive erosion.

Significantly, Engels emphasises that we are increasingly able to control the more remote consequences of our impact on the environment but..

we must feel a oneness with nature and we must change our mode of production, which is concerned with immediate gain and in which the ruling class is the driving force concerned with the most immediate and tangible results.

Unless we realise the longterm destructive effects of the capitalist mode of production, the negation of the negation will not be transcended. One hundred years later, the contemporary process of irreversible destruction has led to

the call by the United Nations, many environmentalists and leftist economists for 'sustainable' development.

Under capitalism, pursues Cohen, 'humanity splits itself off from nature, and splits it apart, exercising a destructive freedom. Capitalism is spirit in its negative form, assaulting nature.'⁽¹⁴⁾ Cohen calls this the stage of *differentiated disunity* in contrast to the relationship of man to nature in pre-capitalist times which, in its oneness and engulfment can be described as *undifferentiated unity*. Resolution of today's contradictions or differentiated disunity with the environment is not inevitable but it is rational. Cohen presses on : 'a freely realised unity is established under socialism'. This unity he describes as *differentiated unity* because it preserves individuality in a context of regained collectivity.⁽¹⁵⁾

The 'stupendous productive feats' of today are realised as the property of the factory. 'The power of the species is not suffused through its members. It confronts them as something foreign, as the possession of the capitalist, who monopolises intention and knowledge', and health. Cohen argues that power must be shared, production democratically planned, only then will creative existence for all be achieved. Note that the central obstacle to development in both Cohen's and Godelier's view is the fettering of social relations in which workers' freedom and dignity are negated. For them the determining contradiction lies here.

The dialectic of health and development

In the dialectic approach to health (a), I contrasted this still nascent view of health to the two main established views: the engineering and the holistic. The subsequent review of theories of development may now enable us to synthesize a dialectic approach to health and development.

Let us begin by paraphrasing Hegel(16):

It is the very nature of health to transcend itself, to negate its negation (disease) and to become infinite... it is its nature to be related to itself as limitation... and to transcend the same, or rather to have negated the limitation and to go beyond.

In other words, health (or Sen's capability) in the immediacy in which it appears (the opposite of contemporary disease or functional ability) is only 'appearance' but in its limit is its truth.

Within this framework it is methodologically valid to study health as its opposite: disfunction, disease and death; using morbidity and mortality statistics. Meanwhile on a personal or phenomenological level, the realisation of physical health through its opposite is general. For example, Alice Walker(17), on losing the sight of one eye when she was eight, says 'it was then that I realised its value.' We only realise the value of a healthy body when that health is lost. We only appreciate an unbroken arm or smooth-working intestines, when we break the arm or develop indigestion or worse colitis. It is after this interaction of opposites that we endeavour to transcend or avoid the dangers to our health : we take care not to break our arm, we learn to eat more selectively and carefully. It is in sickness that we gain a true measure of ourselves: it is the realisation of our own mortality in contrast to the seeming immortality of everyday life that motivates change.

(a) see pp 16-29 of this chapter.

Is Cohen's interpretation useful here? The format: undifferentiated unity, differentiated disunity and differentiated unity; is used by him in two distinct ways: first to characterise a person's development and second to characterise historic changes in the mode of production. Firstly, on the level of personal-family relationships, Cohen describes how a child is totally engulfed by the family - in undifferentiated unity. But as s/he grows older, s/he seeks a separate identity, rebels and breaks away - in differentiated disunity. Finally, if the dialectic is given ground, the separate identity merges within the previous but transformed circle of love and care - in differentiated unity. Cohen observes the same rhythm often occurs in partnerships when, at first, one is totally engulfed by love for the other but quarrels often break out when one seeks self-identity and more freedom in the relationship. The challenge is to transform possessive love to respect and mutual development. Drawing an analogy with health: on a personal level we are in undifferentiated unity with our healthy bodies, but disease then makes us aware that health is a separate entity, it is in fact the opposite of how we are feeling and on our sick bed we experience differentiated disunity. However, the sick bed can be a time of reflection and growth.(a) If our health revives, we are more able both physically and mentally to withstand subsequent infections and to know how to live more healthy lives. We can value health as both part of ourselves and as separate. We are, to use Cohen's phrase, in differentiated unity. This format does indeed throw light on rational personal development in relation to health. It draws primarily from the concepts of the interaction of opposites and the negation of the negation but could be

(a) It is an old Maltese custom to say that, while ill, we grow.

strengthened with reference to the concept of the transformation of quantity into quality at transitions. At a certain point in our lives, the effects of, on the one hand, positive nourishing inputs or, on the other hand, of negative destructive inputs, make or break our health.

Secondly, Cohen traces the dialectic in relation to society and production. In pre-capitalist society, a handicraft worker managed a total process of production, fashioning a complete article which s/he could call her or his own work (concrete labour and undifferentiated unity). But under capitalism, workers 'merely add a contribution to an ensemble travelling along the factory floor'. Their labour is abstract and they are in differentiated disunity with their work. Only when production is democratically planned, when knowledge and skill are applied in the productive process by the producers themselves, when workers have economic power over the means of production, only then will the contradictions between labour and capital be overcome and only then will people achieve creative existence.

The contradictory unity of labour and capital that exists today - the mutual repulsion within an exploitative relationship - is internalised by people. All living things within its embrace are affected. The body metabolism and the eco-system cannot cope, and cancer is one manifestation of this contradiction. Health is the essence of labour and when labour under capitalism is performed in a state of alienation from oneself then the system is left wide open to crises - uncontrolled abnormal growths, irreversible decay, increasing polarisations - of the human body and the body politic. The complex totality of humans - activity - nature is threatened.

The prevalence of alienated labour(18) is central to understanding the contemporary problems of disease and diswelfare, destruction and undevelopment. Workers may have more ability now but their freedom is restricted, primarily because they do not own the means of production and have no control over productive activities and final products. Secondary restrictions on freedom follow from this contradiction between labour and capital : time and motion studies as detailed by Braverman and Stone (19) and 'external methods for correcting and controlling operations of the body,' as outlined by Foucault; and the manipulation of knowledge, wants and desires by capitalists' control of the media and the state, as witnessed by Galbraith, Veblen and Miliband.(20)

The following diagram, adapted and extended from Arthur's discussion of alienating activity (21), shows how the worker, is estranged from himself and from nature. 'His life-activity', says Marx,'does not belong to him'. Activity is the central determinant of human being, because as people express their life so they are. The alienation of labour is at the same time self-estrangement.(22)

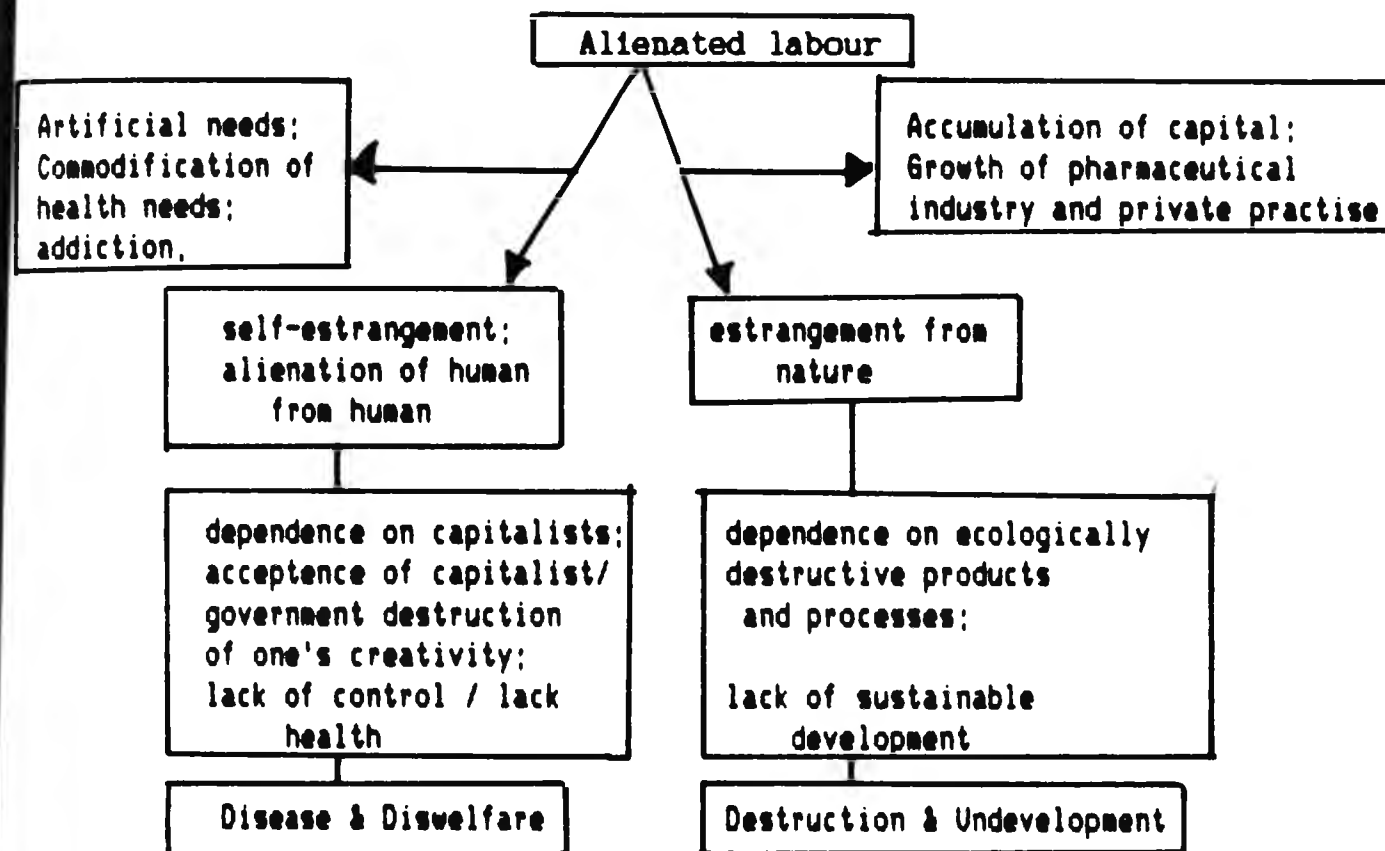
The alienated worker does not only lose his product, confronting him as an alien object, but also, nature, the basis of production, is monopolized by the propertied class. It appears an 'an alien world inimically opposed to him'.(23)

The diagram starts with alienated labour, for this is the nature of human productive activity today : subordinated to capital and its international division of labour. It ends with disease and destruction being the logical result of man's estrangement from himself, his fellow men and from nature. It

points to the fundamental need to overcome the contradictory unity of labour and capital and to gain freedom, health and harmony.

Figure 4

The Dialectical Relationship between Disease and Destruction



What is to be done?

The immensely powerful modern productive forces must be taken into worker's possession, not for the sake of the accumulation of capital in a few hands but to meet everyone's human needs. Marx argued for the abolition of private property as capital or alienated labour. When private property has become the negation of human freedom, it must itself be negated. This is a necessary phase 'to the liberation and recovery' of humankind.(24) The aim is health. The aim is development.

The full development of human mastery over natural forces, those of his own nature as well as those of so called 'Nature'...the absolute working out of his creative disposition, without any presupposition other than previous historical development...Where he does not produce himself in any determined form, but produces his totality. Seeks not to remain something he has become, but is in the absolute movement of becoming.(25)

It is that movement of becoming, that development of human capacity that is denied most people today. Human capacity is essentially ability and freedom. The history of production shows a tremendous development in man's abilities, from mechanism to cybernation but man's freedom has not developed correlatively. Instead, we live in a cult of discipline, docility, acceptance, and addiction: a cult that is but the natural outcome of the contradictory unity, the mutual reciprocal opposition, of labour and capital in production. The relations of production, based as they are on short-term maximisation of profit for a minority of property-owners, are the essential obstacles to the health and development of the mass of people.

Reform, not revolution, is on most people's agenda. The duality of reform is its limitation. Reduction of work-hazards increases workers' health, efficiency and productivity but also raises costs. Each side, labour or capital, pursues its own goal and in any compromise between opposing forces there is a winner and loser. The interests of capital will dominate unless reforms are persistent and coordinated. An unbroken chain of social transformations, a schema of revolutionary, anti-capitalist reforms, supported by extra-parliamentary direct action, is necessary.(26) Only then will the limitations of reforms in the capitalist system be overcome, enabling people to take wealth and power, freeing themselves from exploitation and estrangement, organising production in the long-term interests of all and becoming responsible for the earth they have borrowed from their children.

PART THREE

The State and Social Policy: Welfare and Population: Smallness: Patriarchy

The state and social policy

The question of what is to be done to ensure health and development leads us directly into a discussion of the role of the state and social policy. Malta was continually in contact with what Hodges(1) calls 'primary states' - more complex civilisations that operated long-distance trade through our harbours. Imperialism and local institutional, hierarchical mechanisms therefore developed in well-fortified towns and port areas on these islands. But it is probable that traditional levelling mechanisms continued to operate in country areas. The problems of distance between Malta and the dominant state made strict administration difficult, although the small size of the islands presented no geographic obstacle to internal penetration. It was when under military threat or when the imperial power was actually home-based (like the Knights of St John) that the state's reigns of control tightened.

Let us first identify the 'state'. According to Hodges, it is 'a strong centralised government with a professional ruling class largely divorced from the restrictions of kinship'... 'it has a monopoly of force and effects a stable and permanent hierarchy which can withstand the disruptive effects of successive struggles'.(2) States are expensive levels of organisation to create and maintain. Hodges gives primacy to the expanding market with its high energy circulation in enabling the emergence and sustenance of such a complex infrastructure as the state. But it is clear that productivity must sustain a relative surplus population for the state to function.

The discussion, at the end of Part One, of the Marxist approach to imperialism indicated the importance of the state in giving stability to the capitalist system. Baran for instance analysed the military outlays and imperialist ventures of the state in advanced countries as being necessary to the survival of monopoly capitalism with its tendency to underinvestment and underemployment. He conversely saw the state's role in less developed countries as crucial to progress. It must control foreign firms, prevent the extraction of surplus and invest in local rational production. More recently, O'Connor and Gough(3) among others, have analysed the role of the state and its recurring conflicts in aiding capital accumulation and ensuring overall health and harmony.

They argue that the way one class extracts surplus from another, 'the way production is organised and the means by which the production and extraction of the surplus labour product takes place'- ultimately determines the nature of the entire social structure, including the state. In *The Political Economy of the Welfare State* (1981) Gough observes that most of the growth in state activity has taken place in the twentieth century in the era referred to as 'monopoly capitalism'. Following O'Connor's pioneering analysis he discerns, 'two basic and often contradictory functions of the capitalist state: accumulation and legitimisation' (4). All state expenditure has a twofold nature, that of social capital and social expense. Social expenses, for example, expenditures on pensions, are not productive for private capital but legitimise the system, while social capital, for example, expenditure on roads, is indirectly productive as it increases the productivity of private capital. Social capital has a twofold character: social investment that raises the

productivity of labour and social consumption which lowers the reproduction costs of labour power. Nearly every state expenditure is part social investment, part social consumption and part social expense. Let us turn to a simple relevant example. Take sanitary services - drainage and clean water supplies. These improve health and therefore the productivity of labour and to that extent are a social investment; they also in the long run reduce the reproduction costs of labour power and to that extent are a social consumption; and finally they are also supplied to the old and infirm and to that extent they are a social expense.

But even this simple example shows how there can be conflict between state policy and certain sections of capital. Improvements in sanitary services have necessitated the demolition or rehabilitation of slums. This state policy has been in conflict with the capital accumulation interests of certain landlords and accounts for some of the nineteenth century delays in sanitary reforms(a). Again today, the provision of uncontaminated water is increasingly vital to people's health and productivity but the task of keeping water clean brings the state up against formidable bastions of monopoly capital, such as the chemical and nuclear industries, whose capital accumulation process would be disrupted by restrictions on waste disposal.

The Gough-O'Connor framework of analysis also clarifies the conflicts the state faces within its role of aiding accumulation. Take for example the choice it faces between state expenditure on preventive/industrial health services and curative health services. The former, social investment, increases the general

(a) for a local example see chapter five.

productivity of labour by preventing health hazards at work and in the environment as a whole. Thus an industrial health service contributes to the profitability of private capital in the long term. But in the short term, the extra expense of preventing hazards at work or reducing pollutants to the environment invariably reduce the profit rate of individual firms.

The latter alternative state policy: expenditure on curative health services (largely social consumption) is and has been an easier option in capitalist countries. The profits of the powerful pharmaceutical oligopolistic and monopolistic industry are directly raised through state purchases of drugs and equipment.(5) The incomes and capital of a powerful section of the ruling class - consultants, professors and doctors of medicine - are directly augmented. Meanwhile the state is seen to be caring for people's health in a way that is not so apparant with preventive programmes. A big hospital is more striking than the removal of invisible contaminants from the air or water. So emphasis on curative expenditure, not only directly aids the accumulation process but also apparantly, legitimises the system.

Welfare and population

In the past two decades of depression in the capitalist system, a larger relative surplus population has emerged and this has led to the revival of the demographic-determination school of thought. In I.M.D. Little's review of the post-1960 resurgence of neo-classical arguments, he summarises: There is a strong presumption that higher growth rates of population reduce the growth of income per head.(6)

The neo-Malthusian or neo-classical argument is based on the premise that a low proportion of working people to the whole population lowers the amount of capital per head and therefore lowers the amount of output and income per head. Manifestations of this disequilibrium, they say, are seen in :-high costs of education and other social services; the inability of food production to keep pace with demand; rapid urbanisation and increasing unemployment.

But the analyses assume an original stationary equilibrium, free of conflicts. It also raises the bogeyman of uncontrolled human reproduction. Essentially, the disequilibrium is assumed to be caused by people who have too many children. Their reproductive activity is treated as an abstract phenomena - even a law- without reference to the socio-economic structure of society. (7)

Earlier in this chapter(a), I have questioned the theoretical grounds for this attitude. There is also mounting evidence that fertility rates are closely and inversely linked to income and educational levels of women.(8) And if fertility rates depend on the level of development of a country they are not the primary but the secondary issue. It is the socio-economic structure that determines both development and fertility not uncontrolled fertility that undermines development.

No-one can deny that world population has been growing at a phenomenal rate but radical economists argue that nothing can be achieved through family planning in isolation. Only if economic wealth and politico-economic power is redistributed more equally, can population control be achieved.

(a) see pages 32 and 33.

Relevance to health.

Holding all other things constant, when the rate of growth in resources of land and capital cannot keep pace with the growth rate in population, the health of the people in that country will deteriorate. Food becomes more costly; more and more people seek work in urban conurbations; unemployment, underemployment and poverty increase.

Apart from the well-known relationship between low incomes and ill-health, especially in crowded inner-city slums, the connection between unemployment and ill-health has also been shown(9). Periodic and even permanent unemployment is the lot of an increasing percentage of the labour force, especially in ex-colonies which lack the capital and technology that would ride them through cycles in the economy. The resulting stress and hardship cause ill-health.

A large relative surplus population also makes it harder to organise for healthy work-conditions. Occupational poisons and accidents are accepted because there is so much competition for each job. International companies manufacture their more dangerous products where there is least resistance. Examples are profuse.

But before ending this brief review of the alleged population problem, let us refer to the high population density that Malta enjoys - the highest in Europe and one of the highest in the world. Yet in the late 1970's, thousands of emigrants returned to Malta because they could find healthier and happier

lives here than in relatively sparsely populated regions of Australia and Canada.

Thus we can conclude that both the growth-rate and the density of population are factors that affect development but the effects are only negative in certain socio-economic contexts - when the capacity to realise a country's potential is impaired.(10) Population growth per se is not an obstacle to development.

Relative smallness

Arising from the discussion of relative surplus population is the question of a nation's relatively small-size and whether this in a political, economic or technical sense delays or prevents development. First political leverage is greater the wealthier and the larger is one's country. Membership of the United Nations, where each member has the same weight in the General Assembly, has given small countries elbow room for the first time. But it has not given them real clout. For that, much diplomatic skill is needed in paying off conflicting interests. As observed in *The Economic Development of Small Countries: Problems, Strategies and Policies* (1989): Although no country is refused membership to the United Nations due to its size, the microstates receive very limited and indirect attention. (11)

Secondly, small size means relatively few resources of land, labour and capital. Bottlenecks, due to scarcity of specific skills or specific materials are likely. There is relatively little scope for reaping economies of large scale production in which 'output per man hour grows as work becomes more specialised, equipment can be designed to produce a larger output at lower

cost, larger supplies of materials can be finely graded, and so forth.'⁽¹²⁾ Dependence on imported goods and services and consequent balance of payments problems are inevitable. An additional drawback is the lack of local capital for productive investment. The foreign extraction of the surplus, the drain of local capital abroad and the corruption of the local state are all factors that variously contribute to the dearth of local productive investment. But the small size of the local capital market and therefore the relatively small returns on investment are, per se, deterrents.

However, the discussion of economies and diseconomies of scale are too often couched in monetary and not human terms. As Pigou and others have shown, non-monetary diseconomies of scale such as pollution, can be large.⁽¹³⁾ They can outweigh the benefits workers may gain from large-scale capital investment and labour specialisation, especially in terms of health.

In addition, while the local market may be limited in size or in its rate of growth, production can be geared to the export market, diversifying by product and by customer, as the Malta Drydocks has so successfully done. Skillful and sometimes aggressive state diplomacy is often however a necessary element in obtaining contracts and avoiding balance of payments disequilibrium. Other advantages include import substitution, advanced equipment and private skills in export market strategy.⁽¹⁴⁾

Where a small country can get a sure foothold not just in overseas markets but also in a multi-national company, then its size again will be irrelevant. Brewer observes that the most important result of the emergence of multi-

national companies is that the expansion of the national capital of a country is not directly tied to the expansion of that national economy. While the latter, the national economy, may be weak or small, the former, the national capital, if invested soundly may be strong and big(15). However, there are real difficulties in encouraging and sustaining indigenous development in a small, open and vulnerable economy.

Patriarchy - an obstacle to development

Let us go back to Gulalp's distinction between development for the mass of people and development for the capitalist. Development here does not refer to the ruling-class view of progress in terms of increased capital, national product and consumption goods at the cost of increased equality. Development which is in the interests of the majority of people is development away from oppression and exploitation and towards health and freedom.

According to R.H. Tawney (1931), the chief obstacle to this type of development, or 'progress' is: the habit of mind which thinks it... natural and desirable that different sections of a community should be distinguished from each other. (16)

It is, in fact, more than a habit of mind that oppresses women. It is in the interests of capital accumulation that workers are divided.

Divisions of labour exist in all societies. Even in the most egalitarian hunting and gathering societies, a variety of tasks is accomplished every day, requiring a division of labour. But the division of labour is not equivalent to collective subordination. In her seminal work *Women & Economics; the economic*

factor between men and women as a factor in social evolution(1898), Charlotte Perkins Gilman describes women's collective subordination:

Half the human race is denied free productive expression, is forced to confine its productive human energies to the same channels as its reproductive sex-energies. Its creative skill is confined to the level of immediate personal bodily service, to the making of clothes and preparing food for individuals., While its power of consumption is inordinately increased,.. She is forbidden to make but encouraged to take. (17)

In a patriarchal society, men dominate and women are subordinate. Patriarchy can be defined as a set of social relations with a material base than enables men to dominate women. The material base of patriarchy is men's control of property income and of women's labour. (18) Economic, legal and political power is largely in the hands of men.

Women as a collectivity are distinguished as having particular interests. The biological distinction between women and men is used as the basis of a much wider socio-economic distinction. The biological capacity of women to be mothers has been used to widen the gap between men and women. The view of women as, primarily, vehicles of reproduction and their lack of payment for fulfilling this role ensures the reproduction of labour power at little or no cost to the ruling class.

Thus the phenomenon of women's oppression is contingent upon a dominant class exploiting women's capacities. Only at certain historical moments like wartime, when the dominant class needs to mobilise all workers into production, do most women break out of home confinement. But for most of

written history and in most parts of the world, women have been continuously engaged in reproducing the labour force: its daily servicing, reproducing labour power, and its replacement, reproducing labour. This ghettoizing is reflected in the labour market today where women tend to do jobs that are extensions of the home: teaching, nursing, cleaning, servicing. The lack of partnership between men and women and the marginalisation of women in political-economic life have been a major obstacle to harmonious development, or using Baran's phraseology, a major cause for the gap between the actual and the potential.

* * * *

Summary

Four obstacles to development have been discussed above. They are: the limitations and contradictions of state social policy; the high population growth rate or density; the small size of a national economy; women's oppression.

The population bogey has been dismissed as secondary, while small size, has been seen to have both pros and cons. Referring again to the limitations of state welfare policy and the contradictions inherent in today's capitalist system, we can see that the state's support of the military industrial complex and the drugs industry is capitalism's way of overcoming some of its internal contradictions. Both bullets and drugs, once consumed must be replaced. Emphasis on individual cures rather than mass prevention reduces the contradictions between the state's role as legitimiser and its support for private capital accumulation. In the following specific history of the Maltese

Islands, the role and limitations of the state will be highlighted. Meanwhile, the domination of woman by man has reduced the capacity of half the human race and has encouraged the growth of both militarised and consumption societies, so undermining real development.

Notes (Part One)

1) May L.A. *The Physiological and Psychological Bases of Health, Disease and Care Seeking* in *Introduction to Health Services* edited by Williams S & Torrens P. 3rd Edition N.Y. John Wiley & Sons (1988) p35.

2) The 'modes of production' debate in a colonial context is concisely reviewed by Anthony Brewer in *Marxist Theories of Imperialism : A Critical Survey* Routledge London (1989)
Foster-Carter A. *The Modes of Production Controversy* *New Left Review* 107, Jan/Feb (1978)

3) McKeown T. *The Role of Medicine. Dream, Mirage & Nemesis* Nuffield Provincial Hospital Trust (1976) see especially Chapter 2 on the seventeenth century 'philosophical turning point between the two different points of view of medicine'. Three lines of thought developed : that body and mind are separate; that the body is best interpreted as a machine; that the body is best controlled as a machine.

Doyal L. & Penuel I. *The Political Economy of Health* Pluto Press (1979) esp. pp 12-17. In summary, three crucial assumptions are made in the orthodox view: 1) that the determinants of health are predominantly biological; 2) medicine is a value-free science; 3) scientific medicine provides the only viable means for mediating between people and disease.

4) Galilei Galileo observing the night sky through a telescope in 1609 found that Jupiter was accompanied by several small satellites that orbited around it. Everything, then, did not revolve around the earth. He was one of the first to argue that man could hope to understand how the world works and we could do this by observation. For his belief in the independence of science he was severely repressed by the Catholic Church.

5) Doyal L. & Penuel I. *op cit* p29. For an interesting discussion of The evolution of western scientific medicine see pp 27-36.
Descartes R. *The Philosophical Works* (translated by E.S. Haldane & G.R.T. Ross) Cambridge University Press (1967).

6) Reiser Stanley *Medicine and the Reign of Technology* Cambridge University Press (1978) Gives a compelling account of the changes in the forces of production of medical care and the consequent changes in the mode of health care.

7) Cullis GC. & West P.A. *The Economics of Health*. Martin Robertson (1979) gives a clear exposition of the view that health is a consumption good : 'Good health and a long life are two among many desirable goals in life, and for most they are not afforded a special dominance in any hierarchy of wants.' p5.
Griffiths A, Bankowski Z. *Economics & Health Policy* Jointly published by the Council for International Organisations of Medical Sciences and the Sandoz Institute for Health & Socio-Economic Studies. Geneva (1980) Here it is argued that ' a new health order in which resources are fairly distributed must be part of the new social order which is the ultimate purpose of development' p13. For further discussion of inequalities in access to health care see:-

- Townsend P. & Davidson M. *Inequalities in Health. The Black Report*. Penguin (1982)
- Walters V. *Class Inequality & Health Care. The origins and impact of the N.H.S.* Croom Helm. London. (1980).
- 8) World Health Organisation *The First Ten Years of the WHO Constitution of the WHO Geneva* (1958)
- Bryant J. *WHO's Programme of Health for All by 2000*. Social Science & Medicine. Vol 14. Part A. (1980) pp 381-386.
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- 10(a) Dubos R. *Man, Medicine and Environment*. Pall Mall Press. (1968)
- (b) Dubos R. *The Mirage of Health: Utopian Progress and Biological Change*. New York: Anchor Books, (1959)
- 11) Dubos R.(a) (1968) *op cit* p 61.
- 12) May L.A. *op cit* pp41-44
- 13) Brody H. & Sobel D.S. *op cit* Thus the model of a person as a system not a machine was proposed. The system is defined as : an organised set of components conveniently regarded as a whole, consisting of interdependent parts.
- 14) Dubos R.(a) (1968)*op cit* pp 6-7.
- 15) Pearce D., Markandya A., Barbier E., *Blueprint for a Green Economy* Earthscan Publications London (1989)
- The Brundtland Report *Our Common Future* World Commission on Environment and Development United Nations (1987)
- 16) Fuchs V.R. *The Economics of Health in a Post-Industrial Society* . Public Interest. (Summer 1979) pp 3-20. Fuchs argues that for most of human history, income has been the primary determinant of health and life expectancy. It is the variable that explains most differences in health among nations and among groups within nations. But in USA this correlation between health and income 'has tended to disappear' and has been replaced by education. He argues that years of schooling enables people to think ahead and become more efficient at producing health.
- 17) Illich Ivan *Limits to Medicine. Medical Nemesis: The Expropriation of Health*. Penguin (1979) pp273,274.

18) For an earlier critical selection of views on this subject see: Powles J *On the Limitations of Modern Medicine* in *Science Medicine & Man* London Pergamon Press.(1973) Vol I pp1-30.

Also Ehrenreich J. *The Cultural Crisis of Modern Medicine* Monthly Review Press (1978) especially I.K. Zola's contribution *Medicine as an Institution of Social Control*

Inglis B. *The Diseases of Civilisation* London, Wiedenfeld & Nicolson (1976) Ch.4 p138.

He argues that the medical profession is in a cul de sac. Whether judged by the mortality rates of common diseases or the prevalence of serious illnesses, medicine has not resulted in any substantial improvement to Western society's health in recent years.

Navarro V. *Radicalism, Marxism & Medicine*. International Journal of Health Services. Vol 13. No 21. (1983) pp 179-202. This is an incisive criticism of the negative approach.

19) Doyal L. & Pannel I. *op cit* p19

20) May L.A. *op cit* p42.

21) Arthur C.J. *Dialectics of Labour* Basil Blackwell (1986) p 5-7.

22))The mode of production includes the productive forces (labour power and its materials) and the relations of production (the relative economic power of workers).

23) Cohen G. A. *History Labour and Freedom : Themes from Marx* Clarendon Paperbacks Oxford (1988). See especially chapters one and two, pp 3-36.

24) Arthur C.J. *op cit* p4.

25) Navarro V. (editor) *Imperialism Health & Medicine* Pluto Press London (1981) The Economic and Political Determinants of Human (including health) Rights.pp53-76

26) Marx Karl *A Contribution to the Critique of Political Economy* Lawrence & Wishart. London (1971) p20

27) The classic reference here is Reed Evelyn's *Woman's Evolution* Pathfinder Press New York (1975).

More recent research includes :-

Blaxter M & Paterson E. *Mothers & Daughters*. Heinemann (1982)

Mayall B *Keeping Children Healthy*. Allen & Unwin (1986)

Graham H. *Caring for the Family*. London Health Education Council (1986)

28) Here I draw upon Cohen's analysis *op cit* *The Dialectic of Labour in Marx*, pp183-209.

29) Cohen G.A. *op cit*; Sahlins M. *op cit*; Braudel F. *op cit*; Rubin I.I. *op cit*; Kula W. *op cit*.

30) Waitzkin H. *The Social Origins of Illness* I.J.H.S. Vol 11, No 1. (1981) esp. pp135-148

F. Engels showed that such features of 'urban life such as crowding, poor housing, inadequate sanitation and pollution combined with social class position in the etiology of disease and early mortality', in *The Condition of the Working Class in England* Panther (1969) .

31) Arthur C.J. *op cit* p30

Under capitalism, the concrete differences between kinds of labour are diminished. Labour becomes a means to create wealth in general, hence Marx' use of the term 'abstract labour' and it 'has ceased to be tied as an attribute to a particular individual'...*Critique of Political Economy op cit.* p 210.

Also see Marx K. *Theories of Surplus Value.* Lawrence & Wishart. London.(1972). Part III pp 130-139. And Cohen G. *op cit.* pp 193-196.

32) The latest estimate by the UNFAO is that at least one billion people in the world suffer from malnutrition including two-thirds of the world's 800 million children. This is quoted by Thirlwell A.P. *Growth & Development* MacMillan Educational Books (1989) p 35.

For a Marxist analysis see Chossudovsky M. *Underdevelopment and the Political Economy of Malnutrition & Ill-Health.* IJHS Vol. 13. No. 1 (1983). pp 69-83.

Castleman B.I. *The Double Standard in Industrial Hazards* IJHS Vol 13., No.1 (1983 pp5-14.

33) Eyer J. *The Social Aetiology of Disease* H.M.O. Packet No.2. Jan (1977) An Introduction to *Historical Materialist Epidemiology* p6.

34) Doyal & Pennel *op cit* pp 66-95.

35) Little I.M.D. *Economic Development: Theory, Policy & International Relations* Twentieth Century Fund Book USA (1982). p 17.

36) Kindleberger C.P.& Herrick B. *Economic Development* McGraw-Hill Book Co. (1977) Includes an amusing summary of the history of labels given to less developed countries.

37) Thirlwell A.P. *Growth & Development with special reference to developing economies.* MacMillan Educational Books (1989). p8.

38) Sen A. *Resources, Values & Development* Basil Blackwell (1984) p 497.

39) Smith Adam. *An Inquiry into the Nature and Causes of the Wealth of Nations* London 1776 p27

40) *ibid* Vol 2 p180

41) *ibid* Vol 1 p400

42) Malthus Reverend T.R. *An Essay on the Principles of Population, as it Affects the Future Improvement of Society* London 1798

Reviewed and criticised by Brenner R. in *Agrarian Class Structure and Economic Development in Pre-Industrial Europe* in *The Brenner Debate* edited by Aston T.H. & Philpin C.H.E. Cambridge University Press (1987) pp13-25

See also Dorfman R. *Thomas Robert Malthus and David Ricardo* Journal of Economic Perspectives Vol 3. No 3. Summer 1989. pp153-164.

43) Mass B. *An historical sketch of the American Population Control Movement* in *Imperialism, Health & Medicine* edited by Navarro V. *op cit* p 179

44) Hofsten E. *Population Growth - A Menace to What ?* in edited volume by Navarro V. *op cit* p 173.

45) Little IMD *op cit* p25

46) Godelier M. *Rationality and Irrationality in Economics* translated from the French by Brian Pearce. Monthly Review Press New York & London (1972) p25.

47) Robbins L. *The Subject Matter of Economics*. London MacMillan (1932). In which he defines economics as 'the science that studies human behaviour as a relation between ends and scarce means that have alternative uses.' Thus every action that combines scarce resources so as to better attain an objective is said to be economic. In fact this is pure economism - a wish to see in the economic an aspect of all human activity.

Lipsey R. *An Introduction to Positive Economics* London Wiedenfeld & Nicolson Fifth Edition (1979)

Samuelson P. *Economics : An Introductory Analysis* New York (1958)

The father of neo-classical thought was Alfred Marshall who wrote *Principles of Economics* in 1890. Reprinted in Macmillan Educational Books (1961)

Particularly penetrating critique is found in Judy Klein's PhD "The conceptual development of population and variation as foundations of econometric analysis" City of London Polytechnic (1986)

48) For instance the Cobb Douglas Function :

$$O_t = T_t K_t L_t$$

Where O is output at time t; T_t is technology at time t or commonly referred to as the residual factor; and K_t is value of capital at time t ; while L_t is the value of labour input.

49) Labour, it was realised, is not homogenous but comprises (to take Kindleberger's simple breakdown *op cit* p 104) :

- a) raw labour :- unskilled physical work,
- b) human capital:- including schooling; on-the-job training; job market information; health & nutrition; migration.

50) Nadiri M. *International Studies of factor inputs and total productivity*. Review of Income & Wealth (June 1972) pp129-54.

51) Maddison A. *Economic Progress & Policy in Developing Countries* London Allen & Unwin (1970).

52) In the latest economic texts on development, such as:-
Thirwell's *op cit* and
Todaro M.P. *Principles & Concepts. Development Economics & Third World nations - a global perspective.* Longman New York & London (1989), whole sections are dedicated to 'education & development' while 'health & development' is hardly referred to.

53) Mishan E. *Evaluation of Life and Limb. A theoretical approach.* Journal of Political Economy Vol, 79. no. 4. July/August (1971) pp 687-705
Layard R. (editor) *Cost-Benefit Analysis* Harmondsworth, Penguin (1972)

54) Cullis J.G. & West A.W. *op cit* p4.
Other examples of this approach are found in:-
Mushkin S. J., Dunlop D.W. *Health: What is it Worth? Measures of Health Benefits.* Pergamon Press (1979)
And numerous other cost-benefit studies to health evaluation, for instance :-
Harris A. *Study of the Relative Needs of the Handicapped* HMSO (1971);
Culyer A.J., Lavers R.J., Williams A., *Social Indicators of Health* Social Trends No.2. (1971)

For a critical review of this approach see Irvine J. et al *Demystifying Social Statistics* in particular *Operational Research and Cost Benefit Analysis. Whose Science?* Also Godelier M. *op cit* p 254.

55) Cullis & West *op cit* p77

56) For example Griffiths A & Bankowski Z. *op cit*

57) Little IMD *op cit* quoting Hollis Chenery p19.

58) *ibid* p20.

59) Myrdal Gunnar, *Asian Drama* Pantheon (1968)
----- *Challenge of World Poverty* Routledge & Kegan Paul (1970)
Interestingly, Godelier places Myrdal within the dialectic method but I don't think that Myrdal's study of cumulative causation, warrants such a categorisation.

60) Frank G.A. & Johnson D. L. *Dependence and Underdevelopment: Latin America's Political Economy.* Doubleday & Company New York. (1972).
Fanon Franz *The Wretched of the Earth*
Dos Santos T. *The Structure of Dependence.* American Economic Review. (May 1970) pp 231n

61) Amin Samir, *Unequal Development.* Hassocks, Sussex (1976).
Accumulation on a World Scale Monthly Review Press, New York (1974)
Theoretical Model of Capitalist Accumulation Review of Africa Political Economy no 1. (1974)
See a critical survey of Amin by Brewer A. *op cit* pp233-257

- 62) On the New International Economic Order see IMD Little *op cit* p and Todaro pp 600-602
- 63) Sen A. *op cit* p309n in particular his conclusions are based on survey results one year after the Great Bengal Famine 1943-44.
- 64) *ibid* p334
- 65) Sen A. *The Standard of Living*. The Tanner Lectures 1985 printed by Cambridge University Press (1987).
- 66) Dubos R.(b) *Mirage of Health*. Harper Colophon (1979) p17
- 67) For a lucid critique of utilitarian economics see IMD Little *A Critique of Welfare Economics*. Oxford University Press (1970)
- 68) Sen A *op cit* p 104.
- 69) For a succinct review of contemporary marxism see McLellan David *Marxism after Marx* The MacMillan Press (1979) who traces the origin of structuralism to 'the linguistic studies of Saussure and Jacobson who investigated the structure underlying language in general rather than its specific developments.'p298.
- 70) Althusser L. *For Marx*. London & New York(1970) and a recent analysis of his thought is written by Elliott G. *Althusser The Detour of Theory*. Verso London & New York (1987)
- Poulantzas N. *Political Power and Social Classes* London (1973) in which the state's autonomy in relation to the economy is posited.
- Poulantzas N. In *Classes in Contemporary Capitalism* London (1975) 'Poulantzas rigorously excludes, along Althusserian lines, reference to consciousness in his analysis and rejects anyh form of economic reductionism.'(McClellan p 304)
- Godelier M. *Rationality and Irrationality in Economics*. New York & London Monthly Review Press (1972). Who asks what is the rationality of the economic systems that appear and disappear throughout history and whose dialectical analysis is drawn upon in this thesis.
- 71) Althusser L. *op cit* p 232
- 72) McLellan D. *op cit* p 301.
- 73) Elliott G. *op cit*. p 153
- 74) *ibid* p 157.
- 75) *ibid* p 155.
- 76) Althusser L. *op cit* p 201-2 and quoted in Elliott G. *op cit* p 155.

77) Elliott G. *op cit* p 155.

78) *ibid* p 157

79) *ibid* p 195

'Having indicated that the economy retains a determinant role as a result of the survival of, for example petty commodity production and the existence of large inequalities of income, Althusser comes to his 'essential point':

the thesis of 'regression' presupposes that in a certain conjuncture of the history of socialist countries, *the ideological* can be the *strategic point* where everything is decided. Hence the crossroads is situated in the ideological and the future depends on it. The fate of the socialist country (progress or regression) is played out in the ideological class struggle.

80) Godelier M. *op cit* p 80.

81) *ibid* p78n

82) Foucault M. *Discipline and Punish: The Birth of the Prison* Allen Lane, London (1977) p136

83) *ibid* p137

84) *ibid* p138

85) *ibid* p138

86) *ibid* pp195-197

87) *ibid* p198

88) *ibid* p199

89) *ibid* p218

90) Brewer A. *op cit* p 41

Marx K. *The British Role in India*, and *The Future Results of British Rule in India*. New York Daily Tribune 25 June 1853 and 8 Aug. 1853.

Avineri S. (ed) *Karl Marx on Colonialism and Modernisation*. Cambridge University Press (1969) pp93/4

Warren B. *Imperialism : Pioneer of Capitalism* New Left Books, London & New York pp40/1.

91) Arthur C.J. *op cit* p7.

Marx K. *Capital* Volume Three Lawrence & Wishart London (1970) Ch.20 p322

92) Rubin Isaac Ilych *A History of Economic Thought* Ink Links London (1979) for an interesting study of mercantilism and its decline see Part One.

93) Lenin V. *Imperialism the Highest Stage of Capitalism* Foreign Language Press. Peking (1973). p 148.

- 94) *ibid* p117
- 95) Baran Paul A. *The Political Economy of Growth* Monthly Review Press (1957).p xl.
For a critical survey see Brewer A. *op cit* pp131-157.
- 96) Baran P.A. *op cit* p 85.
- 97) *ibid* pp 119-129.
- 98) *ibid* pp 151-162.
- 99) *ibid* p 299.
- 100) *ibid* p 300
- 101) Brewer A. *op cit* p138.
Brenner R. *The origins of Capitalist Development: a Critique of neo-Smithian Marxism* New Left Review 104 (1977)
- 102) Frank A.G. *Capitalism and Underdevelopment in Latin America* New York (1967)
Latin America : Underdevelopment or Revolution New York (1969)
Wallerstein I. *The Modern World System* New York (1974)
- Again see Brewer A.(1984) and Brenner R. (1977) for incisive critiques.
- Of interest on India and Ireland are:
Bagchi Amiya Kumar. *The Political Economy of Underdevelopment* Cambridge University Press (1982) esp Chapter 4.
Crotty Raymond *Ireland in Crisis : a study in capitalist colonial undevelopment.* Brandon (1986). Again Crotty falls into the 'Smithian trap' by asserting that of central importance in the process of undevelopment is the mispricing of factors of production pp234-236.
- 103) Amin Samir *op cit.*
Schiffer J. *The changing Post-war Pattern of Development: The Accumulated Wisdom of Samir Amin.* Pergamon Press Ltd (1981) & World Development Vol.9. No.6. pp 515-537. (1981)
- 104) Kay G. *Development & Underdevelopment: A Marxist Analysis* MacMillan Press (1975)
- 105) Taplin Ruth. *Economic Development and the Role of Women* Avebury, Britain(1989) pp1-5
- 106) Warren Bill *Imperialism: pioneer of Capitalism* New Left Books (1980) p9.
- 107) *ibid* p67-68
- 108) *ibid* p82.

Chapter One/Notes

109) In contrast see Navarro V. *Imperialism, Health & Medicine*. Pluto Press London (1981). He underlines the very lack of equality inherent in imperialism, in particular the technological and cultural dependency. pp23,24.

110) *ibid* p 113

111) *ibid* p 129

112) Gulalp Haldun *Debate on capitalism and development: The theories of Samir Amin and Bill Warren* Capital & Class No.28 Spring 1986. pp138-159.

113) Brewer A. *op cit* p273

114) Engels F. *The Origin of the Family, Private Property and the State* (1884)
Trotsky L. *Women and the Family* New York (1970)
Zaretsky B. *Capitalism, the Family and Personal Life* Pluto Press (1976)

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1) Cohen G.A. *op cit* p18

2) Mao Tse Tung *Selected Works* 1937. Foreign Language Press, Peking (1977).
Vol 1. pp311-315

3) Engels F. *Anti-Duhring* Progress Publishers USSR. (1975) especially Chapters XII and XIII.

4) Cohen G.A. *op cit*
Brenner R. *op cit*

5) Hegel G.W.F. *Science & Logic* translated by A.V. Miller, Allen & Unwin. London (1969)

6) Colletti L (a) *From Hegel to marx* New Left Books (1973)
---- (b) *From Rousseau to Lenin* New Left Books (1972)

7) Engels F. *op cit* p152

8) Colletti L. (a) *op cit* p48

9) *ibid* pp281-2

10) Marx K. *A Critique of Political Economy* pp41-42

11) Engels F. *op cit* p169
Marx K. *Capital* Volume 1. London (1970) p763.

12) Braudel F. (1981) p33

13) Engels F. *op cit* p160

14) Cohen G.A. *op cit* p192

- 15) *ibid* p193
- 16) Hegel G.W.F. *op cit* p138
Colletti (1973) p 15.
- 17) Walker A. *The Colour Purple* The Women's Press London (1983)
- 18) Arthur C.J. *op cit*
- 19) Braverman H. *Labor & Monopoly Capital. The Degradation of Work in the Twentieth Century.* Monthly Review Press (1974)
Stone K. *The Origin of Job Structures in the Steel Industry in Roots & Branch* edited by root and branch Fawcett Crest, USA (1975) pp123-157.
- 20) Galbraith K. *The Affluent Society* London Hamilton (1969)
Veblen T. *The Theory of the Leisure Class* The Modern Library, New York (1934)
Miliband R. *The State in Capitalist Society* Quartet Books London (1973)
- 21) Arthur C.J. *op cit* p8.
- 22) *ibid*
- 23) Marx K. & Engels F. *Collected Works* London (1975) Vol.3 p275.
- 24) Arthur C.J. *op cit* p38.
- 25) Marx K. *Grundrisse* Penguin Books London (1973) p 488.
- 26) Kagarlitsky B. *The Dialectic of Change* Verso (1990) pp34,35.

Notes (Part Three)

- 1) Hodges R. *Dark Age Economics: The origins of towns and trade AD 600-1000* Duckworth London (1982) p180n
- 2) Hodges R. *ibid* p189
- 3) O'Connor James *The Fiscal Crisis of the State.* St James Press (1973).
Gough Ian *The Political Economy of the Welfare State* The MacMillan Press (1981) p18
Miliband R. *op cit* This is especially thorough on the state's process of legitimation.
de Brunhoff S. *The State, Capital & Economic Policy.* Pluto Press. (1978). Particularly lucid on the state's management of labour.
And Kay G & Mott J. *Political Order and the Law of Labour* MacMillan Press (1982)
- 4) Gough I *op cit* p51.
- 5) Malta Government Expenditure on medicine in the 1960's showed an annual average increase of 13.45% but in the 1970's an average annual rise of 19.17%

but total recurrent expenditure on Maltese health care rose by only 9.69% each year 1962-70 and 13.55% each year 1971-80. In comparison in the 1970's in Britain expenditure on medicine by the Government hospital and general practitioner services increased by 19.77% per year. (My data from official sources).

This study opens up a whole area of potential research and progressive action.

6) Little I.M.D. *op cit* p 145n.

7) Malthus Rev. *Essay on the Principle of Population 1789. Reprinted in Population: A Clash of Prophets*, edited by B. Pohlman. The New American Library Inc. New York (1973).

In opposition see *Marx and Engels on the Population Bomb*, edited by R.L. Meek, Ed.2. Ramparts Press, Berkeley, California (1971) and Marx K. *Theories of Surplus Value III*, Lawrence & Wishart London (1972) pp 13-68.

8) Hofsten E. *Population Growth- A Menace to What?* in *Imperialism, Health & Medicine* edited by V. Navarro. *op cit*. pp 171-178.

McKeown T., Record R.G., Turner R.D. *Population Studies* (1975) Vol 29 pp391-422

9) Brenner M.H. *Mortality and Economic Instability: Detailed Analyses for Britain and Comparative Analyses for Selected Industrialised Countries*. *International Journal of Health Services* Vol 13. No. 4. (1983) pp 563- 620.

10) Bagchi *op cit* p 20.

11) Kaminarides J; Briguglio L; Hoogendonk H.M. *The Economic Development of Small Countries* Eburon Publishers. The Netherlands (1989) p xii

A seminal collection is edited by E.A.C. Robinson *Economic Consequences of the Size of Nations*. New York (1960)

12) Robinson Joan. *Economic Heresies* MacMillan London (1971) pp 52-63.

13) Pigou A. *Socialism versus Capitalism* MacMillan Press London (1937)

Schumacher B.F. *Small is Beautiful* Harper & Row New York (1973)

14) Jansen A.C.M. & Lambooy J.G. *Economic Policy in Very Small Countries* in *op cit* book edited by J. Kaminarides. pp28-35

15) Brewer A. *op cit* pp274-294.

16) Tawney R.H. *Equality* written in 1931 and reprinted in 1964 by Allen & Unwin London. p442.

17) Perkins Gilman C. *Women & Economics*. First published in 1898. Edited C. Degler. Harper Torchbooks Harper & Row New York (1966). pp 117/8.

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18) Vogel L. *Marxism & the Oppression of Women* Pluto Press (1983) esp pp 135-150.

Oakley A. *Women's Studies in British Sociology* *British Journal of Sociology*. Vol 40. no. 3. Sep (1989) pp 442-470.

Chapter Two

DISEASE AND DEVELOPMENTS IN MALTA UP TO THE MIDDLE AGES

The Pooling of Human Experience

Mixed cultures may denote stratified societies divided into rulers and ruled. In any case they are richer than either of the component cultures in that they result from the blending of two social traditions evoked by distinct environments. They illustrate one of the most important processes in the pooling of human experience. Gordon Childe p75.

Turning now from the theory to the specific, I am left with the question of where to begin in unravelling the history of classes, health and development in the Maltese Islands. Where else, but at the beginning? However, in taking such a long time span, this chapter stretching from 5,000 bc to 1530 ad, more questions tend to be posed than answers given. The historical pattern of health, illness and development must be studied in the specific conditions of a people's forces and relations of production but the historical material is often lacking. Holistics would argue, for instance, that the the Neolithic Temple people lived in a 'natural health state'. With diverse food supplies, birth spacing, smaller family size and therefore low density and small population size; with a peaceful environment, harmony between the sexes and a oneness with nature; with a greener, wetter land and a richer, cleaner sea : with beautifully situated public places to gather and praise Mother Earth and the Big Mother ; was not life bountiful? Perhaps - but not always. Oneness with nature signifies engulfment by it and people, whose forces of production were undeveloped, had no protection against unpredictable scarcities or dangers. The still unexplained disappearance of this culture suggests that it

carried the seeds of its own destruction. Contradictions inherent in every society result in progress or regression depending on the specific circumstances. Let us begin with some specifics.

1. Changes in land and sea

In the beginning were the sea and the carob tree.

The Maltese Islands lie in the middle of the Mediterranean on a submerged ridge that it seems once linked Europe to Northern Africa between the deep Western and Eastern basins. Marooned after the great flood broke through the Straits of Gibraltar (or the Pillars of Hercules) , this 'one-time land bridge' now forms 'the basic dividing line of the Mediterranean Sea.'⁽¹⁾

The landscape has changed. This process is vividly described by Ernle Bradford. People - hunting, farming and boat-making - depleted the forests. They were slowly replaced by thickets of shrubs: of rosemary and sage, myrtle and Aleppo pine - the maquis. This too was slowly cleared, being used among other things for charcoal, resin and fibre.

The stony, arid land that is characteristic of the Mediterranean today, remained. On it many aromatic and medicinal plants thrive. 'It is the parent of almost every culinary herb' ⁽²⁾: rosemary, lavender, thyme, sage, savory, garlic and rue. Writing on the Mediterranean in the sixteenth century after Christ, the great French historian, Braudel exclaims : 'What a wealth of medicinal herbs. But extraordinary fauna and flora can never be taken to indicate abundance.'⁽³⁾ Where the soil has been destroyed, not even these hardy plants

survive. In many places, fennel and caper bushes, the carob and the prickly pear trees are the only green patches to break the scorched monotony.

Two trees deserve special mention. Both have long lives. The carob is the oldest indigenous tree. Large and spreading it gives welcome shade. Its long pods, or locust beans, hang prolificly from its branches in Spring and Summer providing food for the poor and feed for cattle. Juice from the boiled carob pods is a sure palliative to coughs. Chewed it also prevents dysentery. The seeds were the original 'carat' weight of the jeweller and the wood is hard and lustrous, good for walking sticks and marquetry.

The cultivation of the olive tree has provided wealth and health to Maltese and other Mediterranean peoples from earliest times. Olive oil has been used for cooking, lighting, anointing the body and medicine. Olives, preserved and eaten with bread and tomatoes, are a staple diet. The olive branch, reflecting the tree's material bounty, was in Biblical times and remains today the emblem of peace.

Malta, in common with all Mediterranean islands, periodically suffered scarcities, especially of water and wheat. With few resources besides limestone and human beings, the going has often been rough. Thus the traditional wisdom of the Maltese way of life is to combine everything possible: farming and fishing, trade and business, 'adding together meagre resources and wasting nothing'⁽⁴⁾, doing things in moderation, often seasonally.

Chapter Two

Droughts have been constant threats to agriculture and human life for four thousand years. A perennial problem is the lack of sufficient drinkable water. The average rainfall is only 22" (560mm) but this figure varies greatly from year to year. It comes in torrential showers of never more than a few days during the winter months. Such downpours have the disadvantage of washing away soil from hillsides so, for many thousands of years, rubble stone walls (*hitan tas-sejfer*) have been painstakingly built to retain the earth.

Climatic conditions have changed. 'Probably during most of the Neolithic period conditions were wetter, but since the late Middle Ages the climate has been very similar to that experienced today', notes Blouet.(5)

While the face of Mediterranean lands has changed from forest to rock, buildings and occasional tree or shrub, the sea has changed less. It too has been regularly overharvested and has long been relatively unprolific. But the many different species of fish, in particular tunny, dorado and swordfish, still constitute an important part of the diet of Mediterranean people. That fishing was a common industry in Malta over four thousand years ago is shown in the many images of fish found in the Bugibba Temples. Of the resources that lay in abundance around the first inhabitants, fish were surely important. They provide an important clue to what Marshall Sahlins in *Stone Age Economics* calls the 'original affluent society'. (6)

Then and now, the fact that the sea is never far away in Malta has a tempering effect, both physically and mentally. In the exhausting heat and constant sunshine of at least two long summer months, whole families move home to the

the cool shores. The sea calls to us to rejuvenate in its clear blue waters. Its waves, resounding on the limestone shores brought Malta's first inhabitants some seven thousand years ago, brought bounty and peril, and the extraordinary wealth of experience of countless people through hidden ages.

2. Prevalent Diseases and Population Trends

What kind of diseases did the Maltese suffer from? This is the first question to ask because how people die is determined by and to a large extent determines how they live. It is also, as argued in chapter one, through the opposite of health that we see health's development.

Two preliminary notes of caution are necessary. First, there are many difficulties and dangers in looking back into the past, especially when few primary sources exist. This chapter gives only a glimpse (where I would have preferred to provide insight) into health, its determinants and its care. It's sweep extends from the Neolithic Age through to the Middle Ages. The fact that the period we are dealing with covers over 4,000 years is enough to indicate that each subject touched upon here requires several books. The additional fact that the Mediterranean world and Malta's rulers changed so much and so often during this period indicates the richness of experience to which I cannot do justice in the following pages. However, some things have not changed. Even today, the pattern of agricultural life is not unlike what it was in Phoenician times. One can often pass a farmer digging furrows with a hoe, or working a mule-drawn plough and find gardens with primitive wooden beehives similar to ones that must have been used to gather honey so many thousands of years ago. In addition, the period covered here has a common factor despite the many

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changes that it saw. The principal mechanical energy available in all these cultures, as Sahlins points out, was that supplied by human beings.

A second note of caution is apposite because changes (or the lack of change) in disease frequencies and disease types may reflect changes (or the lack of change) in the adequacy of diagnosis and reporting. For instance, a diagnosis of the 'fever' may have meant malaria or the plague, or more lately either yellow fever or undulant fever. Contagious fevers abounded in Malta's Summertime, according to the Commission sent by the Knights of St John in 1528. Most probably it was referring to malaria, but one cannot be sure.⁽⁷⁾ On the other hand, changes in disease frequencies and disease types may simply reflect variations in the character of the germ or virus; or thirdly, changes in the genetic structure of the population (e.g. through migration); as well as changes in nutrition, sanitation or medical knowledge. Whilst, I choose to emphasise the role of the latter in the context of class relations, it is not to deny the existence and importance of the former factors.

The question of diagnosis is particularly relevant because the most manifest ailment was 'the fever' for most of this period and this could have meant one of many diseases that bear feverish symptoms. However, the most prevalent disease seems to have been malaria. Malaria was for many hundreds of years, endemic to the Mediterranean. Its early prevalence is suggested by the wetter and therefore marshier conditions in earlier times and is evidenced by many examples of medical papyri of Ancient Egypt (from 3,200 bc) of charms and spells used in attempts to drive away fever. Fever, chills, sweating, anaemia and headaches, renal failure, acute encephalitis and coma were sure signs that

malaria was spreading again. Usually it drastically reduced the victim's labour power. Its individual virulence, like most contemporary contagious diseases, depended on the weakness of its potential victim. In many cases, especially of women and children, it was fatal. Braudel remarks:

Before the use of quinine, malaria was often a fatal disease. Even in a mild form it led to a reduction in the vitality and output of its victims. It wore men out and led to frequent appeals to labour. It is a disease that directly results from the geographic environment. Plague, carried from India and China by long-distance travellers, although greatly to be feared, is only a passing visitor to the Mediterranean. Malaria is permanently installed there. It constitutes the 'background to Mediterranean pathology'. (8)

Towns renowned as malaria-catchment areas were frequently visited by Maltese traders e.g. Brindisi, Rome and Alexandria. Meanwhile, areas of Malta that were marshy such as Marsa, Qormi, Msida, Salina and Marsaxlokk were natural breeding grounds for the carrier of malaria - the female anopheline mosquito. These places, being low-lying, were catchment areas of stagnant water. The 'fever' was the result, especially when the infested region was disturbed by man (9). Stagnant water and the 'bad odour' emitting from it was long believed to be a health hazard and various efforts were made to prevent recurrence of malaria epidemics.

Leprosy and trachoma had long plagued the Mediterranean and Middle Eastern communities. The leprosy bacillus can be cultured in the footpads of mice but its exact mode of transmission is unknown. It is only mildly communicable from skin lesions and nasal discharges of infected people but the horror of its progression and the fact that it was endemic in the Maltese Islands must have brought much fear, loathing and suffering. By the middle of the thirteenth century, leprosy was becoming less common in Europe, perhaps due to the higher

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incidence of epidemic diseases such as the plague. The leper hospitals or lazar houses, in which lepers had been isolated since 1179 by Canon Law, began to fall into alternative or dis-use.(10)

In the Maltese Islands, leprosy (gdiem) seems to have been prevalent during Arab rule (870-1090 ad) and throughout the Middle Ages. It seems to have persisted for, as Dr Paul Cassar scrupulously states, 'on the 29th October 1659, the Council of the Order of St. John was expressing its concern about the fate of the sick poor suffering from leprosy'.(11) But, Dr Cassar goes on to note, few cases were subsequently reported until a rise in the dissemination of the disease in the late nineteenth century when a leper hospital was built at Mgieret.

Eye diseases -trachoma and ophthalmia - were widespread, especially where there were crowded living conditions, poverty and a dry, dusty environment. In his chapter on *Trachoma*, Cassar begins:

Though it is not known when trachoma was first imported into these Islands, there is sufficient evidence to show that eye diseases were common in the past. Quintinus, the author of the earliest description of Malta to be printed, remarked in 1533 that the dust raised by the wind in summer from the rocky terrain of the Islands had a deleterious effect on the eyes of the inhabitants...Boisgelin made a similar observation... 'there are many blind people; indeed the greatest number have weak eyes,' writing in 1805.(12)

The social and economic handicaps of weak sight and blindness were not however of much interest to the ruling classes until the first world war and among the many post-war emigrants, trachoma was found to be a serious handicap. Children are particularly susceptible to trachoma - a communicable kerato conjunctivitis- and it is of lifetime duration if left untreated. Basic sanitation, especially the availability of pure water and soap is vital to its prevention.

Bilharziasis, the terrible debilitating disease from which so many Egyptian and other African peasants still suffer - and which is carried by certain species of snails which breed in irrigation canals- was known in ancient times (13) but does not appear to have been prevalent on the Maltese Islands. However, other illnesses, mentioned on the Ancient Egyptian medical papyri, were no doubt suffered by the Maltese. These include rheumatic and arthritic complaints, women's diseases, diseases of the lungs, liver, stomach, bladder and for various affections of the head, scalp and teeth.

The big plague epidemics came later, spreading from the East, carried by rats and rat fleas.(14) Some idea of its mode of transmission may have existed thousands of years ago. For instance, the Philistines would attempt to pacify their God by offering golden rats and golden bubos when plague visited them. After Galen, the main factors responsible for plague generation and spread were believed to be physical constitution, vitiated air and contagion. However, the plague bacillus was not discovered until 1894 and its 'transmission cycle, rodent-flea-man, demonstrated in 1898.'(15) Its symptoms include fever, headache, vertigo, nausea and vomiting. Buboes accompanied by pain then soon appear.

Known epidemics occurred on the Maltese Islands in 1270, 1348, 1427-8, 1453, 1501, 1519, 1523, 1575, 1592, 1623 and 1675 at which date it is estimated that over 11,300 people died of it out of a total population of about 50,000. The plague struck again at the end of the Napoleonic Wars, at the end of the first world war, in 1936-7 and at the end of the second world war. The importance of poor socio-economic conditions is suggested by the pattern of this

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recurrence. The plague fatality rate is high: untreated bubonic plague has a case-fatality rate of up to 50%.

Much later, it seems, the continuous fever characteristic of typhoid also became increasingly prevalent, especially in overcrowded insanitary urban areas. Gastro-intestinal disorders have a long history, but the major known epidemics of both typhoid and cholera occurred in the last two centuries, particularly as the concentration of workers in port areas increased. Both diseases are transmitted by direct and indirect contact with infected faeces - the principal vehicles of spread being contaminated water and food.

The horror of cholera is that it can cause death within hours of its onset. Acute intestinal pains, diarrhoea, vomiting and dehydration are caused by the vibrio cholerae. Even worse than the plague which itself could wipe out half a town - cholera has an untreated case-fatality rate of over 50%. The pandemics of cholera came in the nineteenth century as it repeatedly spread from its traditional home in Bengal and other parts of India. Again the lowest socio-economic groups were most susceptible as we shall see in more detail in Chapter 5.

The methods of prevention and control of the 'apocalyptic scourges.. which regularly swept Europe in epidemic proportions'(16): malaria, the plague, typhoid, typhus and cholera have much in common. Primarily they involve nutrition and hygiene:- an ensured supply of pure water, sanitary disposal of human faeces and other refuse, clean preparation of food and the control of insects: flies in the case of cholera and typhoid; mosquitoes in the case of

malaria; fleas in the case of the plague. But perhaps the weakest link in the chain was the lack of good nutrition. Let us recall the fact that poverty lies at the heart of the Mediterranean islands. Malnutrition and even starvation were common and exacerbated by indifferent imperialists and in these hard conditions the spectre of disease always rose.

It is however possible that high levels of health were enjoyed in many parts of Malta and Gozo during Neolithic times and later under Phoenician, Carthaginian, Roman, Byzantine and Arab dominations. Primitive communities living in big caves, in equilibrium with their limited world, may have survived the vicissitudes of fortune, their biggest threat remaining the drought - the long summer cloudless months of relentless heat. Ofcourse disease existed even among the healthy cave-people.

Skeletons obtained from neolithic settlements, the Egyptian mummies, the drawings, sculptures and other artifacts from ancient Mediterranean civilisations all provide overwhelming evidence that many of the diseases known today have long existed - coeval with human life.(17)

Cancer is one such disease. However many Maltese throughout this period may have enjoyed what Dubos calls 'adaptive fitness', especially during those periods in which local conditions allowed population growth.

The following table gives a rough idea of the changes in growth and density of population on the Maltese Islands with an area of 313 square kilometres. Of particular interest is the 'golden' neolithic age when population appears to have doubled over some two thousand years and no trace of any war has been found. There is then a large gap in recorded population data until the middle ages. A decline in Malta's population is likely to have occurred towards the end of the Roman Empire, due to the harsh economic conditions described

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forthwith and also the possible spread of malaria. Meanwhile, an increase in the population, coincident with that of Italy and the birth of merchant capitalism is likely to have occurred in the eleventh century. This may have been halted by the spread of the plague (especially the Black Death 1348) and is evidenced in the still unexplained disappearance of villages that is examined among others by Dr Luttrell, Dr Blouet and Professor Godfrey Wettinger(18). As Blouet notes in his PhD, the late Middle Ages, when population fluctuated round the low level of 5 to 10 thousand were years of extreme hardship for most Maltese: eeking out a meagre existence mainly from grain farming and live-stock grazing; exploited by the new nobility and imperial powers as serfs and slaves; ravished by raids, the plague and malaria; and of little importance 'in the strategic geography of Europe'. For these reasons, it seems, Malta experienced the European demographic pattern of a decline in population in the thirteenth century. It was later to share in the European population rise of the sixteenth century. Taking the latter period as a whole, from 1240 to 1530 ad, although adverse conditions prevailed, such as the increasing incidence of serious epidemics, the population nevertheless grew threefold, most of this increase occurring in the late fifteenth and early sixteenth century.

TABLE 1

Estimated population size and density of the Maltese Islands: 4100bc - 1530ad

<u>Period</u>	<u>Population</u>	<u>Density per sq.km.</u>
4,100 to 3,500 b.c.	3,000 to 4,000	11
2,500	11,000	35
Thirteenth century	5,000 to 10,000	24
1419	10,000	32
1429(after invasion)	7,000	22.4
1530	20,000	64

Sources:

Renfrew Colin p169;Blouet B. pp35-45;Cassar-Pullicino J. p24.; Wettinger G pp80-107

For comparison of population densities see Sahlins Chapter 2.

From available records, Dr Lutrell has found the population in 1241 amounted to 1,119 families: of whom 836 were Muslim, 250 were Christian and 33 were Jews.

3.-Neolithic Farmers

The household is to the primitive economy as the manor to the medieval economy or the corporation to modern capitalism; each is the dominant production-institution of its time. Each represents, moreover, a determinate mode of production, with an appropriate technology and division of labour, a characteristic economic objective or finality, specific forms of property, definite social and exchange relations between producing units and contradictions all its own. Marshall Sahlins p76.

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Remains of *Homo Sapiens Neanderthal* found in Sicily, indicate that cave dwellers and hunters using flint tools lived near the Maltese Islands during the last interglacial period, 50,000 bc.(19). After the Wurm ice-cap began shrinking, modern humans, *Homo Sapiens Sapiens*, proliferated in the Mediterranean, from 8,500 bc, inventing the boat and adapting to changing climatic conditions: gathering food and beginning to plant crops.

The first known traces of humans in Malta date from approximately 5000 b.c. The diminishing returns from hunting and gathering in such a small space must have become apparent relatively quickly and demographic restraint may well have been practised. The date of first colonisation was, according to archaeologist D. Trump, not earlier than about 3,800 bc. This, the neolithic age, from 4500 bc to 2500 bc, saw the use of polished stone tools and fired pottery, the widespread cultivation of wheat, barley and leguminous plants and the domestication of goats, sheep, pigs and cattle. Evidence of this agricultural wealth is pictured in the freizes of Tarxien Temples. The basic diet became and still remains bread, olives, garlic, wine, fish and milk. Besides the importing of obsidian from Pantelleria and Lipari for tools the growing population (see Table 1) appears to have been self sufficient, and even able to support an unproductive class with a surplus. Noting the size and complexity of the Tarxien Phase of Temple Building, from 3300 to 2500 bc, Renfrew conjectures a hierarchical chiefdom society and arrives at the high estimated population of 11,000. (20), while Blouet suggests the emergence of 'a powerful group which was able to control manpower and other resources.'

The overall picture of this time shows an increasing population supported on the basis of higher agricultural production, achieved mainly by utilising the land more intensively, by the reduction of pasture land and woodland, and by the shortening of fallow periods in the shifting agricultural system."(21)

The dominant form of economic specialisation, observes Sahlins, was the division of labour by sex. This is the first element in the *domestic mode of production*. Simple technology and finite production objectives are the two other elements, all systematically inter-related, at the level of household production. Three characteristics of stone-age economies resulted from these elements. They were, according to Sahlins, 1) underexploitation of productive resources and decentralisation. He posits: 'the less community polity or political centralisation, the more population dispersal and village fission and less development of the productive means'; 2) underuse of the labour force (labour power being withheld according to age, sex, tradition, weather, skill); 3) a substantial degree of domestic economic failure because huge differences in familial production exists and 'in unfavourable years the minority fall below the ordinary level of subsistence'.(22) It would be interesting to discover how far these elements were operative in the small, central, and advanced Maltese Islands.

There is no doubt that women were the principal producers in the neolithic age. As Gordon Childe describes :

The women would till the plots, grind and cook the grain, spin weave and manufacture clothes, build and bake the pots and prepare some ornaments and magic articles...as a result, among pure cultivators, owing to the role of the women's contributions to the collective economy, kinship is naturally reckoned in the female line and the system of 'mother right' prevails. (23)

Women had developed the arts of soil cultivation and animal rearing while the men went out hunting. They had discovered the use of fire in cooking and in industries. It was the women who were the leather makers and tanners, the

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weavers and the sewers, the pot-makers and artists. And above all, it was the women who developed medicine.(24)

The use of wild plants for medicinal purposes must have been common on the fertile Maltese Islands of the neolithic age. Farmers are very likely to have turned to herbal remedies before either supplicating a spiritual power or organising rules of hygiene. There is evidence of experience in their application as far back as 2000 b.c. In particular, to the East in Babylon, where the first documented accounts of tried and tested medicinal herbs, such as bayleaves, caraway and coriander were discovered . The Ancient Egyptians imported many of their herbs, spices and aromatic oils from Babylon and India.

Cottrell writes :

So beware of despising the Ancient Egyptians because their doctors began by using magic. Many of the drugs they prescribed had genuine therapeutic value, and indeed are still used in modern pharmacy. For example; acacia, anise, barley, cassia, castor beans, castor oil, wormwood, coriander, cucumber, cumin, poppy and saffron are among the vegetable substances; among the minerals, alum, copper, feldspar, sulphur, red ocre, sodium carbonate and bicarbonate, arsenic and nitre have been identified in the medical papyri. And among the animal substances used were the fats of animals, blood, bone marrow, bile, liver and spleen. (25).

Dyes and disinfectants concocted from herbs were also applied in the highly skilled art of embalming the dead.

The worship of the fertility of the earth and of woman was a major unifying factor in these times. Pivotal to the power of women were not only their seemingly separate reproductive abilities but also their knowledge of how to use the fruits of the earth. They were not only givers of life but also savers of life. The magnetism of the temples must have laid in the special skills of certain Maltese and Gozitan women. My suggestion, here, is that one important skill was their knowledge of how to find and apply medicinal herbs.

Additionally, it is possible that their food-making and storing, their clothes-making and their design enhanced their power and complemented their beauty. And within and around the temples, they created a magic atmosphere that lives on today - an atmosphere that combines hope from the way sunrays slant through pillars of stone and strength from the way the land and sea unfolds below the temples. Below Ggantija is the panoramic view of Gozo's fertile valleys and beyond Hagar Qim and Mnajdra lies the incomparable beauty and peace of Malta's deep blue seas in the setting sun.

As Maltese Historian, Pawlu Montebello notes on the origin of the name Malta from *Omm Ghalliela* - Fertile Mother (26):

For many thousands of pre-historic years, people had no other gods besides the Great Mother. The Maltese, besides the name of Malta, probably called her other names as well, such as Omm l-Ghajja. The names of many places and towns in olden times were often names and nicknames of the Great Mother. She, alone, was adored and esteemed as the source of life of all that one found, and that happened in nature and to people. From her, came good and bad, beauty and ugliness, love and hatred, war and friendship, health and illness, birth and death. The name of the earth, that is our mother, Malta, is the name that came from the first Maltese, the tongue that is one family with the tongues of Sumer, Babilon and Assyria. The name of these places was Mu Ghallita, or in today's Maltese, Omm Ghalliela... that changed with use over time to Malta.

In *The Great Cosmic Mother*, Monica Sjöo and Barbara Mor ask what were the neolithic people seeking when they built, over a period of perhaps one thousand years, 'thirty huge megalithic structures', on these islands. Were they seeking immortality by surmounting the sharp antithesis between health and disease, between life and death?

Probably what we would call "the living darkness"- the stillness of the tomb, the breathing silence of the womb of the Earth Mother. The chambers, painted blood-red, had no sharp angles; all the shapes are rounded, or molded in curves and waves. There was no worship of the heavens in these temples, and no human sacrifice. There are traces only of animal sacrifice and the pouring of libations. Here, the living and the dead were as close as possible to each other(27)...On the islands of Malta and Gozo in the Mediterranean can be seen the clearest connection between the cave, the tomb, and the temple - all three *being* the body of the Great Mother. Some time in the third or second millenium B.C. (or maybe earlier) an incredibly advanced culture developed on these small and isolated islands - which, situated between Sicily and the Libyan coast, were really right at the centre of the ancient world. Malta and Gozo were an ancient

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sacred centre for the religion of the Great Mother. From Europe, from Africa, from the Aegean and the Near East, pilgrims traveled here, and the sick came to be healed. This was the centre of something... In this sacred space priestesses of the Great Goddess contacted the spirits of the dead, consulted oracles, prophesied, and performed ritual healing. (28)

It is probable that the symbiosis of health care and religion was established during these times when walking to the temples in awe and supplication became a way of life. Today, offering sacrifices to Our Lady to secure her miraculous aid is still a widespread custom, some five thousand years after the close of this magnificent era.

The disappearance of the Temple Builders and their cult of fertility is widely attributed to 'over-exploitation and eventual exhaustion of the natural resources compounded by successive years of drought.'(29) Some say matriarchy ended with the knowledge that men play an inseminating role in reproduction. Others would point to the increasing importance of metal (e.g. bronze and copper) in production and in the development of war-instruments. The answer must lie within the internal contradictions of neolithic society. Gordon Childe points to the fact that production surpluses were too small to withstand natural disasters or rising population pressure in confined spaces. He also emphasises the role of the plough in transforming the relations of production. The plough, Childe states was in use in Egypt by 3,000 bc and 'by 1000 bc, the plough like bronze had attained the limits of its ancient diffusion.'

It relieved women of the most exacting drudgery, but deprived them of their monopoly over the cereal crops and the social status that conferred...for among barbarians, whereas women normally hoe plots, it is men who plough fields. (30)

Some of the inherent contradictions in 'expansionist and endogamous' neolithic society are illuminated in Germaine Tillion's classic work *The Republic of Cousins*. In searching for the reasons for the debasement 'of the female conditions throughout the Mediterranean basin'(31), Tillion suggests the 'likely association of endogamy with a demographic 'detente', a variation in man's relationship with the space that feeds him.'(32) The neolithic revolution, which included the sowing of fields and the domestication of animals, changed the mode of production and for the first time allowed resources to increase with population.(33)

Tillion points to the geographic coincidence between the oldest spread of the neolithic and the region in which procreation is a patriotic duty: the ancient world or the Mediterranean. It could well be that within the Maltese cult of fertility the seeds of natalism, of patrilineal descent and privileges for the eldest son were being sown. As population density increased (see Table 1) so the importance of property must have grown and it was the men -the hunters- who could best fight for and defend land and settlements. Women's productive power began declining as the importance of property rose and thus the relations of production changed.

It is interesting to note the contemporary co-incidence of a strong cult of Isis in Ancient Egypt's Middle Kingdom from 2100 to 1700 bc. Isis was the epitome of a good wife and mother while her brother-husband and son were the protagonists. Isis literally picked up the pieces of, and after, the men(34).

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A couple of hundred years after the recorded disappearance of the temple people, round 2,300 bc, migrants- now called the Tarxien cemetery people-came probably from Southern Italy , living mostly off barley, lentils and horsebeans(35). Meanwhile, in the Kingdom of Egypt literate civilisations spread after 1850 b.c.,working bronze and copper and warlike Bronze Age colonists invaded Southern Malta at about 1450 bc. Consequently, the ideal, powerful figure of the caring mother became usurped by that of the healthy warrior.

In the Near East, agriculture and populaton grew in Palestine and Syria. Cyprus became a major source of copper and a fairly steady trade in wine, oil and textiles extended over the Eastern Mediterranean from 1300 bc.

Health, in pre-history, was determined not only by nutrition and aided by herbal remedies, drugs and spells, but also by levels of hygiene. Sanitary engineering is evident way back in 2000 b.c. in the excavations of the Knossian Palace of Crete. A huge network of sewers was also found among the ancient ruins of Babylon. the Egyptians were one step ahead in not only collecting their sewage but also diverting it into the desert and applying it as a fertiliser.

4. Malta under the Phoenicians- the Canaanites, the great ship-builders.

The Phoenician merchants, coming from the great city of Tyre, now in South Lebanon, where textiles, glass and metal work were manufactured and timber, wine and oil produced, were trading in the Western Mediterranean basin by about 1000 bc. With their strong purple sails, they were the first

international traders. Evidence of their colonising Malta dates to about 800 bc. Maltese weaving in every colour, and its trade in honey and corals began as its people developed the advantages of being on a major trading route(36). In Hodges schema, the area round the Grand Harbour in Malta developed very early in history into a 'port of trade', at the centre of a concentric zone of market exchange.(37) A group of merchants, especially rich if connected with long-distance trade, began to stand out against the mass of people. The Phoenicians new range and volume of trade followed their discovery of Spain and its wealth of silver, copper and tin. While from Arabia, they imported resins:- myrrh, frankincense and balsam: highly esteemed as medicine and perfumes, but alas useless against malaria and the plague.

The Phoenicians had many Gods. Every town in Phoenicia, like every village in the Maltese Islands today, honoured its saint. The Ba'al or God of Tyre was a solar God in origin but he was also regarded as a maritime deity. His name was Melkart. At Tas Silg, Delimara, in the South-East of Malta, they built a temple in his honour. There too was a shrine to Astarte: female deity of fertility, beauty and love. Under the Romans, this seems to have become a temple to Juno.

One of the Phoenician's God, Exmun, had an important reputation as healer of the sick. This symbiosis of religion and health care was common to many ancient peoples who gave a prominent place in their theological systems to Gods of Medicine: Shen Nung in China, Asclepius in Greece and Imhotep in Egypt. Medicine, asserts Dubos, had a 'dual nature from its very beginning. It included the empirical knowledge of effective procedures and belief in magical influences.'(38) In Malta and Gozo, the recent popularity of the lay-healer,

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Frenc tal-Gharb (1892-1967), is evidence of the continuing attraction of this duality.(39)

The prevalent belief of the Egyptians of this period was that illness came from God's disgrace or from the souls of the dead, so that prayer was a vital component in the combination of prevention and care. Healthy customs such as washing and cleanliness were woven into religious beliefs. The temple servers had to obey the custom of washing twice in the morning and twice in the evening, of only wearing white clothes and not eating pig's meat or beans. There is evidence that water was boiled or strained. Children were bound in swaddling clothes and fed cow's milk and vegetables in an attempt to avoid high infant mortality. Children of the rich were encouraged to exercise and play.

Women under the Phoenicians were particularly important to the prevention and care of illnesses. From Phoenician remains, it can be construed that they kept their homes washed and clean. They had been passed on the knowledge of how to overcome the pains of rheumatism, paralysis, trachoma and ophthalmia using herbs, seeds and oil. Women knew too of bicarbonate for intestinal complaints and myrrh's antiseptic qualities. Some of this knowledge must have reached Maltese women.(40)

One of our old neighbours - the Jewish people- had explicit religious rules on health. Cleanliness was a religious ceremony. Rabbis not only had to give an example in their washing and clothing but they also checked homes for leprosy (evicting lepers and dismantling infected houses) and they supervised the

circumcision of boys. Jewish women, too, saw illness as a punishment from God. They abided by the religious laws of food and cleanliness and were forbidden from entering sacred places within 33 days of a male birth and 66 days of a female birth. They used the mandrake root as a painkiller; hyssop to reduce fever, relieve coughs and reduce anxiety; and rosemary tea to remedy colds, colic, headaches and nervous tension. Rosemary balm applied to wounds, bites and stings was known as an antiseptic and rosemary oil as an insecticide. The early existence of a Jewish community in Malta suggests that these methods were known locally at this time.

5. Greek influence in Malta.

As its eastern hold on the Mediterranean was being increasingly challenged by the Greeks, the Phoenicians founded the city of Carthage, not far from Malta in 814 bc. Under the Carthaginians, the Maltese also came into more contact with Greek traders. It was the Greeks and Carthaginians who economically unified the Mediterranean littoral, providing the basis for its later political unification by Rome.

With the rise of the Carthaginian or Punic Empire from 550 b.c. Malta had more contact with the farmers of Carthage and Sicily. Olive oil production began and Maltese exports of textiles and honey increased. The grand harbour developed from being simply a trading port and shelter to a vital naval base, especially useful in the first Punic War against Roman expansion (262-242 bc.), presaging its recurring importance to imperial powers.

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Perhaps it was Malta's strategic importance to the Carthaginians that enabled it to win some degree of self-government and prosperity during this period. A reader in international relations, Eric Gerada-Azzopardi comments thus:

It is believed that under the Carthaginians, the Maltese were allowed a restricted form of self-government and the islands minted their own currency. The Islands also had their own Senate and an assembly of the people. Although, never a Greek colony, it is clear that there existed a strong Greek influence in Malta. Many Greek items of pottery, inscriptions and coins belonging to this period have been found.(41)

The British archaeologist T.H. Ashby concludes similarly that 'at the end of the third century b.c. a Greek element predominated in Malta and Gozo.' (42)

It was the Greek Gods who highlighted contemporary beliefs concerning health and illness. The Greek God Apollo was commonly known as Alexikakos - the Averter of Ills. Through the oracle at Delphi he is reputed to have taught the means to health and recovery. Two Goddesses: Hygieia (health and cleanliness) and Panacea (cure for all) symbolised two radically different yet complementary approaches to the control of disease. Hygieia was one of the manifestations of Athena, the Goddess of Reason, concerned with the prevention and maintenance of health. Panacea specialised in the knowledge of drugs. Thus the Greeks traced the art of medicine to several different Gods. Asclepius became the most prominent and the symbol of the perfect physician. During the classical period, the cult of Asclepius was under the control of a priesthood which practised faith healing based on dreams. Many patients came to seek cures in sanctuaries dedicated to His worship. In beautiful surroundings with purifying baths, anointments, abstinence, a religious atmosphere and the interpretations of dreams, many patients were healed.(43) Lay Asclepiads, however, also used the anatomical and physiological knowledge of their time, adapting Mesopotamian and Egyptian medicine to Greek conditions of life. They

had extensive knowledge of surgery, drugs and regimens. This practical tradition gave rise to Hippocratic and, indirectly, to modern medicine.

After 400 b.c., the influence of the great physician and teacher, Hippocrates of Chios, (?460-350 bc), must have reached Malta's shores and growing civilisation. He argued, on the Greek island of Cos, that the mind and body cannot be considered independently of each other and that nature itself cures and our duty is to aid it. Hippocrates, with his analysis of the relation between disease, environmental conditions and personal habits reinforced a more logical and down-to-earth attitude toward the preservation of health. Childe points out that the Greek medical tradition was characterised by freedom from demonology and by accuracy and objectivity in the observation and recording of symptoms, quite foreign to Assyria and Egypt (44).

However, the longstanding belief in Malta that the wind bears illness (*ir-rih* means both the wind and a cold, *gidi ir-rih* means chicken pox) may have derived, in a distorted way, from Hippocrates discourse on humours. How far the Greek health laws: on cleanliness in cooking and drinking, in houses and streets and in food distribution; prevailed amongst the Maltese Islanders must have depended both on the people's means and on the extent of their interaction with the foreigners. The fact that the people spoke a Semitic, and not a Latin or Greek language, must have inhibited this exchange of knowledge.

Meanwhile, in nearby Sicily, Empedocles is said to have cut short the prevalence of malaria by draining swampy lands. Pansanias, his pupil, supposedly checked 'fever' epidemics with fire, probably burning contaminated

houses and corpses. And in the first century ad, the Greek Dioscorides listed the medicinal properties of over 500 plants and herbs that grow naturally in the Mediterranean, in *Materia Medica*. This later became a standard book for Christian religious orders in Europe. One century later, Galen, a Greek physician in Imperial Rome, wrote many medical books which remained in use for 1,500 years. It was Galen who gave the first literal definition of cancer as a growth, lump or protuberance and gave it its name, from *karkinos* - crab, inspired 'by the resemblance of an external tumour's swollen veins to a crab's legs.'(45)

6. Malta at the heart of the Roman Empire.

Malta prospered under the Romans and became renowned for its high quality textile industry and its exports of luxury goods. The production of wheat and olives dominated the agricultural system while the capital cities of Rabat /Mdina in Malta and Castello in Gozo thrived as did the ports. Let us turn to a famous contemporary, Diodorus, for a somewhat rosy summary for it masks the entrenchment of slavery and the inequalities inherent in despotic rule and it says nothing of the amount of land seized for the imperial Roman state or how this was worked by dispossessed serfs and slaves. It, however, captures some positive results of being so close to the centre of gravity of the Roman Empire:

To the South of Sicily are three islands each of them with towns and harbours offering shelter to all ships cast thither by storms. The first is Melita 800 stadia from Syracuse having many convenient ports. The inhabitants abound in opulence, for they have artifices for every kind of work; but they excel most in their manufacture of linen which is beyond anything of the kind, both in firmness of its texture and its softness. Their houses are very beautiful and magnificently

ornamented with pediments projecting forward and the most exquisite stucco work. The inhabitants have become very wealthy and increased in reputation and splendour.

Source: Diodorus Siculus : Circa 40 b.c.(46)

T.H. Asbhy writes: 'During the Roman period, the Maltese Islands, like so much of the Roman Empire, have no history'. Population probably increased and there is evidence of some field building in the North West under the Romans and in the later Arab times, probably, as Dr Blouet suggests, because the farming community outgrew the available cultivable land. Private ownership of land seems by now to have been common. Family rights were probably more successfully held or obtained than communal rights. The emphyteutical lease, which had its origin in Greek antiquity, was a long-term contract that stipulated the rent or annual payment in kind, the duties to improve the land and/or practise certain husbandry, plant trees, and terminated all rights to the land on the lease expiry. Well-suited to land reclamation projects, these contracts between farmer and landowner may have increased in Roman times, although Blouet hazards the guess that the Byzantines introduced the long lease into the islands: 'it was certainly in use during Arab domination. By the latter part of the Middle Ages, the system seems to have been highly developed and widely employed.'(47)

The Romans valued the herbal knowledge that they had inherited from the Greeks, Egyptians and Babylonians. Roman armies took medicinal herbs with them to their new colonies. Gordon Childe is scathing of the lack of medical progress despite the Roman's vast resources but he does remark on Crateuas:

physician to the king of Pontus (120-63 b.c.), (*who*) introduced a fruitful innovation in method when he illustrated his herbal with realistic pictures of the plants he was

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describing and classifying. ...*Under the Roman Empire*, there is some evidence for the existence of a public medical service in Egypt, rather less in the Seleucid kingdom and Pergamon, but its benefits were probably confined to the Greek citizens and the army; the natives were left to their fate. Of effective measures against epidemics, such as campaigns against fleas, lice and mosquitoes, we hear nothing, while human excrement was still regarded as the best manure. (48)

But the Romans did perform great feats of sanitary engineering. For instance, under the architect Vitruvius, nine aqueducts had been built by the end of the first century providing an abundance of healthy water to Rome and no doubt assuaging the endemic killer - malaria.

Roman colonisation of Malta from 218 bc to 535 ad, has left its mark with a network of aqueducts and the impressive Roman Baths near Ghajn Tuffieha. But the extent to which Roman customs, such as the provision of running water to each house, were extended to the Maltese is doubtful especially since only a small minority of Maltese actually lived in stone-built houses. However, as a symbol of what might have been, the remains of baked clay feeding bottles, toilet seats, baths and heating have been found in the remains of the many graceful Roman villas.

By 528 ad, at the end of the Roman Empire, all big towns in the Mediterranean, including Carthage, Rome, Salonika, Constantinople, Antioch and Alexandria, produced textiles, glass, pottery and metal instruments and ornaments. Lying at the heart of the Empire, Malta's merchants and middlemen could reap the advantages of being on a major trading route, compensating somewhat for the heavy taxation and oppressive rule of their Roman Emperors. The development of Sicily as the granary of the Mediterranean meant that Malta's closest neighbour became her vital supplier of basic nutrition. But how far the people,

especially the women, were used as chattels and slaves and how far the peasants retained the right and ability to eek out their subsistence from their land without being dispossessed or overtaxed is none too clear.

7). Medieval Malta: Byzantine & Arab & Norman

The decline of the Roman Empire was accompanied in most places by a decline in population. The requirements of the military had become crushing. Citizens were being taxed to the limit and a sizeable proportion of the masses were slaves - with a notoriously low reproduction rate. Under the twin threats of excessive taxation and arbitrary imperial authority, exacerbated by disease and early death, increasingly threatened by attack from corsairs, freeholding peasants had no choice but to seek the protection of bigger landlords. And later during this period, many smaller hamlets disappeared as is well-documented by Professor Godfrey Wettinger, Dr Anthony Luttrell and Dr Brian Blouet. The landed gentry gained and what is known as the feudal system spread.

In return for the title to the peasant's land, the landowner guarded the civil interests of his client and as far as possible shielded him from taxes. This seems a hard bargain from the peasant's point of view, for he surrendered his freehold and became a tenant whom the landlord could evict at will; and it is a telling measure of the burden of taxation that in the last century of the Western Empire the freeholding peasantry voluntarily liquidated itself. The landlord gained all round. He tended to take his increasing rent in produce where possible, for the less money there was about, the less the tax-gatherer took. (49)

The birth of feudalism in the countryside in the longrun meant great inequalities and little economic power in the hands of the producers. The new class of serfs had little control over their labour power and means of

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production. But Maltese, taken as slaves, had none. Assuming, however, that under the Romans, most Maltese people were not slaves but independent farmers and merchants, then as they gave up this independence for feudal protection, holding other things constant, so ill-health is likely to have increased. But had they remained independent citizens, unprotected by a feudal lord, they were more likely to bear crushing taxes imposed by imperialist sovereigns, and more likely to be undefended from raiding corsairs. Caught in this vice, the distribution of the land between landlord, sovereign and peasant was a central question and locus of class conflict throughout this period.

The forces of production changed relatively slowly. The cultivation of the vine and the olive seems to have been developed under the Byzantines, under whose hegemony Malta fell by the end of the fourth century. Later, under the Arabs (870-1090 ad), lemon and orange trees were planted and cultivated, being of untold benefit to health. The Arabs also brought the sugar cane.⁽⁵⁰⁾ Simple irrigation techniques advanced the cultivation of local cotton, as it also did in Spain and Italy, and provided vital raw material to the already skilled spinners and weavers of cloth. The Arabs, as Blouet notes, 'coming from generally drier climates, were skilled in the use of scarce water supplies' and 'presumably the Arabs introduced into the region the *noria* (Maltese *senija*), an animal-powered device for lifting water from wells onto the land.' ⁽⁵¹⁾.

Evidence of Byzantine or Arab influence on the Maltese population's health is sparse. The Byzantine Emperor Justinian is credited with the enactment of the first quarantine laws in the fifth century ad, presaging their widespread adoption in later Middle Ages ⁽⁵²⁾. Contemporary Arab treatises on hygiene and

herbal remedies show an advanced understanding of their importance. Their understanding of anatomy and physiology remained well in advance of European doctors for many centuries after they left Malta. McCall remarks that 'many Western European doctors' in later medieval times, 'left their Jewish and Arab contemporaries quite dumbfounded' such was their apparant ignorance of physiology or anatomy'. The following short extract is both amusing and revealing (53):

In his autobiography, the twelfth century Arab writer Usama ibn Munqidh tells how 'the (latin) ruler of Munaitira (Moinestre to the Latins) wrote to my uncle asking him to send a doctor to treat some of his followers who were ill. My uncle sent a Christian called Thabit. After only ten days he returned and we said 'You cured them quickly!'. This was his story: They took me to see a knight who had an abcess on his leg, and a woman with consumption. I applied a poultice to the leg, and the abcess opened and began to heal. I prescribed a cleansing and refreshing diet for the woman. Then there appeared a Frankish doctor, who said: 'this man has no idea how to cure these people!' He turned to the knight and ... sent for a strong man with a sharp axe... The doctor said to the man: 'Strike a mighty blow, and cut cleanly!' And there, before my eyes, the fellow struck the knight one blow and then another... and the patient died instantaneously. Then the doctor examined the woman and said: 'She has a devil in her head who is in love with her. Cut her hair off!' This was done and she went back to eating her usual Frankish food, garlic and mustard, which made her illness worse. 'The devil has got into her brain', pronounced the doctor. He took a razor and cut a cross on her head and removed the brain so that the inside of her skull was laid bare. This he rubbed with salt; the woman died instantly.

So it is safe to conclude that where Maltese subjects did obtain medical attention under Arab rule, this was more informed, gentle and effective than later Western European combinations of savagery, ignorance and religion. That some of the Arabs' knowledge must have been passed onto the Maltese is indicated by the similarity between the languages and a close assimilation of the Maltese into the Arab way of life.

The fact that Christian Maltese had to pay 'monumental taxes to Muhammed and his governing establishments'(54) usually amounting to 50% of their wealth may

have reduced the level of health and welfare of some households but then it appears that only a minority of the population claimed to have Christian beliefs. 'An estimate of the population made around 1241', notes Blouet, 'indicates that Moslems were still in the majority and apparently controlled most of the wealth.'

The Normans

On the defeat of the Arabs by Norman conquerors, the Maltese economy became more integrated with Europe. Blouet dates the beginning of this penetration from about 1220 after Frederick II had started to reorganise his Sicilian Kingdom.(55) As Table 1 shows, the local population tripled during the later middle ages but this was not a gradual and constant increase. Four factors were particularly responsible for fluctuations: the increased incidence of serious epidemics, such as the plague in 1348; the frequent raids of the Moorish corsairs and Turkish corsairs and the consequent deportation of people into slavery; the expulsion of the Jewish community from Malta in 1492; and the widespread privateering which was 'at once a main source of wealth and a considerable steady drain on the population'.(56) However, despite these adverse conditions and the extreme poverty and insecurity of the, predominantly rural, Maltese community, overall population increased to reach an average family size of five at the end of this period. One of the reasons was the increased commerce and trade and the benefits gleaned from connections with Venetian and then Genoan merchants.(57)

Local agriculture was gradually transformed away from subsistence toward more lucrative cash crops such as cotton and cumin for export that required more intensive field labour and processing. Grain too was exported from Malta until

late in the fourteenth century, but the large grain estates, formerly held by the crown authorities, seem to have become less important as a more commercialised form of agriculture penetrated parts of the islands. Most farmers continued to grow subsistence crops but cotton provided some cash income.(58) Disputes over common land, which were used by the poor farmers for grazing and collecting firewood and thistles, were frequent (59). Where lucky enough to obtain a lease on land, this was usually for a short period (about 4 years) on higher quality land and a long period (about 16 years)- the aforementioned emphyteutical lease- on lower quality, marginal land. The small size of the holdings, the high labour to land ratio and the lack of united power of the peasants all combine to suggest that contracts were drawn up very much in favour of the landowner. The relations of production were extremely exploitative, peasant workers being either slaves or serfs: 'Slavery was an established part of life and the estates controlled by royal interests were worked by slaves and servile labourers.' (60)

For the exploited and divided peasantry, life was dominated by a strong but changing nobility. It was marked by an unequal distribution of income; low purchasing power of the mass of the population exacerbated by high taxation and stiff import duties on basic foodstuffs from Sicily, together with compulsory contributions towards the maintenance of the main fortifications; availability of forced labourers whose services could be incessantly intensified by the Don or Barone, thus discouraging the introduction of agricultural improvements; the growth of an unproductive merchant class profiting from the greater commercialisation of agriculture; and a failure to develop home production and a home market for advanced goods, due to the low

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mass demand and lack of internal investment mentioned above. Instead, the rich imported manufactures and luxury goods from Europe.

'The people were at the mercy of one feudal overlord after another,' notes Gerada-Azzopardi (61) Successive Kings of Sicily, hard up for cash, repeatedly granted Malta as a fief for favours or services rendered to the Crown. So Sicilian barons became more powerful in Malta and a prominent group of families from Sicily and Aragon became the established nobility, as listed in the appendix to this chapter.(62) After purchasing their land, they had little obligation to the crown, and malpractice and corruption could be practised unrestrained. The local Barone and the local Church, the two biggest landlords, had the wealth and freedom to do very much as they pleased.

For the landed gentry, the landlords of Mdina, the professional men-of-affairs - the lawyers, notaries and occasional doctors(63), and for the clergy, feudalism did not just mean their enjoyment of unpaid work, it also meant their ability to control the serf's person. For instance, when the landlords could gain extra-economic power over the person of their tenants, argues Brenner(64), when they could control marriages, peasant mobility and especially land transfers, then they could tighten their squeeze on the serfs, for instance by increasing arbitrary taxes or increasing labour services on the lord's demesne.

It was in the interests of the peasants, on the other hand, to establish fixed rents and heritability or freehold rights on the land. Local tenacity and imperialist changes or disinterest enabled some peasants to retain the

integrity of their tenancy of small-holdings. But when the crunch came, village solidarity or rather the lack of it was the crucial deciding factor. This Brenner emphasises when comparing the divergent paths of social and economic development in the late Middle Ages between West and East Germany; and later between France and England.(65) The development of peasant solidarity and strength were manifested in organisations for political self-government that, for instance, prevented the encroachment and sale of common land and encouraged mutual organisation such as the sharing of horse-drawn ploughs and the fixing of common agricultural prices. In the Maltese Islands, the sending of joint or individual petitions to the King seems to have been the most widespread path used in attempts to obtain rights and redress. Often the aid of the parish priest was sought in these disputes. However, once the Church itself was bent on buying up more and more land, it too began to encroach on the poor man's common land. A highlighting case is that of Dun Filippo, whom Wettinger describes as the 'Inquisitor-inspired' author of the political diatribe '*Relazione*' against the excesses of the Knights of St John rule.(66) Dun Filippo claims to have persuaded the Grand Master not to make grants of common land without the consent of the Pope. He himself however, secured some common land for personal gain. The principle was not therefore at issue - it was a question of who should or should not enjoy the privilege : the Church or the nobility or the Order. Alas, the Maltese peasants never achieved the right to choose their village priest.

In Europe, peasant solidarity invariably led too, to demands that rents be fixed, rights of inheritance be ensured and arbitrary taxes removed. Again conflicts between the interests of the wealthy political leaders sometimes gave

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the peasants certain leverage.(67) Solidarity against arbitrary taxation was a recurring feature of the later Middle Ages in Malta: from the raising of funds to buy back the islands from capricious barons to public clamours, large demonstrations and petitions (68). By the beginning of the fifteenth century much local government power had been obtained. The Università or governing body was first set up in the eleventh century by the newly elected consiglio popolare, with the particular task of ensuring a continual supply of grain at a moderate price. Later it had its head appointed by the Viceroy of Sicily but its four elected Jurats effectively ran the islands(69). They arranged for necessary supplies of wheat to be brought from Sicily and maintained defences, the treasury and the harbours (70).

In summary, among the most important elements that the feudal order contained were the following (71):-

- a) rigorous economic subjection of a host of humble folk to a few powerful men;
- b) ties of obedience and protection bound man to man;
- c) fragmentation of authority (e.g. between the nobles, inquisitor, bishop);
- d) growing strength of the state and ease of long distance trade;
- e) centrality of the extended family and the oppression of women,
- f) little productive investment.

On the last point, the size of the agricultural surplus and where it went are in question. The noble families, owned considerable property but there were several factors that limited the productivity and thus the revenue of the lands. First the restricted area of the Maltese Islands conditioned the size of the fiefs which were naturally small; second, the nature of the terrain necessitated small uneconomic fields. Although the amalgamation of several fiefs would have greatly increased their revenues, only one 'local' family held

more than one fief. Moreover the local elite appear to have refrained from making any investment to improve farming methods. (72)

However, one might have expected that feudal landlords had greater ability, relative to say those operating in Sicily, to extract a surplus in the Maltese Islands because of the very fact that the labour-land ratio was high, especially in demographic upturns and the peasant's mobility was very low. But these technical features ignore the historically evolved balance of class forces: village solidarity and local tenacity vis a vis landlord exploitation and degree of ruling class solidarity. Increasingly, landlords removed the surplus they obtained from the serf's labour power from the islands altogether, further undermining not only agricultural initiatives but also the development of the home market, these being two essential ingredients in growth. Montalto finds that a 'substantial number of the best agricultural fields in the Maltese Islands, were owned by foreign feudal lords' and 'as these landlords were allowed to take out 85% of the total revenue which their territories yielded, there was a constant drain on the local resources and the effect of this became very serious'. (73)

Medieval life then was labour intensive rather than capital intensive, and the family household became of increasing importance as a productive unit and specific social site for the reproduction of labour power. Let us consider why the extended family and its oppression of women, was a major feature in feudal Malta. On a theoretical level, the total number of serfs could be maintained and replaced by four methods : generational replacement; immigration or importation of slaves; increased women's participation in agricultural labour;

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and reduction in sickness and disabilities.(74) An increase in any of these factors raised the level of total social reproduction, or the totality of labour power potentially available to feudal lords. Because of the high rate of infant and maternal mortality, many women were exhausted in the process of generational replacement - childbirth, lactation, child-care. But women were also seen as a source of surplus in agriculture and husbandry. Thus, as the importation of slaves decreased while local sickness and disabilities did not decline but, by the incidence of epidemics, seem to have increased, the onus on women to both reproduce and produce increased. The only way in which a woman could hope to survive these pressures was to expand her home base.

Many women had to sell their bodies to survive. Slavery had sanctioned the traffic of women and under feudalism women fared only marginally better. The terrible oppression of the mass of serfs in bondage to the lords and the continual danger of death from invasion and disease, left the mass of women fighting a daily struggle for their own and their loved ones' existence. Prostitution was common. McCall notes that crusaders on holy missions invariably took with them an unseemly complement of prostitutes(75). Ironically, the Catholic Church's overt campaign against slavery and its sexual exploitation of women, led to the covert growth of prostitution from which the Church itself extracted a handsome cut.

All through the Middle Ages, many bishoprics, abbeys, monasteries and even the Papacy - which toward the close of the Middle Ages could hope to make as much as 20,000 ducats from its premises leased out to brothel keepers - included whorehouses amongst their properties. (76).

On a local level, there is evidence of widespread cuckolding of the Maltese clergy and their keeping of numerous concubines up till the seventeenth century. (77)

The growing importance of religious ideology added to women's oppression. Rozsika Parker in her *History of Embroidery*(78), brings out the contradictions of the Church's position - its devaluation of women's work but its dependence on it, from the production of beautiful ecclesiastical robes to the reproduction of the faithful. She points out that the misogynist stance of the church was in direct contradiction to the important hidden domestic and economic roles that women had in feudal society. To the church, women and childbirth were a necessary evil. St Thomas Aquinas voiced the thirteenth century ideological compromise :

As regards the individual nature, woman is defective and misbegotten, for the active forces in the male seed tend to the production of a perfect likeness in the masculine sex; while the production of women comes from a defect in the active force or some material indisposition...on the other hand, as regards human nature in general woman is not misbegotten, but is included in nature's intention as directed to the work of generation.

To the church, childbirth was a sign of women's sinfulness and the manifestation of the curse of Eve: 'As long as woman is for birth and children, she is different from men as body is from soul. But when she wishes to serve Christ more than the world, then she will cease to be a woman and be called a man.(79)

In the feudal world of violent repression, dispossessed peasants, undeserving rich and corrupt officials, there was an important place for the church and its overfed ecclesiastics. They sanctified the idea of a Chain of Being - of appointed places and functions descending from the Ultimate Godhead, through angels and through men, women and animals, down to the meanest inanimate object. 'So long as every component part of the Divine Plan kept to its proper place and discharged its proper function' order would prevail and the disasters of disease, drought, famine would be averted.(80)

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In the Maltese Islands, the Catholic Church gradually increased its economic and ideological power after the defeat of the Arabs in 1090. Blouet writes that 'By 1168 there is evidence of a bishop of Malta.. and by the late thirteenth century the cathedral at Mdina was providing a well-established range of services for the island.'(81) During this time, priests took over many village communities. By 1436, ten parishes had been established. (82). On the role of the Church, Wettinger suggests that : 'In pre-1530 days, the local Maltese clergy seems to have been almost entirely pre-occupied with their religious duties and perhaps with keeping their body and soul together both for themselves and their dependents'. But after the coming of the Knights of St John , the clergy's role was transformed. Their ability to appeal to Rome over the heads of the Knights gave them a political edge over the local nobility, who had formerly held political leadership.

8. Catholicism and health

The Roman Empire officially became Christian in 337 ad adhering to the Arian belief in the separate identity of God from his Son.(83) By 528 ad Malta was quite surrounded by Arian-Christians, (as opposed to Sabellians of Monophysites), but the Maltese people as a whole do not seem to have embraced the Catholic faith until much later. It was not until well after the Crusaders were given the Maltese Islands that there is evidence that Christianity became a prevalent belief.

At the demise of the Roman Empire, medical 'pagan' temples such as Asclepija were shut down (335 ad) and the founding of hospitals began to be spurred on by Sister Helena, mother of Emperor Constantine. By the fourth century, a

series of Church Councils had laid down that the revenue, which a Bishop received, was to be divided into four parts: one to be retained by the Bishop; one to pay the clergy; one to cover the costs of constructing and maintaining churches and ecclesiastical buildings; and one was to be spent on relieving the suffering of the sick, the crippled and the otherwise needy.(84) In tune with the Christian virtue of compassion towards the suffering, the care of the sick in almshouses, or hospices, increased. The character and locus of health care was changing. Not far from Malta, at Mount Cassino in 529 ad the St Benedict religious order ran a large hospital and medical library. Under Pope Innocent III, the hospital movement increased momentum with the founding of grandiose Santo Spirito Hospitals in almost all cities of Europe. One was founded in Rabat, Malta by 1347 (85). As these centres lacked sanitary regulations they usually became hotbeds of infection. The Church did little to convey the wisdom of cleanliness passed down from previous empires.

Cure and not prevention was becoming paramount. St Francis' teachings on the importance of feeling one with nature and adapting to one's environment were negated. Ill-health under the power of the rising Catholic Church was considered as a way to save souls, bring more people into the fold and raise money. The understanding of the causes of disease and the art of prevention became of minor importance.(86) We have already seen how Western European doctors often used a mixture of savagery and ignorance in their 'cures'.(87) Their relative backwardness resulted from four elements; the symbiosis of sickness with sin and thus the popular association of healing with miracles; lack of first hand knowledge of the Greek physicians, especially Hippocrates and Galen's work; an ecclesiastic ban on dissection; and an ecclesiastic ban on

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clerics taking lessons in anatomy or practising surgery, until about 1480.(88) The dualism between body and soul, bad and good, woman and man, thus led to medical ignorance and contributed to the high rates of mortality during the medieval period.

By the eleventh century and the Norman invasions, the prevailing view was that disease was a departure from holiness. Just as the Christians were supporting the establishment of more 'houses of mercy' and encouraging the development of a professional class of physicians schooled in cures, so the simple rules of hygiene and the knowledge of traditional herbs were slowly being erased from women's hands and minds. This process was to be brutally accelerated by the persecution of the witches (89). Thus in the fifteenth century, in the 'civilised' areas of Malta the rule of death and dirt was apparent.

8. Summary

This chapter attempts to understand health in pre-capitalist Maltese society against a background of changing forces and social relations of production. Low life expectancy and high infant mortality were primarily a product of the harshness of life: subjugation by nature, by imperial rulers and increasingly by a local patriarchal elite of priests and nobles.

The mode of production in Neolithic Times was primitive. People, in particular women, had control over their own labour power and over the limited means of production. However the building of the huge temples suggests that a chiefdom demanded the labour of some members of each settlement for some time of each

year. Lack of sufficient nutrition, especially wheat and water, were the most serious threats to health especially as the density of the Maltese population increased. However, the very fact that the Maltese islands were increasingly populated whether or not they were a centre of neolithic trade, suggests that healthy conditions for life and procreation existed. Capacity and need seem to have increased symbiotically for over one thousand years aided by a high degree of organisation and harmony.

From Phoenician times, the process of change in a small island colony involved interaction and destruction. Never did we develop autonomously. Changes in the balance of military powers and in the control of Mediterranean trade directly affected the lives of the Maltese in towns and coastal areas, whose production and income were governed more by the pull of the market than by subsistence needs. One cannot underestimate, for instance, the importance of Malta's central position in the Phoenician and Punic maritime world, at the heart of the Roman Empire, as an Arab stepping stone to Europe and then on the Western Venetian route from eleventh century; nor must one overlook the importance in improvements in sea transport - its increasing certainty and cheapness.

A feudal mode of production was dominant after the decline of the Roman empire, and this together with the medieval rise of Church power and ideology, and recurring wars, pestilences, and droughts, left the mass of people in dread, poverty and ill-health. The increasing importance of commerce and trade and therefore higher circulation of money led to the expansion of merchant capital. But the class structure of serfdom and colonialism in the Maltese

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Islands, the vastly unequal distribution of income in agriculture, ensured economic backwardness and consequently high levels of vulnerability to disease and drought. Women's importance as mothers and workers was central, but her position was so exploited that her output on the whole, was qualitatively low, if quantitatively high, thus contributing to the poor levels of health and welfare. Both freedom and ability, the dual elements of capacity, were at a low level for most people, leading to periodic epidemics of malaria and plague and to deprivation and depopulation. Capacity was clearly limited by relatively static forces of production and by imperial, class and gender exploitation.

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1) Bradford E. *Mediterranean Portrait of a Sea*. Tutor Publications Malta (1989) pp29-30.

Evans J.D. *The Pre-historic Antiquities of the Maltese Islands: A Survey*. The Athlone Press (1971). Here he surveys the evidence:

"The Maltese botanist J. Borg claimed to have established the existence of an African type of flora in Malta, which is otherwise only found in a few parts of Southern Europe, such as Spain and the Island of Lampedusa. Other evidence however, is to some extent unfavourable to the African connection. Vaufrey has insisted on the European character of the Pleistocene fauna of the Maltese Islands, including the three species of *Elephas antiquus*, and the equally striking absence of typically African elements, but corresponds very closely to that of Sicily. Thus the available evidence, while it does not rule out entirely the possibility of a connection with North Africa having once existed, does indicate that it has left much fainter traces than the connections with Europe, and must have been severed much earlier." p2.

Also referred to by A.P. Vella in *Storja ta' Malta*. Klabb Kotba Maltin. Malta (1974) p 10.

2) Bradford E. *op cit* p41.

3) Braudel F. *The Mediterranean and the Mediterranean World in the Age of Philip II*. translated from the French by Sian Reynolds. Fontana/Collins (1972). p152.

Braudel, in two magnificent volumes, gives much depth and breadth of knowledge. He begins by analysing the role of the environment and notes that, "On Malta food was short. In spite of the many privileges permitting the island to import wheat from both Sicily and France, Malta was always in difficulties, so much so that in the summer the galleys of the Knights would stop grain ships coming from Sicilian *caricatori*, exactly like the corsairs of Tripoli.

As well as the threat of famine, there was also the risk from the sea, which in the mid-sixteenth century was more warlike than ever." p153.

4) Braudel F. *ibid* p144 :

This is the traditional wisdom of the old Mediterranean way of life where the meagre resources of the land are added to the meagre resources of the sea.. If it is disappearing today it rarely does so without provoking distress; the Greek fishermen of the Pelion region, 'increasingly drawn to the sea, have to give up their gardens and cottages and move their families to the harbour streets.' But once removed from the traditional balanced pattern of their former way of life, they swell the ranks of the sea poachers who fish with dynamite in spite of government prohibitions. For the sea alone is not rich enough to feed her fishermen... Neither is the land..

5) Blouet B. *The Story of Malta*. Progress Press Co. Ltd. Malta. (1981) p19.

6) Sahlins M. *Stone Age Economics* Tavistock Publications (1978) p9.

7) Cassar P. *Medical History of Malta* in the Chapter "Malaria" he details the problems of diagnosis. pp157-167

8) Braudel F. *op cit* pp62-6.

9) *ibid* pp64,66

'In order to conquer the plains, then, the unhealthy water had to be dealt with and malaria reduced. The next task was to bring in fresh water for the necessary irrigation. Man has been the labourer of this long history. If he drains the marshes and puts the plains under the plough, if he manages to produce his food from it, malaria retreats. But if the drainage and irrigation channels are neglected, if the mountains are too quickly deforested, altering the conditions of the flow of the streams, or if the population of the plain falls and the peasant's hold on the land is relaxed, then malaria spreads again and paralyzes everything.' p 64. "To colonize a plain often means to die there." p 66. Braudel notes that malaria was particularly virulent at the end of the Roman Empire and towards the end of the fifteenth century (p65). It may well be that it also contributed to the disappearance of the Temple People in antiquity.

- 10) McCall A. *The Medieval Underworld* Hamish Hamilton, London (1979). p136,144
- 11) Cassar Dr.P. *Medical History of Malta*. The Wellcome Historical Medical Library, London (1965). p210 & p213.
- 12) *ibid* p233.
- 13) Cottrell L. *Life under the Pharaohs* Evans Brothers Ltd. London (1962) p152
- 14) Braudel F. *op cit* p289.
"So if the seventeenth century saw a recurrence of outbreaks of plague, particularly in Italy, and also in the Balkans, there was perhaps a connection between cause and effect between these two outbreaks and the revival of overland transport."
- 15) Cassar P. *op cit* pp164-8.
- 16) Braudel F. *Afterthoughts on Material Civilisation and Capitalism* John Hopkins University Press Baltimore & London (1977) p10
- 17) Dubos R.(1968)
- 18) Luttrell Dr A.(editor) *Medieval Malta: Studies on Malta Before the Knights* (1975) in particular Godfrey Wettinger's *The Lost Villages and Hamlets of Malta*.
- 19) Renfrew C. *Before Civilization, The Radiocarbon Revolution and Prehistoric Europe*. Jonathon Cape . London (1973).
Trump D. *Skorba, Malta*. London (1966).
Trump D. *Malta: An Archaeological Study* first printed in London 1972. Progress Press, Malta (1990)
The first people came via Sicily perhaps originally from Anatolia or Lydia.
- 20) Renfrew C. *op cit* p169.
- 21) Blouet B. *The Story of Malta* Progress press Co. Ltd. (1981) p26.
- 22) Sahlins M. *op cit* pp41-70
- 23) Childe G. *What Happened in History* Peregrine Books (1982) p67,p73.

24) Reed E. *Woman's Evolution from matriarchal clan to patriarchal family*. Pathfinder Press, New York & Toronto. (1975). pp 105-129.

Quoting Robert Briffault, Reed writes:

"The connection of women with the cultivation of the soil and the search for edible roots made them specialists in botanical knowledge, which, among primitive peoples, is extraordinarily extensive. They became acquainted with the properties of herbs, and were thus the first doctors." p112.

25) Cottrell L. *op cit* p153

26) Montebello P. *Ghanja lil-Malta* Malta (1979) p25

27) Sjoon M & Mor B. *The Great Cosmic Mother: Rediscovering the Religion of the Earth* Harper & Row San Francisco. pp111,112.

28) *ibid* p110 & 113.

29) Gerada-Azzopardi E. *Malta an Island Republic*. Editions Delroisse France (1975) p103

'Many theories have been advanced for this singular and curious event. Invasion and complete extermination of the population cannot be entirely ruled out. However, there must have been a more natural cause for this decline and apparent death. It is possible that a combination of factors relating to overpopulation and over-cultivation of limited fertile areas led to malnutrition, death and a rising infant mortality rate...'

New studies on the question of the decline of the matriarchy have been presented at the Mediterranean Women Studies Institute (KEGME), Athens, Greece. For instance:-

McDonough S. *Mediterranean Women and their roots: Transition from Matriarchy to Patriarchy*. (1986)

30) Childe G. *op cit* pp73-76 & p89.

31) Tillion G. *The Republic of Cousins. Women's Oppression in Mediterranean Society*. Translated by Quintin Hoare. Al Saqi Books distributed by Zed Press. London.(1983). p59.

32) *ibid* p60.

33) *ibid* p54.

For an interesting contemporary review see:-

Gadant Monique, *Women of the Mediterranean*. Translated from the French by A.M. Berrett. Zed Books Ltd. London & New Jersey. (1984)

34) Cottrell L. *op cit* pp19-20

35) Blouet B. *op cit* p29.

36) McEvedy Colin. *The Penguin Atlas of Ancient History*. Penguin Books (1967) esp pp 54,55.

I have drawn from this and *The Penguin Atlas of Medieval History*, (1984) both concise, visual and very carefully written histories of the Mediterranean.

- 37) Hodges R. *Dark Age Economics: The origins of towns and trade AD 600-1000* Duckworth London (1982)
Braudel F. (1977) *op cit* pp56-90
- 38) Dubos R. (1968)
- 39) Bonnici Alexander, *Frenc ta'l-Gharb (1892-1967)*. Snatwarju-Bazilika "Madonna ta'Pinu", Ghawdex (1985).
- 40) Soler Inez *Il-Mara matul Iz-Zminijiet*. Guido Saliba, Floriana, Malta (1975). pp126-135.
In this chapter on Cleanliness, Sickness and Health, Inez Soler suggests that Maltese women were affected by Babylonian, Egyptian, Jewish, Greek and Roman cultures.
- 41) Gerada-Azzopardi E. *op cit* p130
- 42) Ashby T.H. *Roman Malta*. Journal of Roman Studies (1915) p25.
- 43) Dubos R. (1968)
Compare to some contemporary private hospitals for cancer patients.
- 44) Childe G. *op cit* p 231.
- 45) Sontag Susan *Illness as Metaphor*. Penguin Books (1978). p 15.
- 46) Quoted in Gerada-Azzopardi E. *op cit* p 132.
- 47) Blouet B. PhD. Malta University pp92,93.
- 48) Childe G. *op cit* p260 & p277
- 49) McEvedy C. *op cit* Book 2 p8 and Book 1 p90.
- 50) Runciman S. *The Sicilian Vespers* p5.
- 51) Blouet B. *op cit* p 36.
- 52) Cassar P. *Contributions of Mediterranean Peoples to the Control and Alleviation of Disease*. Mediscope n.7. (1985) pp16-21.
- 53) McCall A. *op cit* pp138-140
- 54) Kiernan T. *The Arabs. Their History, Aims and Challenge to the Industrial World*. Abacus London (1984). p pp115-128.
- 55) Blouet B *op cit* p37
- 56) Cassar-Pullicino J *Malta in 1575 Social Aspects of an Apostolic Visit*. Melita Historica (1956).
- 57) Braudel F. (1977) *Dates Venice's zenith from 1380 to 1500 and Genoa's from 1560 to 1590*. p85.

Chapter Two/notes

- 58) Blouet B. *op cit* p40.
- 59) Wettinger G. *op cit* footnote p 269.
- 60) Blouet B. *op cit* p 38.
- 61) Gerada Azzopardi *op cit* p147
- 62) Montalto J. *The Nobles of Malta* Midsea Books Ltd. Malta (1980)
Galea G. *Chronology of Malta* (1990) p125.
- 63) Wettinger G. *Early Maltese popular attitudes to the Order Melita* *Historica*
Vol VI, No. 3. (1974) pp260.
- 64) Aston T.H. & Philpin C.H.E. *The Brenner Debate Agrarian Class Structure and
Economic Development in Pre-Industrial Europe* Cambridge University Press.
(1985) pp15-26
- 65) *ibid* pp37-61
- 66) Wettinger G. *op cit* p269
- 67) Aston T.H. & Philpin C.H.E. *op cit* p 57.
- 68) Wettinger G. *op cit* see p 267 for details of a few.
- 69) Blouet B. Ph.D p 42.
- 70) Eton W. *Authentic Materials for a History of Malta* Malta (1807) footnote
p24.
- 71) Bagchi A.K. *The Political Economy of Underdevelopment* Cambridge University
Press (1982), especially Chapter 2.
- 72) Montalto J. *op cit* p257
- 73) *ibid* p260
- 74) Vogel L. *Marxism and the Oppression of Women: Toward a Unitary Theory*
Pluto Press, London (1983) pp 136-150.
- 75) McCall A. *op cit* p185
- 76) *ibid* p183
- 77) Wettinger G. *op cit* p258
- 78) Parker R. *The Subversive Stitch : Embroidery and the making of the
feminine.* The Women's Press. London (1984)
- 79) *ibid* p58 & p53
- 80) McCall A. *op cit* p15

- 81) Blouet B. *op cit* p39
- 82) Ferres A. *Storia Ecclesiastica di Malta* Malta (1877) p 138-9.
Wettinger G. *op cit* p260
- 83) McEvedy C. *The Penguin Atlas of Medieval History* (Book 2) p26.
- 84) McCall A. *op cit* p134.
- 85) Cassar Dr P. *op cit* p12 & p23-25 The first hospital to be established in Malta was in fact a church. It had four beds and its motley inmates included the sick, invalids and foundlings. It remained the only one until 1532 when the Knights of St John built their first infirmary in Malta.
- 86) *ibid* Dr Cassar succinctly comments that diagnosis was symptomatic rather than aetiological.
- 87) *To some extent the Maltese may have been more fortunate in that the Jews dominated the nascent medical profession and they tended, due partly to their religious practises, to be particular about cleanliness and sanitation, disposal of clothes and house disinfection where contagious diseases were diagnosed. See Cassar P. op cit p14&15*
- 88) McCall A. *op cit* p 141
- 89) Ehrenreich B. & English D. *Witches, Midwives and Nurses*. Writers & Readers Publishing Cooperative. (1973)

Chapter Three

HEALTH AND DEVELOPMENT UNDER THE KNIGHTS OF ST JOHN.

1.-Mediterranean Background.

The Knights of St John, a military order of hospitallars crusading since the eleventh century, combined killing and curing in a successful dualism(1). The prime object of the Order of St John of Jerusalem had been the building, furnishing and improvement of hospitals, but its military and naval exploits soon became dominant. Its dual role, as soldier and surgeon, seems contradictory but proved to be complementary, because it was based on the premise that Christian lives are valuable but barbarians are fit only to slave or to die. Its profitable combination of warfare and medical treatment foreshadowed the present-day domination of the military and pharmaceutical multi-national companies on the world's stock exchanges. But at the beginning of the sixteenth century, the Knights were retreating. They were offered Malta by Charles V of Spain after their defeat by the Turks at Rhodes. This international aristocracy then dominated the Maltese Islands for nearly three hundred years. Axiomatic to its long rule was its victory over Muslim forces at the Great Siege of Malta in 1565 (2). For the Ottoman Empire, this defeat was another factor in its long decline. Of similar importance to the Mediterranean balance of forces was the rise of the Spanish Empire and the power it was beginning to glean from its 'new world' exploits.

The Mediterranean, in the sixteenth and seventeenth centuries was slowly emerging from a self-contained world economy, with a clear geographical

division of labour. Its heart lay in the cradle of merchant capitalism - the city-states of Venice and Genoa. Its pulse was later quickened, according to Braudel, by the emergence of Milan and other finance-capital centres. For many centuries, its most profitable trading connections lay to the East, in particular in drugs and spices, but shipping also went as far north as the Baltics and south to Tangiers, and increasingly to the golden west to the Americas.⁽³⁾ The invention of the compass aided this process. One must remember that the rate of technological advance had been very slow during the medieval period, but late innovations such as the compass, gunpowder, pumps, and printing were to be increasingly developed by the Knights.

Meanwhile, many places in the Mediterranean had developed into mono-cultures due less to a natural geographic division of labour than to the convenience and profit of successive imperialist powers. The island of Djerba, to the south of Malta, concentrated solely on olive oil production; Libya and Tunisia were known for their wax, leather and wool exports; the Sahara exported slaves and gold dust; to the north of Malta; the island of Sicily, often called the granary of the Mediterranean, exported wheat, cheeses and tunny-fish; Crete and Corfu were renowned for their wine exports; and Malta principally traded cotton, cumin and honey. The lack of diversification within economies left the people more vulnerable to the vicissitudes of war, pestilence and weather. As Braudel notes: Grown for export only, these crops regularly threatened the equilibrium of the island's economy. They were often responsible for the threat of famine.⁽⁴⁾

Malta, lying at the meeting point of the two Mediterranean basins, was often used as a refuge by a contending power in nearby battles, for instance Tripoli

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in 1511 and 1551, Lepanto in 1571, and the fateful Great Siege of 1565. These brought increased demand for both Malta's hospital care and shipping repairs. Malta's central position also made it a haven for the many pirates who roamed the two basins. For example, the Catalans, the Barbary Corsairs and the Barbarossas variously controlled the trade routes; and the Muslims took Tripoli and then Malta's sister island Gozo in the middle of the sixteenth century. Blouet and Braudel note:

Piracy had long been associated with the islands, but during the seventeenth century it became a highly organised and profitable activity.(5)
Trade and piracy, were the great integrators of the Mediterranean islands.(6)

In addition, the Maltese were thrown into the maelstrom of events by the international connections of the Knights and their military-missionary prowess.

2.-Maltese population, work and health

*Adieu, farewell earth's bliss!
This world uncertain is;
Fond are life's lustful joys,
Death proves them all but toys.
None from his darts can fly;
I am sick, I must die-
Lord, have mercy on us!*

*Rich men, trust not in wealth,
Gold cannot buy your health;
Physic himself must fade;
All things to end are made;
The plague full swift goes by;
I am sick, I must die-
Lord, have mercy on us!*

(Thomas Nashe : *In Time of Pestilence* : 1593)

The plague was the scourge of this period, but a French chronicler, recording the first years of the Knights possession of Malta, saw only the good side of life - that side that explains the subsequent, remarkable population growth:

There are eight parishes besides the city of Mdina (then the capital) and a population of over 20,000 most of whom go on living beyond their eightieth year...the climate is healthy and the island is irrigated with springs. It has plantations of orchards, olives and vines, figs palm and other fruit. It abounds in roses and thyme so the honey is excellent. Equally belonging to Malta is ordinary cotton from which the inhabitants derive great profit. It is superior to African and Spanish cotton. In weaving factories, the cotton beans are spun and the cloth is then used for hut coverings, womens clothes and ships' sails. When barley is reaped, cotton soon follows or vice versa and ordinarily the fields of the whole island produce a return of 10 to 12 times of what is sown. The soil is soft, shallow and fertile.(7)

Quintin d'Autin goes on to state that besides cotton and corn, cumin was the third maincrop, well-known in the Mediterranean for its medical and seasonal values. His record is a tribute to agricultural organisation and skill in obtaining a high productivity from few resources. The Commission report of the Knights of St John (1528) was far less enthusiastic about Malta's possibilities(8). In comparing the income from newly acquired crown lands in Malta to those that the Knights had lost in Rhodes, they were struck by the relatively small return. Also of note was the paucity of locally grown foods , dangerous exposure to corsair raids, and the poor health of the local population, especially due to recurring malaria.

Table 2 POPULATION AND POPULATION DENSITY. Malta: 1501-1797

<u>Period</u>	<u>Est. population</u>	<u>Density per sq km (a)</u>	<u>Events</u>
1501			plague
1523			plague
1528	17,000	54	
1530	20,000	64	
1551			Gozo pillage : 5,000 killed/abducted.
1552	15,000	48	
1565			The Great Seige; some 5,000 killed.
1575			plague
1590	28,864 (b)(c)	92	
1591			famine: 800 died
1593			plague: 3,000 died
1614	41,084 (d)	131	
1617	43,798		
1623			plague
1675	50,000	160	plague: app. 11,000 died
1780	100,000		
1797	96,534	308	

Notes: (a) Area: 313 sq km.

(b) Systematic estimates of the Maltese population were only made from 1590.

(c) After the great plague of 1591, trade was not freed until 1594.

(d) Excluding members of the Order.

Sources: *Martins & Blouet* (9)

In 1528, the population of Malta and Gozo was estimated at some 17,000 (8). By 1797, about 270 years later, it had reached 96,534 (10). This overall increase of some 450% or an average of nearly two per cent per year was exceptional especially when one considers the big losses suffered at the Great Seige,

during the recurring epidemics of the Black Death and due to the continuously high infant mortality rate. Bowen-Jones et al comment on 'the relative security and stability of life under the Knights' ' rule of 269 years. (11) While S. Bussutil asserts that in Malta in 1811, just over a decade after the retreat of the Knights, 'we may be sure that per capita income was among the highest in Europe.'(12) Perhaps so, but we may be in no doubt at all that income was very unequally distributed among the population, and security of life was still the luxury of the few.

Where did the wealth come from to support this increase in the local population and the still apparent opulence of the Knights and their parasites? The three main sources were dues (tithes) from the Knights' expansive feudal properties, mostly in France, the export revenue from local cotton sales, and piracy and slavery. In the seventeenth and eighteenth centuries, as their foreign holdings became more vulnerable, the Knights tended to increase local investment. Accordingly, the administrative machinery of local government also increased. The rural areas became increasingly involved in cash crops: cotton for the local spinning and weaving industry and foodstuffs for sale in the burgeoning harbour towns. (13)

Mainly an agricultural community, the Maltese and Gozitans were to specialise increasingly in growing cotton and developing industries in spinning and weaving. Other small industries included goldsmiths, silversmiths, tailors, bootmakers, carpenters, smiths and bakers. And fishing was often fruitful especially to the south of Malta where much tunny, coral and sponge was to be found.

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Lying between the two most populated cities of the sixteenth century, Naples and Constantinople, commerce and trade were of growing importance in Malta's natural harbours. Malta had a strategic position in the cradle of merchant capitalism. The local merchant capitalist class developed and commerce and trade became a way of life for many inhabitants of the dock areas. Merchants make their profits through controlling markets : the greater the control, the higher the rate of profit. They sought state support for monopolistic privileges and they could only operate within definite political limits, always recognising the interests of the Knights, the church and the nobility on whose support they were variously dependent. Merchant capitalism was not then an engine of development. To maintain its price advantage or monopolistic position it preferred the status quo to changes in the forces or relations of production. It corroded the feudal order only to the extent that it subjugated production to the rationality of the market. (14)

Most people then were agricultural labourers and cotton spinners/weavers, fishermen or traders, trapped within a centuries' old relationship of domination and subordination. The mode of production was predominately feudal in that a class of peasants had surplus value extracted from them in the form of rent and rent in kind and thus, through extra-economic coercion, they supported middlemen, priests, landlords and imperialist. Petty commodity production for the market by independent producers who owned their own means of production was limited but of increasing importance especially as the cotton and lace-making industries developed from home base. Industrial production was most concentrated at the new shipyards, where the capitalist mode of production existed as early as the sixteenth century i.e. workers had

nothing but their labour power to sell and no control over the means of production.

We can assume there was a dual economy operating. One in remoter parts of the countryside that depended very little if at all on money and where payment was more often made in kind. The other in the new capital, Valletta, and in the newly fortified towns around the Grand Harbour, where the Knights placed their headquarters and where trade, commerce and ship-repairs were concentrated. And it was in these new, overcrowded, insanitary conditions in the pits of poverty that the recurrent epidemics and endemics of these times raged. Here, infant mortality was even higher than in the countryside. It was here too that class inequalities were most conspicuous and class hatred most virulent.

Braudel describes the collective distress suffered by the Mediterranean poor, especially during the mid-seventeenth century years, which combined overpopulation and economic depression.

Twenty per cent of the population living in extreme poverty constitutes a large but credible percentage both inside and outside the Mediterranean region...A story of perpetual and multiple social tension.(15)

'Cruelty, fratricidal vengeance, lies, one-sided justice', were the prevalent characteristics of every-day life. No doubt our ancestors bore an unfair measure of these injustices, caught as they were between the vying powers and privileges of the Grand-Master, the Bishop and the Inquisitor. The contradictions between the superstructure and the infrastructure and within the superstructure itself were indeed great. Serfs, slaves, artisans or traders could secure or advance their hold on life by seeking a favour through representation and the protection of patronage from one section of the ruling class or another. For instance, the parish priest or the Captain of the Militia

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were the main patrons on a village level. This popular hope that, by being pawns in the hands of vying powers, personal and family interests would be indirectly realised, lives on.

Despite the obvious wealth and international fame of their rulers, many thousands of islanders continued in their frugal and precarious existence, sowing and reaping cotton, corn and cumin at the bottom of a chain of middlemen, landowners, priests, merchants and autocrats. Winters were feared as stormy seas cut off vital trade. Summer carried the twin threats of drought and disease (16). As Joseph Micallef notes, the Church's most popular invocation during this period reflects people's predicament: '*A peste, fame et bello, libera nos, Domine!*'(17)

There were still many troglodytes. For instance, a big cave was occupied all through the Middle Ages and at least up to 1772. In 1632, it housed 172 people or 27 families and evidence points to the fact that these cave-dwellers were very healthy. (18) Others lived in huts in the countryside. Dr Paul Cassar writes:

The great mass of people lived in scattered villages. They dwelt in single-storied rectangular stone houses with a rear courtyard for domestic animals. These habitations were poorly constructed, very low and sometimes covered with reed-roofs which the stormy winds often carried away.(19)

It was near the ports that housing became most congested. For instance, Dr Blouet calculates that Valletta's population increased from three to ten thousand in the short period between 1590 and 1614. In the new city of Valletta, the Knights attempted some precautions. In 1566, each house was required to make connection with the sewers which were laid beneath the streets and had to be provided with a cistern for the storage of water (20).

However, the remarkable stateliness of the buildings they erected concealed a paucity of sleeping quarters(21) In the old quarry of Mandraggio, a damp and filthy shanty town developed without any of these sanitary facilities. By 1614 its population exceeded one thousand poor who had very little but their labour power to sell.(22)

Intermittent work was found at the new ship-building yards which were opened in 1540 and enlarged in 1600 and in 1636, for the construction of the Knights' vessels and also in the building of the huge bastions.

During the Order's rule the number and size of manufacturing concerns on the islands expanded enormously. The lack of industries of war was a severe handicap to the Order during its first years in Malta and at an early stage certain manufacturing processes were introduced. The greatest expansion took place in the industries linked with the two spheres of military operations in which the Order was principally interested ; the galley squadron and the development of defensive works around the Grand Harbour.(23)

The basis of Malta's war economy was being laid and was to remain the pediment of growth for over 440 subsequent years.

The Black Death and Other Illnesses.

Prevalent illnesses during Malta's colonisation by the Knights of St John included the 'fever' - probably malaria-, venereal diseases, smallpox and measles, scarlet fever, consumption, and the plague (24). 'The sixteenth century may well be called the plague century from the several invasions of the disease that afflicted the Island' . The fear of the 'pesta' dominated the new harbour-side slums where contagious diseases found an ideal breeding ground.

One hundred and forty-five years after the Maltese Islands were given to the Knights of St John and following the mid-seventeenth century slump, Malta was to suffer its worst plague epidemic. The fourteenth century Black Death had

claimed millions of victims throughout Europe. It recurred in Malta in 1501, 1523, 1519, 1549, 1575, 1592/3, and 1623 as shown in Table 2. But the greatest blight that ever hit Malta came in 1675/6, eleven years after it raged through London. It killed over 11,300 people, mostly women, out of a population of no more than 50,000 or a fifth of the total population.(25) Contemporaneously, the plague was raging in Tripoli, Tunis, Rhodes and Constantinople. English warships, using Malta as a base in their war against Tripoli, put ashore 68 slaves on 7th August 1665 and these warships were generally blamed for bringing the plague from Tripoli. It struck the towns around the Grand Harbour first and then Attard. As Micallef relates:

The story of the plague 1675-76 is the story of 50,000 Maltese who for weeks on end dreaded discovering the swelling of buboes in their armpit or in the groin...Panic, demoralisation and famine prevailed as the victims usually died within four days and the disease spread, despite quarantine measures and a trade embargo.(26)

An outbreak of the *pesta* at any port led to its closing. This had a disastrous effect on trade. As Blouet points out, 'disease was usually accompanied by famine as food supplies were cut off: this happened in the great plagues of 1591 and 1676.'(27)

It was in the slum areas of the new cities, where inhabitants had no agricultural resources to fall back on, that losses were greatest. Gozo remained free of the 1675 epidemic as did many country villages. Out of 29,000 countryside dwellers 2,000 or seven per cent died, whereas out of 22,000 town dwellers 9,000 or forty per cent died.(28) The relatively low rural incidence of deaths in 1675 Malta & Gozo highlights the relative health and security of country life. The continuing high incidence in the inner harbour region, despite the Knight's policy of making 'the safeguarding of public health'(29)

the supreme law, reveals the limited effectiveness of state health-care policy especially when it is reactionary rather than progressive.

But in Valletta's Mandraggio, thousands died. While in Castiglia of Vittoriosa, nearly all inhabitants perished. Indeed, Vittoriosa lost nearly sixty per cent of its residents while the two adjoining harbour cities of Cospicua and Senglea each lost half of their residents. Valletta, with its population of 12,000, lost one third of its inhabitants in this plague, but very few victims were in the privileged classes. Micallef notes that 'the Order, the convents and monasteries remained for long free of the plague'.

The poorest in the poorest classes were hardest hit. Not only did they die from the plague but also from hunger and other infectious diseases. Their population was further depleted after the epidemic had subsided through a series of crop failures and subsequent forced emigration.

The need to develop an environment unreceptive to the transmission of all infectious diseases was only realised for the upper classes. Cassar reckons that 'the awakening of a serious interest in the influence of the external material environment on the health of the community dates only from the opening years of the nineteenth century'(30) ; but I would argue that this should read 'closing' rather than 'opening' years of the last century. Members of the Order, the church and the burgeoning professionals retained their privileges in life and in death at this time and for hundreds of years to come. The church, in fact, increased its wealth and buildings enormously during

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and after the worst year, 1675, through the soliciting of pledges for protection from the plague.

Government under the Knights

Grain

When the Knights took over in 1530, they kept the Università, the local administrative body(a), as an independent company in the hands of four Maltese but ultimately under the Grand Master's control.(31)The universita ran on the principle of bulk-buying of wheat, corn and indeed many other staple items of food, and then fixed the price of both foreign and local produce. With their new ruler's aid, the Università renewed its annual right to grain from Sicily at preferential export tariffs. For example, the quota was 26,000 salme of grain in 1773 as agreed by the King of Spain and the Order in 1749. This quota was not, however, always honoured and lack of food was a continual hazard to the poorer classes. Grand Master Lascaris, in the seventeenth century, not only instituted a foundation to provide galleys but also a foundation 'to ensure that sufficient money was always available to keep the island well stocked with grain.'(32)

There was no question that the Knights may have tried to dismantle the Università as did the British in later years. The Order set up a paternal system of government involving much local investment:

Sixteenth century Grand Masters like del Monte (the palace), La Cassiere (the conventual church), Verdalle (Verdala Palace and the fief of Marsa) and Aloff de Wignacourt (the aqueduct) had been content to erect public works during their lifetimes and perhaps leave a goodly sum to the Order on death. Many seventeenth century Grand Masters, including de paule, Lascaris, Nicole Cotoner and Carafa, besides indulging in lavish spending during their lives, set up foundations, the incomes from which were to be applied, in perpetuity, to strengthening some aspect of the organisation.(33)

(a) Chapter Two, p 132 for details.

The Knights wanted a safe stronghold against the 'barbarians', they had little concern that government expenses were high, buoyed as they were by feudal dues, and capital investment in Malta was safer than in Europe. So the Knights not only took responsibility for the quality and price of bread but also for the provision of water, public works, hospitals, charities, some higher education and a library. How much the poor managed to benefit from these facilities is a moot point.(34)

Vested interests

The Knights, having received Malta in fief, ruled absolutely, although on paper they owed their rights to the King of Spain. The contemporary Grand-Master had neither obligation nor inclination to refer matters to the imperial headquarters or to the general populace.

Catholic Church establishments had a special place in the line of power, due to the very nature of the missionary language and its aspirations for the spread of the Christian Empire. Thus, in this period, the authority and wealth of the bishop and the inquisitor, who arrived towards the end of the sixteenth century, increased. In the newly built capital city of Valletta, the richest cathedral was erected and every town was centred around a huge parish church. In particular, a church building boom occurred after the great plague of 1676. The bishop and inquisitor enjoyed their own jurisdiction over their patentees and familiari and any disputes between one of these and a layman had to be decided in an ecclesiastical court.

The patentees, always laymen, and familiari, usually laymen, enjoyed clerical immunity, and the Inquisitor had a habit of building up the number of these by splitting up his estates and letting them out to men as leaseholders; as such they qualified for patents and were prepared to pay for the privilege.(35)

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And the church was given control over education and medicine. It was only through the patronage of the church and/or a professional who had been steeped in Christian theology, that an ordinary Maltese person could hope for special relief. A few landowning families, usually the nobility speaking romance, the Church and the professionals were, in sum, the indigenous ruling class or local parasites.

As Roy Rappaport astutely observes, religion was useful to maintain discipline and docility:

coercion is expensive and difficult and compliance and docility are achieved more easily through first the encouragement of religious experiences... and second, inculcation of the belief that the world's evils are a result of the worshippers's own sinfulness rather than a matter of external exploitation or oppression which the worshipper could possibly resent.(36)

The power of the clergy is brought home by the following document which shows the annual income from lands and property in Malta and Gozo in 1671. The clergy has by far the highest annual income from lands and property, comprising twenty-seven per cent or over one quarter of the total income. John Montalto estimates that the income of the few nobles during the 1670's 'was probably not more than 8% but certainly not less than 5% of the 285,628 *scudi*' mentioned in the document(37)

Table 3 Annual Income from Maltese Lands and Property: 1671

	Scudi (a)
Lands of the Order	41,345
Holy Office and its Ministers	20,929
Secular and Regular Clergy	76,749
Inhabitants of Valletta	55,787
Inhabitants of Vittoriosa, Senglea, Cospicua	20,847
Notabile and other casals	37,450
Other casals	31,089
££££	1,432

Note (a) The values are given to the nearest *scudo*, where 1,000 *scudi* were valued at £83.33; income from interest on loans, at a rate permitted by the Church, are not included

Source : John Montalto (1980)

To gain some idea of the relative wealth of the Church, consider the following:

During the eighteenth century the maximum annual income of a noble family was in the region of 10,000 *scudi* - about fifty times more than the salary of a butler. Ofcourse the income of many noble families was much less, the range being 3,500-4,500 *scudi*. Towards the end of the century a noble household of twelve persons could live in some comfort for about 3,300 *scudi*. Families earning, annually, more than 5,000 *scudi* can be considered as very wealthy. (38)

It is clear that the ownership of land with its consequent revenue was the major source of local wealth in the Maltese Islands during this period and the Clergy, within about a century of the Knights' Rule, was doing better than all other sections of the ruling class.

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High quality farm land was let on short-term leases for rent and rent in kind; while emphyteutical leases or long-term contracts were operative especially on marginal lands. This latter was the contract most favoured by the Order, the Università and the church, who 'between them probably owned about 50% of the Islands' farm land,' in the seventeenth century.(39). The terms of the emphyteutical lease were stringent. Blouet finds that many peasants never successfully developed the land they were granted because the marginal productivity of the land was very low, barely able to support meschiato and barley crops which were low quality and low priced. The poor farmers also lacked capital and means of production and were plagued by recurring drought and disease.

During the seventeenth and eighteenth centuries, the cultivated area was extended as the Knights decided to drain the marshland from a 1650 Council of the Order of St John; and as the Knights became more directly involved in the agricultural economy, spurred partly by the increasingly weak finances of the Order and the increasing difficulty in collecting responsions from many European estates.(40). The Knights increased agricultural investment in the Maltese Islands, because these lands, although less profitable were, at least, easy to control and exploit. A common method, that flattered a Grand-Master's ego, was to set up a foundation carrying the Grand-Master's name and in which a part of his fortune was invested in urban and rural development.

By the eighteenth century, the Knights' fleets had destroyed Algerian, Tunisian and Tripolitan corsairs and could cruise from Lisbon to Syracuse carrying loot and treasure. Turkey's sea-power having declined and the threat of Mohammedism

being remote, the Knights (3-500 of them) could live a life of idleness and luxury in Malta. Long-forgotten were their vows of chastity and obedience as were their rules and regulations ensuring discipline and honesty. Their arrogance, tyranny and oppression was unlimited. The Church and upper classes were fully compliant to their system of patronage and encouraged or turned a blind eye to prostitution. Dr Gauci wrote that: 'Valletta became a brothel, nor did a family remain which was not dishonoured.'⁽⁴¹⁾ Despite the fact that the Knight's and Clergy's financial resources vast, the people were reduced to a condition of servitude and degradation.

Health care

In the tradition of combining religion and medical care, the Knights on arrival had a hospital built at Vittoriosa⁽⁴²⁾. The Great Siege, was as Dr Paul Cassar explains, 'the first medical emergency on a national scale that Malta had to face', the Holy Infirmary and a small Italian hospital at Birgu and the old Santu Spirtu hospital at Rabat were sadly inadequate. After the new fortress city of Valletta was constructed as their headquarters, the Holy Infirmary was moved there. Later they set up a district and nursing service for sick women and a quarantine system for seamen at Lazzeretto, Marsamxett harbour in 1634. Dissections and post-mortems began in Malta at a much earlier stage than most other countries because the Knights founded a School of Anatomy and Surgery at the Holy Infirmary Hospital in 1676. The first Director and teacher of the School of Anatomy was Dr Joseph Zammit, both a physician and a priest. He founded a garden of medicinal herbs and was a major donar to the library that was set up in the Holy Infirmary.⁽⁴³⁾

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The Jesuits were expelled from Malta in 1769 . They had headed demands for 'impunity, the observance of national privileges and a reduction in the price of wheat'(44). They got reform of the church : personal and local immunity was restricted as were court exemptions. The Knights seized the Jesuits property and from its revenues they founded a university. In 1771, the Faculties of Theology, Law and Medicine were set up and the School of Anatomy and Surgery were incorporated in the latter. Physicians no longer had to go abroad to Italy or France to train. They had to do six years clinical practise at the Holy Infirmary before license to exercise their profession was granted.

The free distribution of medicines and monthly contributions to the House of Poor Women (founded by Catherine Scoppi in 1646) were provided by the Knights, but when there had been overspending as for instance on building work under G.M. Pinto in 1774, the above services and subsidies were discontinued.

It seems, however, that from the very beginning the Knights' concern for the public's health was superficial. They imposed heavy taxes on the common people and inequalities increased under their rule. Very soon after their arrival, the local people under the leadership of Dr Joseph Callus, District Medical Officer, organised a petition to Phillip II of Spain, against the exorbitant taxes of G.M. Jean de la Vallette. The petition was intercepted by the Knights and Callus was hanged in 1561.(45) Petitions and demonstrations were the commonest methods of airing discontent with harsh taxes, high rents, repression and persecution which according to Wettinger, were the order of the day.

The maintenance and reproduction of Maltese labour power was of intermittent interest to the elite. With vast external sources of wealth, with local surplus supplies of labour (male, female and child), with a not-too-distant source of Sicilian labour and a ready market in slaves (46), both capital and labour were largely available externally. True, the Knights needed a stronghold in the sixteenth century against Muslim attacks but once the Great Siege had been won, there was no real threat until the end of the eighteenth century. Medical care and charities were more often showpieces and means of enhancing their own power while nurturing a useful buffer of physicians. However, as the Knights became progressively more dependent on local investments and local sources of surplus value, such as cotton exports, so they became more concerned with the local infrastructure. I have referred to the increasing foundations of the seventeenth century and the improvements in the provision of grain and water, which bear out this point. The Knights also encouraged the construction of water cisterns, from 1569, and developed the use of underground springs for household purposes, from 1610. 'By 1723', writes Cassar, 'there were fifty-three water reservoirs in Valletta and Floriana, twenty-one of which were open to the public'. In the eighteenth century, the Order enacted many special laws and regulations 'with the aim of securing a better storage of water in the towns and protecting its purity.' (47)

The Catholic Church and the health of the people.

The Catholic Church's power and status under the Knights not only came from its property but also depended on its ability to mediate and compromise. It boasted hegemony in the field of social welfare, both spiritual and material.

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By pointing to its charities - its hospices and orphanages- it could, according to Vassallo (48), morally defend its wealth. Ecclesiastics were not under the jurisdiction of the civil tribunals and many churches were sanctuaries against the Knights' guards. The Church also included an educated elite of notaries, doctors and teachers. These had social and political influence and encouraged patronage and dependency. Thus a monolithic ideology became allied to the international and national elite, 'resisting forces of liberalism and socialism'. (49)

Health then was not seen as a right but 'in the nature of a reward to be won by those who give useful service and fulfil their obligations to society.'(50) Going back to the teachings of St Thomas Aquinas, we see that the Church's ideology upheld a hierarchy of benefits and the perpetuation of inequalities, for 'the standard of living we should have, must reflect our 'station in life''. And the church's way of seeing things like poverty and ill-health must have been general since it was the dominating influence on people's lives.

Poverty and scarcity were not condemned. The church did nothing unless the peasants themselves seemed about to mobilise against severe oppression. There were exceptions. In 1594, for instance, the bishop succeeded in revoking some taxes and the mid 1630's large demonstration in Zejtun against the imposition of new taxes appears to have been headed by the parish priest(51). Complaints might then have been expressed on behalf of their parishioners but the Bishop and Inquisitor were careful not to rock the boat that was so comfortable for them. The church's effect on health was not only indirectly but also directly negative in as much as it drained hard-earned money from the people to build

magnificent parish churches and subsidise the annual parish festa, while this money could have been used in improving village public works and sanitation.

The church's authority was enhanced by its role as protector from the foreign overlord. It thus represented cultural identity in the face of a powerful foreign elite. It sanctified the traditional, frugal way of life as opposed to the evil and false luxuries of the cities. It blessed the family and the wife's sacrifices as its cornerstone. Such pressure to conform to a certain way of life must have had two opposing effects on peasant women. In so far as they stayed in the country, they were less exposed to infectious diseases, filth and famine but in so far as they were used as reproductive machines and sources of unpaid or cheap labour, their lives were shortened.

An example of the church's direct influence on public policy is given in the history of midwifery.⁽⁵²⁾ From 1575, the first Inquisitor of Malta, Monsignor Pietru Duzina, began encouraging parish priests to teach midwives how to baptise. The Kurja certificate showing that a midwife could administer baptism was obligatory long before her doctor's license. This became a rule in 1624. From then a midwife had to have both a Kurja certificate and a doctor's license. Further Government regulations were passed in 1662 and 1722 and became laws in 1724 and 1784, which prevented any woman practising midwifery unless she had been examined and approved by the Principal Government Doctor and given a license. The baby had to be saved in childbirth, and if the mother died, the the midwife was to do a caesarian and baptise the newborn. All the officialdom did not lead to more hygienic birth conditions until much later -

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in 1899- when the Government first published regulations about how a midwife should keep her hands and her instruments clean and disinfected.

As in other parts of Europe at this time, the Inquisitor tried many lay-healers and sorcerers in Malta(53). Popular belief in folk medicine, especially herbal remedies, was widespread. The fame of the anti-septic fungus growing on a rock near Gozo spread as did the belief in the power of the white powder at St Paul's Grotto to overcome fever and smallpox. Natural doctors, mostly women, abounded and increasingly became a thorn in the flesh of the hegemonic physicians. 'Witchcraft' was increasingly scorned by 'science'.

Summary

Under the Knights' rule, Maltese society underwent a slow change in the mode of production - towards more merchant and industrial capitalism and away from subsistence farming and feudal ties. A special source of wealth was that from corsairing which was, it seems, the most prosperous industry until the late eighteenth century (54). Meanwhile the instruments of class domination developed and consolidated : science and technology, politics and law, the church and the professions all increasingly interacted and, occasionally, united against the excesses of the Knights and the uncertainty of the shifts of power in the Mediterranean.

Despite the increased opportunities for a few more well-placed merchants, seamen, artisan and cotton workers, the mass of people still lived lives of subservience and frugality. They lacked the most basic sanitary services and knew little of the benefits of hygiene. The advantages of spacious homes were

increasingly denied them as their numbers grew and housing only developed haphazardly. Their traditional knowledge of herbal medicine had been overshadowed by the growing power of the physician/priest, if not terrified out of their homes by the Inquisitor. Their health, in a nutshell, was more precarious than their hard-won lives. Their babies and children died by the thousand every year.

Contradictions increased not only because of the glaring inequality between the wealth of the Order and the Clergy and the poverty of the mass of peasants but also because, as productivity increased on the land and in the shipyards, the difference grew between a workers' capacity to produce and his and his family's ability to survive. Capacity and need were increasingly separated. To prevent these contradictions being realised and overcome, the Order had to use repressive and disciplinary tools.

Take for example, the Order's reaction to the 1592-93 plague epidemic. The Council of Order elected four Knights as Health Commissioners on 6th June 1592. They were 'invested with great powers to enable them to maintain discipline'. First all plague patients were isolated in a lazaretto. The Health Commissioners could 'punish transgressors with flogging, forced rowing in the galleys and even death after obtaining the sanction of the Grandmaster'.

Nevertheless, Cassar notes:

it has been recorded that even a guardian of the lazaretto did not refrain from stealing two mattresses in spite of the fact that his right arm was missing and that he had only three fingers on the left hand! Others robbed the dead of their clothes and burgled deserted houses. One of these thieves was caught red-handed, flogged through the streets of his village and condemned to the galleys for life while the stolen goods were publicly burned.(55)

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During this period of increased commerce and trade, the recurrence of the plague is central to the relationship between development and ill-health, especially in the desperately poor, socially decomposed inner-harbour slums. It, above all other epidemics during the rule of the Knights of St John, reflects the prevailing mode of production, and the contradictions in the prevailing socio-economic relations. Its recurrence cannot be explained by market forces or demographic changes alone.

Notes

- 1) For an early history of the Order see :
Sutherland A. *The Achievements of the Knights of Malta* . (1831)
Scicluna P. Hannibal. *A Short History of the Knights Hospitallers of St John of Jerusalem of Rhodes and of Malta*. Malta (1970)
Lambert G. *Grand Masters of the Hospitallers*. (1891).
- 2) For in depth descriptions of this historic event see:
Bradford E. *The Great Siege*.
Estimated human losses vary from 3,000 to 7,000 being mostly Maltese townsfolk and peasants.
- 3) Braudel F. *op cit* p107 & 117.
McEvedy C. *The Penguin Atlas of Medieval History*. Penguin Books. p90.
Epicurism, enquiry and theory blended in the Portuguese captains who in the fifteenth century sailed ever further south along the coast of Africa paying for their expeditions by bringing back the slaves, gold and ivory of the western Sudan. The cape was reached and rounded in 1488 and ten years later Vasco da Gama finally reached the rich Indian market. By then Genoese Columbus was already setting out on his third voyage to America. The walls that had confined Europe throughout the Middle Ages were shattered.
- 4) Braudel F. *op cit* p155.
- 5) Blouet B. *op cit* p118.
- 6) Braudel F. *op cit* p150.
- 7) Quintin d'Autin Jean *The earliest description of Malta*. Written in Malta in 1533 published in Lyons 1536. Translated by H.C.R. Vella. Interprint (1980)pp29-37.
In contradiction, he later comments, that the people "are not strong enough for, nor adapted to warfare." p41
- 8) de Boisgelin L. *Ancient and Modern Malta* Vol II London (1805) gives a short summary of the Knights Commission pp15-17.
Bosio G. *Dell'istoria della Sacra Religione et Illma, Militia di San Giovanni Gerosolimitano Malta* Vol III Rome (1602) gives a longer treatment of the Commission report.
- 9) Sources for the figures of this table are various and include
Martins *British Colonies* Dawsons London (1843) reprinted (1967). Vol V on Malta.
Blouet B. *op cit* p71 and graph p72.
In 1528 the Knights of St John sent a commission to Malta to examine the islands. The commission reported that there were 17,000 people living in the archipelago, 12,000 in Malta and 5,000 in Gozo. These estimates might have been derived from militia rolls but more likely they were figures which were generally held to be correct and which the commissioners picked up during their visit.
Blouet goes on to explain that estimates of population growth had been regularly made primarily to ensure an expansion in the grain allowance from Sicily. pp73,74.

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- 10) Blouet B. *op cit* p75.
- 11) Bowen-Jones, Dewdney & Fisher *Malta. Background for Development.* Department of Geography, University of Durham. (1960).p 116
- 12) Bussutil S. *Malta's economy in the nineteenth century.* Malta University Press (1969).
- 13) Blouet B. *op cit* pp90, 79, 121.
- 14) Kay G. *Development & Underdevelopment : a Marxist analysis.* p96
- 15) Braudel F.*op cit* p454.
- 16) *ibid* p258.
- 17) Micallef J. *The Plague of 1676. Malta (1985)*
- 18) Blouet B. *PhD.* p144-5
- 19) Cassar P. *Medical History of Malta (1964)* p326
- 20) Blouet B. *op cit* p86.
- 21) Porter W. *The Knights of Malta* London (1884) p278
- 22) Blouet B. *op cit* p91.
- 23) *ibid* p108-9.
- 24) Cassar P. *op cit* pp153-273
- 25) *ibid* p175
- 26) Micallef J. *op cit*
also Pisani S. *St Lukes Hospital Gazette.* 1970 5 1
- 27) Blouet B. *op cit* p117.
- 28) Doyal L. *op cit* p27.
- 29) Cassar P. *op cit* p174
- 30) *ibid* p275
- 31) Blouet B. *op cit* p44.
The constitution of the Mdina-based universita is far from clear but we can see a structure in which representatives from the town, and outlying villages, were present. Acting in council, these representatives elected jurats, and officials to oversee the maintenance of the walls, the markets, the ports and some aspects of public health.
Eton W. *Authentic Materials for a History of Malta.* 1807. This is a strong argument that Britain should not deprive the Maltese of these ancient rights

of self government. The history and functions of the consiglio popolare are given on page 82.

32) Blouet B. *op cit* p89.

33) *ibid* p90

34) Two completely contrasting histories of common life under the knights are given by:

Eton W. *op cit* especially in the Memorial on page 32.

Nitrovich G. *The Cause of the People of Malta*. London (1836).

35) Cavaliero R.E. *The Last of the Crusaders* London Hollis & Carter (1960) pp92,93

36) Rappaport R. quoted in Hodges R. *Dark Age Economics* p 186

37) Montalto J. *op cit* pp255,256.

38) *ibid* p256

39) Blouet B. Ph.D. p91

40) Malta National Library AOM 257, f60

41) Dr. Gauci *The Capture of Malta by the French*.

The compliance of the Church in the exploitation of women as sexual objects is evidenced in the fact that in 1790, Bishop Labini passed an 'Edict against cohabitation of Women with Priests.'

42) Critien A. *Holy Infirmary Sketches. Malta. Lux Press (1946)*

The author notes that the Order undertook to treat male civilians in the same premises as the ill Knights but were given less and lower quality food.

From the detailed estimates given by Critien of the Order's annual expenditure in the last years of rule, one can calculate that 16% of expenditure went on the upkeep of the two hospitals, a home for the aged and infirm, two houses for illegitimate children and outdoor relief to the sick poor (or some 213,000 Maltese scudi where in 1802 £1 = 10 Maltese scudi).

McLachlan G. (editor) *Medical Education and Medical Care* gives prominence to the influence of the Knights of St John hospital building. Oxford University Press (1977) pp27,28.

43) Cassar P. (1964)

44) Callus Rev. P. *The Rising of the Priests*. Malta University Press (1961)

45) Cassar P. *op cit* pp17,19

Wettinger G. *op cit* p267

46) Doyal L & Pennel I. *op cit* 'The most continuous diffusion of disease spanning some 400 years was generated by the slave trade.' p102.

Montalto J. *op cit* pp326-329

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- 47) Cassar P. *op cit* pp316,317
- 48) Vassallo M. *From Lordship to Stewardship*. Morton Publishers (1979)
- 49) Wallis R.& Bruce S. *Religion and the British Constitution*. British Journal of Sociology vol. 40. no. 3 (1989) p497.
- 50) Vassallo *op cit*.
- 51) Wettinger G. *op cit* p267
- 52) Cassar P. *G.M. Nicholas Cottoner and the Foundation of the Lectureship of Anatomy & Surgery 1676*. Melita Historica 8.38. (1980).
Article by Dr P. Cassar in It-Torca entitled *Il-Professjoni tal-Qabla*. (2-5-1982) p19.
- 53) Ciappara F. *Lay healers and sorcerers in Malta 1770-1798*. Storja Malta (1978).
- 54) Montalto J. *op cit* pp321-323
- 55) Cassar P.(1964) *op cit* pp167,168

Chapter Four

NINETEENTH CENTURY HEALTH & ECONOMIC CONDITIONS

In this chapter, population trends, production and the standard of living in the nineteenth century will be analysed. Some aspects of church, imperial and local state policy will be reviewed. Thus the scene will be set for the next chapter which will look in depth at the epidemics of cholera. Always the aim is to understand how the health of an ordinary woman, man or child was affected by the material conditions of existence and the prevailing ideology.

General Mediterranean Background

At the end of the eighteenth century, two thirds of the Knights in Malta were of French origin and despite the rise in Malta's cotton trade, still a major source of the Knight's wealth came from feudal dues of large estates in France and Italy. The French revolution and the extension of the French Empire was to sound their deathknell. In less than nine years, from the French revolution in 1789 to 1797, the systematic confiscation of their property meant that their annual income was reduced by eighty-five per cent. The Knights were reduced to borrowing from Maltese merchants. (1) Antagonism between the Knights and the civilian population grew sharper than ever as the rulers increased local exploitation in an effort to maintain their standards of wealth. Members of the nobility and professionals, such as Baron don Marion Testaferata and lawyers Bonanni, Torregiannia, Schembri and Muscat, and the church leaders were increasingly denied the rights and privileges they had previously enjoyed. So it was not surprising that many nobles and even some Knights connived in Napoleon's takeover in 1798.

The rise of capitalism with its increased trade and expansive compulsion, meant that sooner or later one of the emerging world powers would have recognised the strategic value of possession of Malta, en route to North Africa, Turkey and India and at the centre of growing Mediterranean trade. The corruption and decadence of the Knights left Malta wide open to prey.

Despite Napoleon's grasp of Malta's maritime importance, French rule of Malta was to last less than three months. (2) The pace of reform being so fast:-all slaves were released and the slave trade abolished; the nobility and its feudal privileges were abolished; the church's wealth and authority were threatened with the passing of measures to seize church property and sell it for the relief of the poor; and the internal base for such a revolution being weak, the local people led by Canon Caruana, the Bishop, and Emmanuel Vitale, a notary, rebelled and laid the French troops under seige in the capital, Valletta. (3)

The Maltese did not have enough arms to completely defeat the French. They were forced to seek aid from another naval power. The British were their only choice. Their hatred for the Knights turned them away from Russia to which refuge many of the Order had fled. They also feared that vital trade with Turkey and the Barbary coast would be disrupted if they came under the Russians. The British Admiralty was close at hand competing in imperialist tactics to outwit Napoleon. But it took two long years of semi-blockades, destitution, disease and death, before Captain Ball took a fleet from Sicily to Malta and secured General Vaubois' formal surrender. As Civil Commissioner, Captain Ball, introduced British absolute rule in all military and civil

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matters and despite protests and petitions, did not re-instate the Consiglio Popolare.

Towards the end of the eighteenth century, Malta's main exports were cotton twist and cotton manufactures, cigars and vegetables to the United Kingdom and the Netherlands while her main imports were grain and fodder mostly from Russia and Turkey. The distance to both these sources and destinations show how far the island's produce and trade had become internationalised during the Order's time. The Maltese merchant class had grown. For instance, a ship would go to Italy to buy silk, take it to Spain, buy cargoes there for sale in the Canaries and Havannah or even Mexico and Peru. Others made a fortune selling goods to the new nation of the United States of America.(4)

After the Napoleonic wars, the British Navy dominated the Mediterranean. Gibraltar had been acquired many years before in 1704 and the Ionian Islands were taken with Malta. The Suez Canal was opened in 1869, Cyprus leased in 1878 and Egypt taken in 1882. So Malta, by the end of the nineteenth century, had become the jewel in Britain's Mediterranean crown, the base for its Mediterranean fleet and a major trading post on the busy Indian commercial route.

British annual military expenditure in Malta peaked in times of war and tension : there were the joint United States and British wars against the Barbary pirates (1814-1816), the Battle of Navarino (1828-30); the Russian-Greek alliance and Treaty of Unkiar Skellessi freeing Greece from the Ottoman Empire (1834-36); against Mehemet Ali (1840-2); and in particular against

renewed French expansion (which took Algeria in 1834 and negotiated to build the Suez canal in 1869) and during the Crimean War 1854-56.(5) But military and naval expenditure tended then to be rapidly cut back. Meanwhile commercial trade was often severely disrupted. Of lasting importance was the fact that the Grand Harbour with its newly built drydock became the supply and refit station for British naval forces in the Crimean War, and commercial repair and bunkering facilities developed round the naval docks. From 1839, the P&O and East India Company used Malta as a calling port on their Egyptian and Levant routes. Entrepot trade rose. For instance, by 1857 Malta had become a stepping stone in the wool trade from Barbary ports to the USA and Malta introduced tobacco from USA to both the Barbary coast and Sicily. Incidentally, this entrepot trade aided the expansion of the local cigar industry, but it was unique(6). On the whole, commerce did not generate local production. And it was on commerce and British foreign policy that the Maltese were to become increasingly dependent for their very basis of existence. As Clare points out, Malta's economy became increasingly dependent on merchant capitalism to the disadvantage of internal development:

As time passed, exports of local products were to form an increasingly small part of total foreign trade, and in the latter decades of the century local consumption of foreign manufactures increased appreciably. The vulnerability of Malta's economy, its increased dependence on commercial pursuits for the payment of basic imports, became even more glaringly obvious in the second half of the period under survey.(7)

Shipping business and port activity were given a great boost by the opening of the Suez Canal in 1869. As a result, unemployment and emigration fell somewhat in the 1870's, while the migratory trend from land to the suburbs of the harbours, such as Paola, Marsa, Hamrun, Qormi and Sliema, accelerated. From 1871 to 1881 the number of coalheavers, porters and carriers doubled and the total labour force rose by forty per cent(8). British steel exports via Malta

peaked in 1882 while Black Sea grain trade to Europe was still buoyant. But the USA was to take the European market for grain after 1890. Simultaneously the size of ships and their working power increased so reducing their need to bunker at ports such as the Grand Harbour. Meanwhile, Malta faced increased competition from other Mediterranean ports which had the extra advantage of resources from vast hinterlands to draw on. By 1895, shipping and port activity in Malta had dropped well back to former levels.

Although Malta benefitted from being on Britain's major imperial sea route in the nineteenth century, it was 'too much considered as a garrison or naval station, instead of a central depot for merchandise'(9). As a commercial centre, Malta's fortunes were intermittent. And as a naval base too, Malta's importance was dependent on external and not internal developments. It is not surprising then that British imperial rule paid scant attention to local living conditions. High unemployment, destitution, famine and disease were officially greeted by the Malthusian arguments that these were only positive checks on the native's fast population growth and high population density. Their terrible condition was demographically determined by the 'improvidence of the people in multiplying their numbers beyond the demand for their labour'.(10) The 1838 Royal Commission, reporting after the big cholera outbreak, went on to add grist to the mill by recommending first that the police should be strengthened and second that monthly alms-giving be discontinued. It could be argued that Malta was not only used, it was abused: being undeveloped and deprived of basic human rights, including health.

Population Trends

In 1797, one year before the arrival of the French, Malta's native Catholic population was estimated to be nearly one hundred thousand souls. The long and dreadful siege of the French garrison(11) may have taken up to twenty thousand lives as British efforts to bring General Vaubois and his men to their knees by preventing the passage of all convoys to Malta, also brought many thousands of women, men and children to their graves. Typhus and yellow fever epidemics raged compounding health problems for the deprived inhabitants. By 1807, despite the commercial boom and increased British demand for labour in port areas, the native Catholic population had still not recovered. From the parish registers, it was estimated at ninety thousand. Of these, ninety per cent lived on the island of Malta and more than a quarter were already concentrated in and around the capital city of Valletta, it being estimated that twenty-five thousand souls lived in Valletta and Floriana.

Table 4 Malta Population and Population Density:1807-1851

<u>Year</u>	<u>Civil population</u>	<u>Density (per sq km)(a)</u>
1807(b)	122,804	392
1828	115,945	370
1842(c)	114,499	366
1851	90,021	288

Notes:(a) The area is 313 sq km.

(b) This is the grand total, including 'other inhabitants and domesticated strangers. The native Catholic population was 93,054 in 1807, and 96,534 in 1797.

(c) The first official population census was taken in 1842 and thereafter in 1851 and every subsequent decade up to 1931.

Sources: *Parish registers; Census 1851; and Martins British Colonies Vol 5 Dawsons London 1843; reprinted (1967) p590; also Price C. Malta and the Maltese Melbourne 1954; Appendix B some aspects of Maltese Demographic History.*

So the first half century of British rule of the Maltese Islands brought an absolute decline in the civil population.(12) Extreme poverty, famine and disease accompanied the sharp decline in manufacturing production and was regarded with imperial indifference. The 1838 Royal Commission and indeed such subsequent learned works as that of Bowen Jones et al(13), mistakenly identified a 'slow rate of increase' in the Maltese population at the beginning of the nineteenth century and attributed this sluggishness to 'the excessive pressure of numbers on resources'. Accusations of overpopulation were and remain a convenient tool for shifting blame for disease and death onto the natives.

Prevalant diseases in the nineteenth century included the 'fever', ophthalmia, bowel and pulmonary infections and the recurrence of epidemics of cholera, measles, scarlet fever, smallpox and diphtheria.(14)

Child & Infant Mortality

High infant mortality rates plagued the nineteenth century. Half the deaths that occurred in the decade 1827-36 were of children under five years of age. The infant mortality rate in Malta at that time was four times as high as in London (15).In 1851 it was reported that sixty per cent of all deaths were of children under five years.(16) Death from diarrhoea, dysentery, gastroenteritis and marasmus were common. Not only bowel but often pulmonary infections developed through debility. According to Davy,the high infant mortality was primarily due to "the extreme poverty of the parents"(17). Even the 1838 Royal Commissioners had to admit that:

Poverty pressed heavily on many underemployed and deaths from hunger and exposure were

frequent...Illnesses such as typhus fever and dysentery, very often happen caused by insufficiency of food or by its unwholesome quality. In Zurrieq in the year 1836 there was an epidemic malignant fever and another epidemic in 1833; also one in Qormi and in Naxxar in 1834; all caused by bad food taken under the urgency of hunger.(18)

Twelve years previous to this report, the Committee of 1824 (19) warned that Charitable Institutions had exhausted their funds before relieving half their applicants. Many agricultural workers attempted to survive on a diet of prickly pears, thistles and clover.(20) While in 1830, Dr Heenan noted that 'smoking tobacco is an invariable accompaniment of the meals of the lower classes and often serves as a substitute for them.'(21)

Relentlessly, the high infant mortality rate persisted throughout the nineteenth century. The percentage of deaths made up of under-fives was fifty-one per cent in 1895, fifty-three per cent in 1896 and sixty-one per cent in 1897. 'The mortality among children in these islands is simply appalling', noted the Public Health report of 1897 with unusual honesty.(22) The infant mortality rate in Malta and Gozo was for instance in 1897 as high as 314 per thousand, whilst it was 177 on average in thirty-three of the largest English towns and an overall average of 99 in Ireland.

'Infant mortality', writes Rosen,'is a sensitive indicator of community health because it reflects the influences exerted by a number of social factors.'(23) The lack of food and pure water, of decent housing and sanitation were among those social factors that , together with the inability to earn a steady living wage, precipitated disease and death to so many infants and children, so many lost lives to their parents, so much unnecessary waste. Central to reducing infant and child mortality is improvement in the welfare of the mother. The fact that for the first one hundred years of British rule, most

mothers had no chance to escape from extreme poverty with no control over the harsh conditions of their existence, meant that their children's health was left precarious and vulnerable.(24)

Meanwhile, infectious childhood diseases often came in waves that took a higher toll of lives such as the scarlet fever epidemics 1840-80, the 1855 diphtheria pandemic and the recurring smallpox outbreaks.

Class Incidence

The nineteenth century was marked by a high class incidence of disease.

The wealthy, especially the British troops, lived in comfortable conditions while the poor regularly succumbed to the 'fever', ophthalmia, typhus, bronchitis and bowel infections. Dr Hennan points out that, 'the fever appeared among poorer inhabitants and agricultural workers and to them it was exclusively confined'. The British troops were not quartered near the marshes 'but in admirable stone barracks or houses either at a distance or well sheltered; while their bedding, clothing and food all co-operate to keep them in a state of vigour sufficient to resist any casual exposure.'(25)

Ophthalmia principally hit women in the lower classes who were most exposed to dust, damp and sun glare. While intestinal worms were so common among the poor that Heenan noted 'they are scarcely considered sources of disease'. In 1867, Dr Ghio wrote that typhoid fever, mainly hitting the working class, occurred regularly in Summer and Autumn, bowel disorders occurred yearly during the hot season and imported epidemics such as scarlet fever, smallpox,

contagious typhus, the plague and Asiatic cholera were also regular killers. 'The average rate of mortality in these islands under ordinary circumstances is about nine persons per diem (24 per 1000 annually on the entire population)'. (26) Again he remarked on the particularly high mortality among children of the lower classes resulting from their deprivations.

Migration & Emigration

Many starving agricultural workers moved to the City and port areas. Those with the means went further afield. It was during the nineteenth century that Maltese communities developed in Algiers, Tunis, Tripoli and Alexandria (27). C. Cassar notes, 'In 1842, there were 20,000 Maltese emigrants in Mediterranean countries which amounted to 15 per cent of the population of the islands.' (28) By 1900, there were about 50,000 Maltese scattered around the Mediterranean shores. At the end of the last century, emigration to New Orleans in the USA began in earnest, but 'according to the 1911 census, the majority of emigrants were still seeking other Mediterranean cities and ports'. (29)

Housing

In Valletta, the old stone quarry, the Mandraggio, developed into a major slum and health hazard as it became overpopulated with hungry unemployed. 'The poor', wrote Heenan, 'are accomodated in dense masses in shelters which exclude sufficient light and air for ventillation and cleanliness.' Add to this the fact that there were neither supplies of pure water, nor drainage systems. The Public Health report for 1897 accurately indicated what was a major obstacle to public sanitation and therefore to health and length of life: 'Landlords aim to erect the most closely packed buildings possible on the site available at the lowest possible cost.'

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In 1887, during the cholera outbreak, the Health Department closed down one hundred rooms in the Mandraggio, in belated recognition of the recurring health hazards suffered by inhabitants. In 1913, the officially-recorded slum population amounted to 1,200 or about five per cent of the total population of Valletta, and remaining remarkably less healthy than their better housed neighbours. (30)

Epidemics

It was in the increasingly populated urban port areas, and especially the Mandraggio that the imported epidemics found their breeding grounds and killing fields. 'The plague of 1813 raged with the most fatal violence among the Mandraggio poor and scarce an individual escaped the contagion.' (31) In all about five thousand Maltese died of the plague of 1813, some five per cent of the total population and a much higher percentage of the poor. Disillusion with British colonial autocracy was fomented by this social massacre. The administrative response was very slow, and as Dr Hennan points out, many died from lack of care and lack of quarantine. The minority of educated and able local people increased their demands for independence and sovereignty (32). While adherents to the contagionist theory of plague transmission who were shocked by Malta's experience, raised their voices against the miasmics, the mercantilists and the laissez-faire proselytes. An example is Sir Arthur Brooke Faulkner's *A treatise on the plague designed to prove it contagious, from facts collected during the author's residence in Malta.* (33)

Measles, imported by the 95th English regiment in 1824, had a particularly ravishing effect on the poor and young. It struck again in 1861, 1865 and 1885.

In fact, the infant population increased in every decade from 1851-1901 except for that of 1861-1871 due to the high mortality both from measles and smallpox(34). The smallpox spread in 1865 and 1870 but in 1830, the smallpox epidemic had its worst impact killing 1,170 people, again mostly working-class children, while 8,000 fell ill remaining 'horribly defaced or blind'. In 1861, of the 1,608 people reported as 'suffering organic and bodily defects living at home,' 340 were blind, also indicating the continuing high incidence of trachoma and other eye diseases. (35). In this year, it was noted that by far the biggest number of deaths occurred in the category *Sporadic Diseases of the Digestive Organs*, deaths from gastro-enteritis taking epidemic proportions in many years, such as 1853,54,55,56 (36). Even more dramatic was the quick and painful death by cholera that struck thousands of poor people in nine successive epidemics. After collecting information on illnesses suffered in Malta during this mid-century decade, the Superintendent of Hospitals found that at least a third of all deaths in Malta were caused by contagious diseases. This is not surprising considering the poverty of the nineteenth century environment, Malta's continuing vulnerability and lack of development.

One effect of the high death rate among the young in epidemics showed in the age ratio. There was, for instance, an actual decrease in the old population recorded 1851-1901 largely due to the ravishes of the 1860-70 epidemics. (Table 5)

Table 5 PROPORTION OF POPULATION IN EACH AGE GROUP, Malta: 1851-1901Out of every 1,000 people

<u>Age</u>	<u>1851</u>	<u>1901</u>
<15	324	341
15-65	614	605
66>	62	53

Source: 1901 Census.

During this second half of the nineteenth century (1842-1901), the native population rose by over seventy thousand, as shown in Table 6. In the last two decades of the nineteenth century, the annual average population growth rate was one per cent. But, despite the increased port activity, bunkering and shipping business and greater overall British Admiralty interest in consolidating its hold on the region, thousands of people lived in squalor and destitution; emigration increased toward the end of the century. Prosperity in the harbour area fluctuated and only reached a minority of the population. Death rates remained excessively high, especially among the young. The 1874 Public Health Commission notes, for instance, that of the four thousand annual deaths over two thousand were of children under five years old. The new suburbs around the dock areas and the three old cities were, themselves, centres of disease. Here, there was most waged labour but most overcrowding. In the country, hardship prevailed and destitution recurred. Traditional agricultural industries had been totally destroyed by 1881 and scarcity of land was an increasing problem. This latter point was noted in the 1874 Commission report and later led to government encouragement of agricultural

colonisation in the north of the island. The villages of Mellieha, Mgarr, Manikata and Zebbieh grew during this period. But, by 1871, agricultural employment was no longer dominant and no steady alternative employment had replaced it. The steady decrease in the number of early marriages in the last twenty years of the nineteenth century and the increase in emigration were two demographic indicators of the hardships faced by most people

Table 6 Malta Population and Population Density: 1842-1901

Year	Total	Density(per sq km) (a)
1842	114,499	366
1851	123,469	395
1861	134,055	428
1871	141,775	453
1881	149,782	479
1891	165,037	527
1901	184,742	590

Note: (a) Area is 313 sq.km.

Source: Census 1985 and author's calculations from the census.

In her discussion of *Everyday Life in Malta*, Carmel Cassar comments on the second half of the nineteenth century:

In many ways the standard of living of the 1870's and 1880's remained quite similar to that of forty years previously. The Maltese working class ate very little meat and not much more vegetables, cheese, oil, pasta or wine. There was a marked difference, however in bread consumption. The 1836 Royal Commissioners had reported that a field labourer ate 2 pounds of bread a day. Francis Rowsell, a British Commissioner investigating the matter forty years later, concluded that in 1877 the same person ate from 4 to 5 pounds a day. (37)

Bread was the staple food of the masses but its price was double that of the 1830's. (38) And incomes on average had not increased. As noted again by Cassar, 'In the 1880s Senior Nassau remarked that "Maltese incomes are so small that the attempt to keep up appearances which the English think only decent becomes a ruinous expense." (39)

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The first century of British rule therefore saw no permanent improvements in nutrition for the mass of people. Meanwhile, hygiene and housing deteriorated.

The general slump in the standard of living from the second decade of the nineteenth century was registered by the Maltese not only in their poor diet, but also in all other aspects of everyday life. The lower classes, which in the nineteenth century amounted to over 90 per cent of the total population, had very bad housing conditions...A typical rural habitation usually had two floors, the first consisting of one or two rooms where the family frequently slept on straw, covering themselves with rags and sacks. The ground floor was usually occupied by quarters for animals with a dung room receiving all human and animal excreta, which were removed twice a year to be spread as manure. Sewers were non-existent and there was no piped water supply. Some sort of water drainage was only available in middle-class houses which had troughs of porous stone; poor homes had open sinks. Both in town and country, ventilation was poor and ordinary houses possessed few windows...It appears that the population of both town and country did their best to keep their places of habitation clean.(40)

Women

It was women who spent most of their days in these dwellings and before closing this section, it would be interesting to see, as far as the meagre references indicate, how women fared. Although there are no figures on the sex incidence of disease and death which give a definitive overview, the general conditions of life and death for women are discernable. In the early part of the century, the plague had a higher incidence and mortality rate among women, killing thousands. Likewise, women were more susceptible to the cholera epidemics. With endemic illnesses, such as the fever, which was then identified as either malaria or typhoid, more women than men died of contracted fever. In the years of 1821-24, for instance, one in six or 90 out of 456 women who were admitted to hospital with the 'fever' died, while one in eight or 102 out of 797 men who were admitted with 'fever' died (41). Women and children were also more likely to die of dysentery and diarrhea, coughs and consumption and cholera. Thus, not only was the incidence of certain diseases higher among women than men but their resistance to illnesses, once contracted, was lower. As we shall see, thousands of women were forced to

suffer worse and worse living conditions as their means of livelihood in the cotton industry and in agriculture disappeared. Meanwhile prices for basic foodstuffs increased. Also, women were expected to toil and sacrifice without complaint under the all-pervasive patriarchal and religious authority. One result having a direct effect on health was that women took the smaller helpings at mealtimes. Price finds that during the first half of the nineteenth century, women and children ate half the quantity eaten by men, the largest item of household expenditure being the over-taxed bread.(42) The effect this had on female morbidity and mortality can only be imagined as deaths by sex and age were first published in 1897.

In aggregate, the male population increased faster than the female population in the 1851-1901 period(43). Especially over the age of five, female mortality preponderated. Between 1842 and 1901 the number of males increased by sixty-seven per cent and the number of females by only fifty-six per cent, although the male infant mortality rate was, as usual, higher. Also, emigration depleted relatively more of the male population.

The relationship between decreasing work opportunities and increasing female debility and death is starkly outlined in a village study (44). In 1861, 74 women out of a total population of 286 at Hal-Safi, found work spinning and weaving cotton. By 1911 only 27 women could find paid work out of a total population of 412 : 20 in the fields, two in shops, three maids and two sewing. The number of girls put out to live with better-off families increased and so did the number of captive prostitutes and mistresses. One result was that

venereal diseases and congenital syphilis spread, especially among girls who had sold themselves to British troops(45).

Women's health is intimately related to both the conditions of production and reproduction. Most married women in the last century and indeed well into this one, had frequent pregnancies. The 1842 Census reported, for instance, that married couples had seven to ten children, on average only five of whom survived to the age of 15. Religious and patriarchal pressure to constantly reproduce more Catholic children and women's harsh domestic life sapped their strength. Their own ill-health contributing to the very high mortality of babies under one month old in a vicious and miserable circle of increasing death and disease. Mothers calculated that one in four of their babies would die before the age of one. Increasingly, girl babies became superfluous and baby boys were seen as the human investment.(46) Such attitudes persist despite the gains made in economic security and female employment opportunities for the working class.

Overview

Over the 83 years 1828-1911, the local population of Malta rose by ninety per cent and of Gozo by only forty-five per cent. Thus, population trends in nineteenth century Malta have little in common with its European neighbours. For while 'population graphs indicate an overall steep and steady fall in the European death rate beginning about 1770'(47), this was not the case in the Maltese Islands, see Table 7. Neither was there a fall in infant mortality and birth rates in the last quarter of the century, again in sharp contrast to Malta's northern neighbours and Britain. The relatively high incidence of

epidemic diseases contributed to the changes in the age ratio (proportionately less old people) and to the change in the sex ratio (proportionately less females) whilst shortening the mean life time of the population (to about thirty years).(48)

Table 7 Comparative Average Annual Percentage Rates of Population Growth

<u>Period (a)</u>	<u>Maltese Islands</u>	<u>N. Africa</u>	<u>Europe</u>	<u>World</u>
1797-1851	-0.1	0.5	0.6	0.5
1851-1901	1.0	1.2	0.7	0.5
1901-1948	1.4	1.4	0.6	0.8
1948-1967	0.14	2.5	0.8	1.9

Note (a)The periods for international comparison are 1800-1850; 1850-1900; 1900-1950; 1950-1965.

Sources: Malta Census '85 ; United Nations The Determinants and Consequences of Population Trends, New York (1973) Vol 1, Table II8 p32; Ermisch J.F. The Political Economy of Demographic Change Heinemann (1983) p2.

Malta's internal migration experience was however similar to that of its contemporaries. Its suburban population rose by four hundred per cent in the period 1828-1911 (49). The massive overcrowding, the poverty and filth that these migrants suffered are reflected in their higher death rates. The causes of their migration can best be understood through the following production analysis.

Agricultural Production: Industry: Class Structure

At the beginning of the nineteenth century, agriculture and agricultural production were by far the most important sectors of the economy. The industry of the Maltese in cultivating their little island is inconceivable.

There is not an inch of ground lost in any part of it,'wrote Brydone on his tour of Malta and Sicily in 1770.(50) The most important crop for hundreds of years was cotton. 'In this industry, a large part of the community shared from the farmer to the numerous persons in every town and village engaged in its spinning and weaving.'(51) This was an 'outwork' domestic industry. In 1861, there were still 9,000 workers occupationally described as spinners and weavers and about 200 beaters and dyers. Nearly all were women.(52) The industry included all processes in the manufacture of cloth but the operations were carried out almost entirely by individual women in their homes.

Far from industrial expansion being a substitute for a declining agricultural sector, industrial contraction was the unabated consequence of agricultural recession. But, despite increasingly adverse conditions, cotton production and export remained Malta's staple commodity for many decades after it became a British colony. It was an industry in which skill and saving had developed over more than a thousand years. Hennan describes how its manufacture into thread 'gives employment to a large share of the population; the seeds are used as food for the cows and oxen and are of remarkable nutritive quality, while the stalks and leaves are employed as manure or for feeding sheep and goats.'(53)

Over the Winter months, the main agricultural crops were wheat and barley. In 1770, local grain production was sufficient to support the inhabitants for five months of the year, by 1820 this ratio had fallen to four months.(54) Between 1828-35, for instance, an average of 82% of the corn used in Malta was imported - most of it from Egypt where it was cheaper but inferior. As with

cotton, the agriculture of grain was very adversely affected by British domination of trade and the removal of protection.(55) The removal of all controls on the price and foreign supply of corn led to much insecurity both for the Maltese farmer and consumer(56). Merchants, both British and Maltese, made profits at their expense.

At the beginning of the century, cumin seeds and aniseeds were successfully cultivated and exported in considerable quantity to the surrounding countries of the Mediterranean, as well as to England and America. The red Maltese orange was highly valued and considered a luxury in France. Honey was also an important agricultural export. However, all these exports were to decline and were of very minor importance compared to cotton. Meanwhile considerable herds of cattle, flocks of sheep and goats provided a local supply of milk and meat, while the careful breeding of asses and mules aided in the working of the fields and in transporting people and goods.(57)

During the turmoils of early British colonial exploitation, agricultural production tended to increase when general activity decreased: labour shifted back to the fields whenever port activity declined. However, income to farmworkers only increased in war conditions as scarcities pushed up the price of grain. Whenever epidemics raged, quarantine restrictions were maintained on Maltese goods, for instance, after the plague trade restrictions operated from 1814 to 1826, and the agricultural community lost a vital source of export income. In this early period, the garrison numbered less than two thousand men because the Royal Navy had not yet built up its base in Malta so that the period 1814-1840 was marked by much economic distress.

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According to the first census of 1842, one quarter of the productive population was still engaged in cotton spinning and weaving and one sixth directly engaged in commerce. The domestically based cotton growing, spinning and weaving industry had expanded as piracy had declined in the eighteenth century, but after the British took over Malta in 1800, it faced one set back after another. Its chief foreign market, Catalonia, was closed to Maltese exports in 1800; exports of cotton yarn to Neapolitan territories were forbidden in 1816. Exports to the German States, Tuscany, Venice, the Papal States and North Africa continued but, as Arthur G. Clare writes, the price of continuing survival was high:

Behind the apparent resilience of the cotton industry lay a more sinister aspect: long hours of work and starvation wages. This it seems was the price it had to pay for survival. In the late thirties, as many as 7,600 female spinners laboured at their wheel for the meagre wage of a penny a day each, a penny less than their male counterparts. (58)

Women and children, under the power of merchant-middlemen, worked the cotton into cloth, dresses and sails. Long working days and exploitative rates of payment became the hallmarks of this traditional industry as its competitiveness decreased. It could not maintain its previous footing as the British Empire stretched from America to India and as the textile industry in Britain itself took technological and organisational leaps forward. At the end of the eighteenth century, Maltese cotton exports were valued at £500,000 but by the 1830's their annual revenue was down to £100,000, and to £86,270 by 1842 (59). Not only had the British textile industry boomed by drawing on its cheap colonial supplies, but Spain prohibited cotton imports in 1800 and Egypt began developing its cotton industry after 1817.

The subsequent decline of the cotton industry is starkly portrayed in the following table. Women, making up over 95% of the workforce were robbed of the possibility of working for regular payment.

Table 8 THE PRACTICAL EXTINCTION OF THE COTTON INDUSTRY, MALTA:1851-1931

	1851	1861	1871	1881	1891	1901	1911	1921	1931
Spinners	9753	7391	5771	5535	2491	782	218	262	86
Weavers	4693	4006	4843	2857	2258	1272	708	221	95
Total	14446					2054			181

Source: 1931 Census p. xxxiii.

The table shows how, in the second half of the nineteenth century employment in the cotton industry fell by nearly ninety per cent. The larger decline, where about eight thousand people are known to have lost work, occurred in cotton spinning, while in weaving employment fell by nearly three-quarters. This catastrophic experience meant the displacement of labour from household production, the rise in unemployment, agricultural depression and de-industrialisation. (60) Marx wrote thus of the destructive impact of early British imperialism and the native's ever expanding 'sea of woes':

Those family communities were based on domestic industry, in that particular combination of hand-weaving, hand-spinning and hand-tilling which gave them self-supporting power. English interference, having placed the spinner in Lancashire and the weaver in Bengal... dissolved these... communities by blowing up their economic basis... It was not so much through the interference of the British tax gatherer and the British soldier as through the working of English steam and English free trade. (61)

It was just this decimation of the local cotton industry and the consequent dire poverty, harshly exacerbated in Malta by the high wheat tax, which is what I posit as the major cause of disease and death in the nineteenth century colony. Cholera's spread, for instance, can primarily be understood against the

background of the new productive forces, one of which was the steam engine, the exploitative relations of production and Malta's openness and vulnerability. The British state was indirectly causal in both opening Malta to the waves of contagious diseases and leaving its people unprotected. As Arthur Clare argues, if some thought and investment had been put into Malta's primary industry, factory production could have been organised successfully: 'Maltese producers would have been in no worse position than textile manufacturers in, for example, Catalonia, where a cotton industry had grown despite the lack of essential raw materials.' Mr Clare does not so much point to the imperial state's responsibility but argues that the pre-1813 commercial boom when Malta became a transit depot of wartime convenience, diverted funds away from industrial development. 'It was thus a retarding factor which blinded men from the real need to diversify an economy which had remained virtually unchanged'.⁽⁶²⁾ Merchant capitalism had expanded and as hitherto argued, it had a conservative influence, regressing development. It did not encourage local investment seeking profits, not in production but, in exchange.

Laissez-faire was however, the British State's official policy and if some 30,000 natives were losing their livelihood, this was of little importance unless they threatened the status-quo. Ironically, laissez-faire in shipping or 'free trade', although officially adhered to, was not allowed in Malta. Maltese shipping, before the mid-twenties, was prevented from engaging in direct trade with other colonies and Maltese exports and imports were taxed. British agreements with other states further reduced Maltese control of trade. For instance, the 1816 British/Neapolitan Treaty allowed the Sicilians to engage in Malta's grain-carrying trade. Much traffic was, thus, lost to competitors. Local

petitions demanding that all obstacles to trade be removed were frequently made by Maltese merchants from 1814 onwards. Marine life remained important and anything that affected the earnings of mariners had ripple effects through the economy. By the end of the 1830's, 'some 16,880 individuals, representing some 3,370 families'^{still}_A depended on the mercantile marine for their livelihood.(63)

Further to the analysis of alternative work opportunities in the Maltese garrison colony we find, in 1842, only 1,000 people worked in local industries such as stone, gold, silver, furniture and straw/bamboo work. The cigar-making industry was one of the most profitable at this time, and provided work for some 1,500 people in 1856, exporting cigars to all parts of the Mediterranean(64). Table 9¹⁰_A(a) give an indication of trends in employment from 1851 to 1931. The overall picture is of a technically static and credit starved industry, the dominant features being the decline in cotton manufacture and the intermittent rise in dockwork.

While the female working group was nearly one half of the total in 1851, this proportion steadily declined. Male-employing small industries had growing dominance. Two-thirds of the male labouring population by mid-century were engaged as labourers, farmers, artisans or fishermen or indeed one man would turn his hands to any of these works according to the prevailing circumstances.(a)

(a) See the Appendix to this chapter for Tables 9 & 10.

As was summarised in the 1891 Census:

In the Maltese isles, large industries are absolutely wanting and with the exception of the Royal Dockyard, no large facilities exist - the vast majority of people engaged in industrial pursuits are neither employers nor employed but work on their own account in their shops.

Such industrial occupations were mostly generated by local building activities, the most important group being engaged in 'houses, furniture and decorations' in 1891. This increase in building and connected trades, in mechanical and metal trades and the variable demand for harbour workers drew men and not women into productive activity. Female employment in cigar and then lace making offered a brief respite to a few women. But finally for a woman, to be or not to be a maid was the question.

As Table 10 indicates(a), the ship repairing and bunkering at the expanded naval establishments were the foci of fluctuating growth and these largely account for the rising number and percentage of male industrial workers. Towards the end of the century, Malta had become an important bunkering station for steamers needing to load with coal. It also became a transit post for Black Sea grain. Trouble began, however, when international demand for grain started turning away from the Black Sea and steam-ships became more efficient and did not need to bunker so often. By the end of the century, Clare argues Malta 'was faced once more with the prospects of having to rely solely on British defence spending for her income'.(65) Table 10 shows, from 1881-1901, a shrinking agricultural class and a rising unemployed and underemployed class and an expanding well off minority of professionals such as civil servants, Maltese who joined the British Armed Forces, and priests. Herbert Ganado in his seminal work *Rajt Malta Tinbidel (I Saw Malta Change)*, shows how in day to day life these contrasts and contradictions merged.(66)

(a) See appendix.

In the nineteenth century then, unemployment and underemployment with their consequent destitution were widespread. The 1851 Census shows that forty-five thousand people or over thirty-five per cent of the population had no occupation. Nearly half of all families lived in low circumstances and were very poor. This absolute and relative poverty was to increase for many households that had formerly depended on cotton spinning and weaving income. In 1901, the official female unemployment figure had nearly trebled in the former twenty years to stand at over seventy-two per cent. Against this fact alone, one can reconcile the persistence of terribly high infant mortality rates.

Table 11 Malta Class Divisions by family: 1851

<u>Class</u>	<u>Family numbers</u>	<u>Proportion</u>
Oppulent and Comfortable	4,111	14
Middle	12,800	44
Low and Poor	12,483	43
Total	29,400	

Source : Abstract 29 Census 1851

There was little help for the destitute. Only about one thousand people who were aged and impotent poor were maintained by the Government or Public Charitable Asylums, including the church-run Saura Hospital in this year. It is not surprising then that the mean life time of the population was found, in 1867, to be as low as 29 years in Malta and 30 years in Gozo and Comino.(67)

Table 12 Malta Income Brackets 1861

<u>Class</u>	<u>Family numbers</u>	<u>Proportion</u>
Wealthy	621	2
Living on regular earnings	9,750	34
Living on irregular earnings	15,547	54
In low circumstances and indigent	3,116	11
Total	29,034	

Source : Abstract 139 Census 1861

In Gozo and Comino where there was no alternative to agricultural production the situation was even worse, with 2,832 out of 3,654 people or eighty per cent compared to fifty per cent in Malta, not having a regular income.

While the small minority of rich merchants and landowners revelled in wealth and imperial grace, the vast majority of Maltese lived in squalor and destitution. 'In no country in the world is the wealthy class so favoured as in Malta,' wrote the American Consul in 1885.(68) Malta is a 'small community where wealth is concentrated in very few hands and where the struggle among the generality for the existence of their class and for individual existence within that class is very keen', wrote Mr Rowsell whilst studying taxation and expenditure in 1878.(69)

The distribution of income was made increasingly unequal not only through imperial indifference to the decline in the basic cotton industry and then the cigar and lace making ventures but directly, as we shall see in the last section, through the colonial government's taxation policies.

THE CHANGING RELATIONS OF PRODUCTION

Comparing the state of agriculture of Malta with the condition of the people, we find little relation between them. Prosperity of one, poverty of the other; great productiveness of the land and small profits of the farmer and miserable wages of the labourer. (Davy p421)

At the beginning of the nineteenth century, the relations of production were adversely affected in the primary industry-agriculture. Surplus labour was

appropriated under harsher and harsher conditions with the consequence that antagonisms between the worker-peasants and the upper classes increased. Although the Napoleonic wars up to 1813 raised prices of agricultural goods, the policies of the British imperial government in this region led to a fast decline in local revenue obtained from agricultural exports, especially from cotton exports. As Blaquiére commented in 1813:

When we consider that our arrival and continuance here has nearly annihilated a source of natural wealth, which had for ages been the principal support of the whole population and yielded a very considerable revenue to the government, it is but just that an equivalent should be made to the sufferers.(70)

In the decade 1826-36, things worsened as the price of field produce fell by one half, whilst rents only fell by one-quarter(71)

The introduction of British and other merchants into Maltese European export markets and the commercial treaties made between Britain and Mediterranean agents, discriminating against Maltese cotton yarns, were among the reasons for the decline in Maltese cotton trade. This, as mentioned, led to the astronomical decline in cotton export earnings, leading to one-quarter of their value at the end of the century. The consequent hardship that British indifference caused is unbelievable. There was no substitute growth in employment for the mass of people and no assistance from the Imperial government. Farmers were forced to shift production to cereals, vegetables and forage.

At the beginning of the century, a farmer attempted to pay his rent and keep up his stock principally from the cotton crop revenue, together perhaps with some income from cattle. 'On the grains he grows, he and his family chiefly subsist and the surplus enables him to pay servants and labourers', wrote Davy

(72). Increasingly, farmers could not pay their rent as cotton and grain revenues declined, while basic foodstuffs rose in price. Collecting manure might for some serve in lieu of rent. By 1836, more than half the farmers 'were unable to pay their labourers in money' and gave them instead 'cotton meschiato (wheat and barley grown together) or bread; valuing these articles too at higher than the market price'.(73)

'Most labourers are obliged to beg to maintain themselves', noted the 1838 Royal Commission and 'others are driven to thieving especially from the fields.' All children made a practice of begging. In Gozo, where alternative employment was even scarcer, over one sixth of the population was reduced to begging.

But local grievances were treated as insubordinate because Malta was enjoying the protection of Britain's naval might and it should be content with that privilege. According to the instructions given to the Royal Commissioners of 1836-8: 'The interests and well-being of the inhabitants could not be consulted or pursued in any such manner as should impede or weaken the action of the military authority'.(74) After the terrible ravages of the first cholera epidemic in the Maltese islands, the Duke of Wellington blandly asserted Malta should be governed like 'the foredeck of an admiral's flagship'.(75)

Means of production: implements and animals

The Maltese people saw few machines in the nineteenth century. Cigar making was done by hand and dock hauling was not mechanised. The 1838 Royal Commission noted that in agriculture, 'The tenant...lives by doing all the work he can with his own hands'. In general landowners did not advance capital to their tenants nor did 'they spend any portion of their rents on the

improvement of their land'. The Commission assessed that scarcely five per cent of the tenants 'have sufficient implements for farming. Cultivators and artisans were faced with the threat, often realised, of losing control over their basic means of production because of failure to pay rent or earn a livelihood'.(76)

Spinners used spinning wheels, which cost nearly 1/5d in 1836. Neither spinning nor sewing machines were common at all in Malta. A new sewing machine in 1870 cost between £4.10s to £14 and whilst it was a great boost to the extension of the factory system of clothing manufacture in Britain, it was far too expensive for most Maltese seamstresses.(78)

Working conditions in agriculture

Work began at sunrise and ended at sunset to the tolls of the Ave Maria. Lunch break consisted of barley bread with a few small onions and radishes. At home, macaroni and bread were the staple evening meal.

A male agricultural labourer could earn as much as 1/6d a day at the beginning of the century but after 1813 the average went down to less than 7d a day. In the 1840's men spinners could earn only 2d a day and male weavers 3d a day. But the plight of women workers was much greater ; toiling from 4 am to 9 pm a female spinner could only earn 3/4d a day and female weaver 1d a day, less than half of the male rate. (79)

Davy concludes that the 'highest degree of cultivation of the land is not incompatible with great wretchedness of the population'. He goes on to observe that Malta demonstrates proof that wages of agricultural workers are not

regulated by the price of bread or of food generally but by the demand for labour. In the Ionian islands, which were colonised at the same time as Malta, wages were more than twice as high as in Malta because, he deduces, 'the one is thinly populated, the other densely; in the one an excess of land for cultivators exists but in the other, a deficiency.' However this simplistic view takes no account of the relations of production, land ownership, and the effects of British rule.

Land ownership

The Catholic Church had become a major landowner over the years (80), especially during the rule of the Knights of St John and where it did not actually own the land, it often instead obtained yearly contributions either in kind or in money. This meant the Church had a considerable revenue and was much better off than its Sicilian brethren. In 1813, for instance, the Bishop had an episcopal palace in the capital, 13 monasteries, 4 convents, and in Valletta alone about 15 churches that were richly endowed. Every time there was a severe epidemic, tributes to the Church increased, for the salvation of souls.

With the advent of British rule, the material power of the Church was not, as in Ireland, threatened. On the contrary, the British Government decided very early on to court the Maltese Catholic Church. The Colonial Office advised the Governor in 1827 to 'consult as much as possible the religious feelings, even the prejudice, of the Roman Catholic population' (81). One result was that works of charity and meagre village social services were left to the Parish Churches.

Meanwhile, the imperial government took over more and more Maltese land until by 1843 it owned one third and charged very high rents to the farmers that remained on cultivable fields. The increasing scarcity of cultivable land was, as previously mentioned, noted in the 1874 Royal Commission Report. This added to the misery of those who were already denied their main source of revenue and who were faced with high indirect taxation. The 3,000 odd tenant farmers who leased or rented land in the 1820's and 1830's worked so hard on their small fields to end up in 'debt and deprivation'. 'Tenants were often obliged to sell the produce in the ground or even before it was sown for a third or even a half less than its real value.'⁽⁴⁰⁾ Rents were very high relative to potential earnings being on average £4/10s a year per acre of good quality soil and double this if supplied with water. Government seizure of property and of crops for non-payment of rent was common. Table 13 highlights how the Crown and the church owned well over half the cultivated land just forty years after the islands were colonised by Britain.

Table 13 Malta Land Ownership: 1842

<u>Owners</u>	<u>Acres</u>	<u>Proportion</u>
Private	24,000	48
Crown	14,000	28
Church	12,000	24

Source: Davy J. p402.

BRITISH FISCAL POLICY

We have suffered the devastating influence of mismanagement. Professor A. Bartolo (1911) (82)

Just as the conditions of productive activity and the large vested interests in land ownership negatively affected health and development in nineteenth century Malta, so too, British fiscal policy led to more hardship and disease.

Under the British, the poorest sections of the population paid most taxes. The Colonial Office wanted a viable colony; the local British officials wanted steady revenue; British merchants wanted to monopolise trade by product and by route; the Maltese workers were alone in wanting work and bread. An inequitable system of taxation remained entrenched until 1948 when income tax was finally introduced under the first Labour Government. Succession duties had been introduced in 1918, after much working-class unrest .

By turning the importing of grain into the primary source of revenue and abolishing the government monopoly over the purchase of grain (82), the poor of Malta and Gozo paid taxes to the colonial government and profits to the merchants every time they bought their daily bread. The conflict between Maltese working class and British ruling class interests inevitably erupted in serious riots and deaths on 6th June 1919.

Tax incidence

The incidence of taxation that was entrenched by the 1838 Royal Commissioners was nearly one half more per head for the working classes than for the upper and middle classes(83). The disproportion was in fact even greater than this

figure suggests because the rich consumed a great deal less bread than the poor who lived almost entirely upon it. Bartolo calculates, for instance, that the incidence of wheat duties was 100% higher on the working class than on the ruling class.

Income

About one half of all revenue raised on imports was collected from duties on grain. The ad valorem duty on wheat varying in the nineteenth century as much as 15% in 1855 when the price of wheat was high: to 47% in 1885 when the price of wheat was low.

The colonial government not only raised the wheat duty but also withdrew a pledge, made By Governor Maitland (1813-1824) to protect the islanders from scarcity and high prices. In 1836 the British Colonial Office in London decided to end all government interference in grain imports.(84) Just when the condition of the local poor was at its worst in 1837, besieged as they were by the cholera epidemic, the local government abolished its reserve stock of grain. The working-class was now totally at the mercy of merchants and indifferent imperial autocracy. Approximately half the rest of government import tax revenue came from the 33% duty of common wine.

Thus, in 1845, for instance, the gross revenue of £102,303 14 10d was mostly derived from import duties on grain and wine and from rent returns. The returns from import duties and rents, combined with great parsimony in expenditure, ensured that Maltese colonial accounts were usually in surplus(85).

Chapter Four

There was tight external control on local government expenditure. From 1830, no public expenditure could be authorised without previous sanction from London and all expenditure had to be accounted for in London. Reform, progress or even temporary relief measures were thus thwarted. 'Schemes for a pension fund and for public works were repeatedly postponed' remarked the Despatches(86). The colonial office maintained that the local administration was not responsible for the employment of people and no significant government initiatives for industry were permitted (87). 'London's primary concern in Malta was strategic and was otherwise more interested in making its own manufactures through the island as a depot, than in creating any competitive local industry, such as shipbuilding.' (88)

Expenditure

In the early decades of British rule, over one quarter of public expenditure went to the civil service, and, in particular, to British officials and pensioners. Expenditure on charitable institutions was kept down to less than fifteen per cent and subject to constant economy.

It would be worth our while looking at two items of expenditure that had some effect on local economic trends, namely military and public works expenditures.

British military spending

Local government annually paid £5,000 toward the maintenance of the British base and £1,200 to the Royal Malta Fencible Regiment plus the total value of grain and cattle consumed by the garrison and fleet. From 1821, Malta started to bear the expense of the British General Staff for the Mediterranean and Commissariat Department in Malta.(89) Thus the total sum of Malta's contribution to Military Defence ranged from £14,180 in 1866 to £8,006 in

1876. This was despite the fact that both the 1838 Royal Commissioners and the 1878 Rowsell report argued that Malta's military contribution should be decreased.

The garrison was thus both a burden and a benefit. Its presence persisted: 'No other colony has anything like so large a garrison and the policy adopted in recent years of withdrawing imperial troops from colonies did not affect Malta'.(90) However, military expenditure did fluctuate, having great repercussions throughout the local economy, as Table 14 shows.

Table 14
Fluctuations in Total Military Expenditure by Britain in Malta:1840-1881

<u>Year</u>	<u>Annual average (£)</u>
1840's	200,000
1854	400,000
1856	800,000
1871	295,460
1881	290,038

Source: Reports exhibiting the Past and Present State of H.M. Colonial Possessions-GB War & Colonial Office

Public Works

Expenditure on public works doubled in the four years from 1837 to 1841 particularly affecting one half of the population then living in and around Valletta. In 1845 public works expenditure was nearly one third of total expenditure and included work on a breakwater at Gozo, the prison at Paola, and a new aqueduct from Fanara to the three cities. This type of expenditure raised local income, but it also fluctuated according to the whims of the contemporary British Governor, vital works such as sewers being continually postponed.(91) Drinking water was invariably contaminated, as was noted in particular after the 1865 cholera outbreak that killed 1,500 people. Cholera reappeared only two years later killing 190 soldiers and 259 civilians.

Chapter Four

Subsequent water analysis proved that drainage that gathered in ditches seeped into wells and in the countryside trapped rainwater was often contaminated by manure. In 1878, Rowsell reported that 'tenants of the poorer classes have neither tanks nor communication with aqueducts, they fetch water from public fountains'. In the country, a charge of 1/6d a day was made in the case of each supply of water. Incredible, since the water was being taken from the country and no farm worker could afford such a charge. The majority of people thus remained without a pure water supply and without sewers throughout the nineteenth century. Meanwhile, much public works expenditure was a waste. Examples include the mine at Mtarfa, attempts to connect the Grand Harbour to Marsamxett Harbour and the ridiculous railway episode. (92) Meanwhile, waste, as mentioned before, also occurred due to the 'multitude of superfluous' civil servants. (93)

Health effects

The lack of sanitary facilities was a major aetiological factor in the spread of illnesses such as enteritis, diarrhea and common infections, which in poor and crowded conditions were killers:

Between 1874 and the end of the century a series of reports put the blame (*for the high rate of child mortality*) on a series of associated factors. The ancient Three Cities and the new unrestricted growths of Hamrun and Sliema were centres of disease. The growth of urban and dockyard employment had not yet been accompanied by any striking educational improvements, and standards of personal hygiene barely tolerable in rural Malta became insupportable in the new towns. At the same time, the growing wealth and opportunities which made possible the new concentrations were not paralleled by similar rates of increase in the Internal Revenue. The resulting shortage of capital available for public works delayed the construction of services until concern over conditions in the Garrison centres became acute. (94)

Thus, the three British researchers attempt to excuse the neglect of the imperial government. The primary importance of supplying fresh water and adequate drainage facilities was emphasised by the 1897 Health Report (a Public Health Department being belatedly established in 1895). While places

that were most inhabited but best drained, such as Valletta, Floriana, Cospicua, Vittoriosa and Senglea, had an average death rate of 29.5 per 1000 souls; in the villages that were much less crowded the rate was over 30 per thousand; in the suburbs that did not have any drainage system (Msida, Pieta, Sliema, St Julians, Hamrun, B'Kara, Qormi, Tarxien, Paola, Zabbar) the death rate was over 37 per thousand.

Indeed, the 'mother country' did not only neglect to provide sewage facilities and a clean water supply to the new concentrations of reserve labour, but it also intensified poverty through its fiscal policies. And as we have seen, the heavy dependence on one indirect tax - the tax on wheat and therefore on bread - and the lack of any direct taxation increased the polarisation in wealth and the ill-health of the working classes. However, Bowen-Jones et al correctly point out that nothing would induce the imperial and local governments to save the lives of countless Maltese people than the spread of disease and death among their own soldiers and sailors in the garrison towns. The contagious nature of cholera and the fear and horror of this particular epidemic made it a spur to public action in many parts of the world but in the Maltese islands, public health measures were both late and localised due to the strength of reactionary forces and weakness of the working classes.

Summary

It must be clear that Malta was de-industrialised as a British colony in the nineteenth century. Its cotton industry was extinguished. A transition was made from an agricultural and manufacturing society to a commercial and servile

one. Dockers, merchants and servants replaced farm-labourers, spinners and weavers. As the traditional cotton industry declined, port activity increased but its multiplier effect through the economy was lower and more localised and its pool of labour was totally male. And as the traditional domestic loci of productive activity shifted to the harbour areas, the labour force was severed from control of means of production and was more and more sexually divided.

British imperial rule paid scant attention to local living conditions. As a naval base, Malta's importance was primarily dependent on external and not internal developments. However, the seeds of future development lay in the growing skills and organisation of the dock-workers. As a commercial centre, Malta's fortunes were intermittent and enjoyed by a minority. But a monetary rather than subsistence economy permeated all levels and areas, payment in kind persisting in agriculture only when conditions were very poor. As a colony, its bureaucracy and conservative local interests were enhanced.

There was then no transition from a feudal to a capitalist mode of production on the lines of Britain or Germany. And it is this very persistence of the dominance of political rather than economic coercion: the serf-servile relationship between labourers and the owners of capital; the lack of internal investment and the consequent failure to improve labour productivity in both industry and agriculture; it is this background alone that explains the inequalities and lack of basic infrastructure and the continuing threat of famine and epidemic diseases. This lack of development is the background against which disease must be set.

Whilst local resistance to imperial exploitation was ever present and recurrently manifested in ways such as petitioning, demonstrating, strengthening communal and family ties and mutual assistance, and setting up workers associations; it was not until much later in the twentieth century that workers could wrest some power from the colonial administration and upper classes. As we have seen, British colonial direct control and repression had the collaboration of the local clergy and aristocracy. In the second half of the nineteenth century, the additional collaboration of the new civil service and commercial bourgeoisie bolstered the colonial state, while an emerging oppositional elite was more concerned with language and prestige than the lives and deaths of working men, women and children. Of importance too, was the elimination of women's productive role in weakening the working classes' ability to unite against exploitation and improve health and development.

The thesis that development is determined demographically can be demolished by pointing to the fact that development and population both declined in the first half of the nineteenth century. On the other hand those proponents of market forces as the vehicles of development would have a hard task explaining Malta's continuing backwardness despite being at the apex of so much trade, commerce and military activity.

Notes

- 1) Mitrovich G. *The Cause of the People of Malta* London (1836)
Eton W. *Authentic Materials for a history of the people of Malta*. London 1802-1807. Especially part 4
 - 2) Hardman W. *A History of Malta during the period of French and British occupations 1795-1815* Longmans England (1909). Britain had possession of Gibraltar, Cyprus (1878), Egypt (1882), Aden 1839, India.
 - 3) Vassallo M.A. *From Lordship to Stewardship. Religion and Social Change in Malta* Religion & Society no 15. Morton Publishers (1979)
 - 4) Cassar P. *Early Relations between USA and Malta* (1976)
 - 5) Williams Ann *Britain and the Mediterranean 1800-1960* in *The British Colonial Experience 1800-1964* edited by Mallia-Milanes V. Mireva Publications, Amsterdam. (1988) pp34-45.
- Lee H.I. *Malta 1813-1914: A Study in Constitutional and Strategic Development* Malta (1972)
- 6) Cassar P (1976) *op cit* and
The Rowsell Report of 1878 *Correspondence on the Taxation and Expenditure of Malta to the Colonial Office*. London.
In 1865, when Malta was one of the biggest depots of American tobacco, some 5 to 6,000 poor people gained their living from the manufacture and sale of cigars. But in the early 1880's, cigarettes made of Turkish tobacco began replacing cigars and simultaneously, countries bordering the Mediterranean introduced stricter controls against the illegal import of Maltese cigars.
 - 7) Clare A.G. *Features of an Island Economy in The British Colonial Experience 1800-1964: The impact on Maltese Society* Edited by Mallia-Milanes V. Mireva Publications, Amsterdam. (1988). p145
 - 8) Malta Censuses 1881 & 1871
 - 9) Martin's *British Colonies* Dawsons London (1843) Reprinted (1967) Vol.5, p590.
 - 10) Austin John and Cornwall Lewis George *Reports of the Commissioners appointed to inquire into the affairs of the island of Malta from November 1836 to February 1838*. pp8,9
See also local newspapers for instance *The Harlequin or Anglo-Maltese Miscellany* 26 July 1838.
 - 11) Blouet G. (1981)
Price C. *Malta and the Maltese* Melbourne (1954).
 - 12) Cassar Carmel *Everyday Life in Malta* in Mallia-Milanes *op cit* p93.
 - 13) Bowen-Jones H. Dewdney J.C. Fisher W.B. *Malta, Background for Development* Geography Department Durham University (1960)

Badger Percy G *Historical Guide to Malta & Gozo* improved and augmented by Zammit H, M.D. pp 95/6 (Malta 1869).

14) Hennan J. Dr *Sketches of the Medical Topography of the Mediterranean* London (1830)

Ghio Dr *The Cholera in Malta and Gozo in 1865*. Malta (1867)

Cassar P. Dr. *A Medical History of Malta* London Wellcome Historical Medical Library (1964)

15) Davy J. *Notes & Observations on Malta and the Ionian Islands* London (1842). For eleven years, Davy was Medical Staff Officer of the British Army in the Mediterranean. To highlight the needy circumstances of agricultural workers, he looked at local parish records finding the average duration of life 1827-1836 was only 30.5 years. This low average was due to the high infant mortality, four times higher than in London.

In the ten years 1827-36 total 3,639 died

aged	0 -1 years	1,068
	1 -3 "	522
	3 -5 "	154
	5-10 "	110
	10-15 "	88
	15-20 "	88
	20-30 "	132
	30-40 "	93
	40-60 "	350
	60-80 "	759
	80-100 "	275

Thus in this decade, 29.35% of deaths were of infants while 48% were of children under five years old.

16) *Report of the Barracks & Hospital Improvement Commission on the Sanitary Condition and Improvement of the Mediterranean Station* pp87 (London HMSO 1863).

17) Davy J. *op cit* p 431.

18) 1838 Royal Commission *op cit* p10.

19) Committee of 1824. CO (158/41)

20) Price C. *op cit*

21) Hennan J. (MD) *Sketches of the Medical Topography of the Mediterranean* p473 on the diet of local peasants. (London 1830)

22) 1897 Public Health Report. Public Health Department Malta (1898) p3.

23) Rosen George, Ch 27 Disease, Debility and Death pp625-657 gives an interesting political-economic background to Victorian illnesses.

- 24) Anon *Lessons from history, maternal and infant mortality* The Lancet 15-7-1989 The sharp decline in infant mortality rates in Britain at the turn of the century was attributed to environmental and social influences, e.g. pure water supplies; sewage disposal; sterilisation and pasteurisation of milk; and the rise in the standard of living. p140.
Newsholme A. *The last thirty years in public health*. Allen & Unwin London (1936) Here Newsholme emphasises that indigence and ignorance are one continuum. pp185-198.
- 25) Hennan Dr J. *op cit* pp 434-439
- 26) Ghio Dr *op cit* (1867)
- 27) Blouet B. *The Story of Malta* Progress Press Co. Ltd. Malta (1981) p171
- 28) Cassar C. *op cit* p98
- 29) *ibid* p98
Cassar P. *Early Relations between USA and Malta* (1976)
- 30) Critien A. *The Mandraggio*, St Joseph's Institute, Malta (1938) p27
- 31) Hennan J. *op cit* pp531-5
- 32) For example George Mitrovich from Malta and William Cobbett in the British House of Commons.
- 33) Brooke Faulkner Sir Arthur, *A treatise on the plague designed to prove it contagious, from facts collected during the author's residence in Malta* (London 1820) . Meanwhile, in 1819 A Select Committ of the British House of Commons reported on the *Doctrine of Contagion in the Plague*.
Of interest as well is Veith I, Plague & Politics Bulletin of the History of Medicine. 1954 V 28/1/408-415.
Local reports include: Cassar P. *Medical History of Malta* pp175-187.
Tully J.D. *The history of the plague as it has lately appeared in the islands of Malta, Gozo and Corfu, Cephalania etc.* detailing important facts illustrative of the specific contagion of that disease with particulars of the means adopted for its eradication. London (1821)
Depiro F.M. *Ragguaglio storico della pestilenza che afflisse le isole di Malta e Gozo* Livorno (1833) esp. p 82
Segond G. *Storia ta'Malta u Ghawdex* (1930) pp178-285.
Two local dissertations on the plague are :
Mercieca I *Plague Epidemics in Malta 1592-1814* Malta University
Galea M. *The plague of 1813-14 with special reference to Qormi* Malta University.
Also Burrell W.H. W.H. *Appendix to the Second Report on Quarantine* London 1854 pp82-91. As principal medical officer in Malta in 1852, Burrell questions the contagion theory using the example of Senglea's immunity from the plague in 1813.
- 34) 1911 Malta Census
- 35) 1861 Census Abstract no. 133.

- 36) 1911 Census p xxvii
 37) Cassar C. *op cit* p101
 38) Price C. *op cit* p131
 39) Cassar C. *op cit* p100
 40) *ibid* p103

41) Hennan J. *op cit* considered the relative incidence of the fever 1821-24

	Admitted to hosp.	Discharged	Died	Av.Mortality
Male	797	669	102	one in 9
Female	456	357	90	one in 6
Maltese Fencibles	47	43	2	one in 23½

The relative incidence between civilian and military morbidity was also observed by Davy during the smallpox epidemic of 1830 finding that among civilians one in every 12 was attacked but among the military only one in every 188 suffered.

- 42) Price C. *op cit* p7.
 43) 1901 Census Sex Ratio table shows that in 1828 there were 93 males to every 100 females while in 1901 there were 99. See also the 1911 census on this point.
 44) Nicallef Joseph, *L-Istorja ta' Hal-Safi* (Malta 1980) also by the same author *Hal-Luqa, Niesha u Grajjietha* (Malta 1975).
 45) Rosen G. *op cit* p658 *Action Taken to Protect the Armed Forces* (GB 1864)
 46) 1891 Census Report refers to the relatively high female illiteracy rate.
 47) Tesh S. Political ideology and public health in the nineteenth century. *International Journal of Health Services* Vol.12, no.2. (1982) p 322.
 48) Giglio Dr. *Census of the Population 1851* In Malta, the mean lifetime of the population is 28.6 years; in Gozo & Comino 29.8 years. p4
 49) 1911 Census
 50) Brydone P. *A Tour through Sicily and Malta* in a series of letters to William Beckford (London 1770). p336-9.
 51) Price C. *op cit* p2
 52) Bowen-Jones et al *op cit* p124
 53) Hennan J. *op cit* p451
 54) Brydone P. *op cit*
 Hennan J. *op cit* p452

55) Bartolo P. *Il-Hobz tal-Maltin u l-Kummerc Hieles li riedu l-Inglizi 1812-38* Storja Malta 1978.

Bartolo P. *British Colonial Fiscal Policy in Malta 1812-38* Disseration Royal University of Malta (1973).

56) The Treasury, in trying to justify the removal of all government controls over importation and prices of corn in 1838 declared that "the inhabitants should be induced to rely, like those of other British Colonial Possessions, entirely on their own resources and foresight, and on the operations of trade for that supply." Valletta Palace Records Despatch 33 Treasury to Colonial Office 12 Dec 1838.

57) Martin J. *op cit* p592
Also 1838 Royal Commission report.

58) Clare A. G. *op cit* pp142,3

59) *ibid* p147

60) Bagchi A.K. *The Political Economy of Underdevelopment* Cambridge University Press (1982) pp78-195

61) Marx K. *The British Role in India* New York Daily Tribune 25 June 1853

Marx k. *The Future Results of British Rule in India* New York Daily Tribune 8 August 1853. These are quoted both by Avineri S *op cit* pp93-94 and Warren B. *op cit* pp40,41.

62) Clare A. G. *op cit* p133

63) *ibid* p139

64) Cassar C. *op cit* p117

65) Clare A.G. *op cit* p151

66) Ganado H. *Rajt Malta Tinbidel*

67) Giglio *op cit*

68) Cassar P. (1976)

69) Rowsell Report *op cit* p4.

70) Blaquiere E. *Letters from the Mediterranean (1813) Volume Two* p276

Blaquiere, although radical in his indictment of British policy in Malta, was in no way an extremist or revolutionary. He describes the French Revolution for instance as 'accursed... that fatal scourge of human nature... deluging the world with blood, and destroying social and political happiness.' p285

He was very aware, however, of the gross injustices of early British rule in Malta. Apart from the breaking of many promises, the British also destroyed the cotton trade, did not encourage alternative agriculture and further depleted the country's resources by encouraging the invasion of foreigners. He notes that of a population of 93,000 in 1812 some 25,000 were foreigners. An

'immense number of strangers who have been permitted to domicile in the island have absorbed so much of its capital and resources' p282.

71) Royal Commission 1838 p6

72) Davy J. *op cit*

73) Royal Commission(1838) *op cit* p7

74) *ibid*

75) Hansard 3-5-1838

76) Royal Commission(1838)
Clare A.G. pp 145,146,147

78) Grech J.C. *Threads of Dependence* University Press Malta (1978) pp59,60

79) Davy J. *op cit*

80) For evidence of the power of the local Catholic Church and its immunity from secular obligations and the law see Callus P. *The Rising of the Priests* MUP 1961. Also Vassallo M. *From Lordship to Stewardship. Religion and social change in Malta.* Religion & Society no.15 Norton Publishers (1979)

81) Despatch C.O. to Governor (2.7.1827)

82) Bartolo Profs A. *Malta : a Neglected Outpost of Empire* Malta (1911) p19.

In 1816, the Universita (or monopoly for importing grain and other foodstuffs to ensure a constant supply at moderate prices) was taken out of Maltese hands and passed to the English Board of Supply. Early 1822, the monopoly was removed and import taxes averaging 25% were put on grain. In 1828, the long tradition of control on bread prices was removed by proclamation. This was in opposition to the Royal Commission insight of 1812 pp165,167,178: "here for a considerable number of years it (the corn monopoly) appears to have answered the two great political needs of bettering the conditions of the poor and of producing an increase in revenue."

The effect of these measure was drastically reduced state responsibility and increased merchants' ability to make profits, for instance:

1812-1822	Government imported 83% foreign corn bought 16% from merchants
1825-1836	Government imported 13% foreign corn bought 46% from merchants.

83) Rowsell Report 18 May 1877 (Parliamentary Papers 1878)
and Bartolo P. *op cit*

84) Thus on 11 Jan 1837 Governor Sir H. Bouverie by executive order removed the grain reserve, notwithstanding the fact that from 1825 to 1830 these reserves had accounted for about 31% total consumption of foreign corn.

85) See regular *Reports exhibiting the Past & Present State of H.M.'s Colonial Possessions* (e.g. 1846) GB War & Colonial Office London.

86) Bartolo P. British Colonial Fiscal Policy p 10.

87) For example from 1817 to 1824, export duty of 25% ad valorem was put on Malta wrought stone. In 1838, a local distilling industry was prohibited so as to secure a rise in import tax revenue on wine etc.

88) Bartolo *op cit* p 30.

89) The 1912 Royal Commission on Financial and Economic matters concluded that the burden of maintaining Malta as a fortress is not fairly distributed between the Imperial Government and the Civil Population... that the Imperial Government did not contribute in sufficient proportion to the construction and maintenance of certain essential public works such as roads, drainages, water supply etc. And it suggested that the military contribution of £5,000 which the Maltese had long paid each year to the British Exchequer should be remitted.

90) Rowsell Report (1978) p10.

91) Bowen-Jones et al *op cit* The 'shortage of capital available for public works delayed the construction of services until concern in the Garrison centres became acute.' p130

92) Blouet B. *op cit* p176

93) 'Local government is encumbered with a multitude of superfluous and ill-paid functionaries' wrote Lord Glenelg to Sir H.F. Bouverie - quoted in Part 2 of the 1838 Royal Commission p2. British officials enjoyed very high salaries and pensions such that in 1834 out of a total public expenditure of £85,530, nearly 25% was paid to British officials and pensioners. Whilst a Maltese farmworker was lucky to earn £5 a year, the average official income of English civil servants was £523 15 6d and of Maltese £42 1 11d in the 1830's. The Rowsell Report in 1878 pointed to 'the huge establishment expenditure' saying the "service of the administration is too costly, more people are employed than necessary.. and its organisation and work should be simplified.' (1878) p26.

94) Bowen-Jones et al *op cit* pp129,130.

APPENDIX

Table 9 DISTRIBUTION OF OCCUPATIONS, MALTA: 1851-1901

Occupations (a)	1851	1861	1871	1881	1891	1901
Physicians	114	94	79	10	119(b)	114
Surgeons	na	14	12	na	na	na
Apothecaries	54	45	39	34	42	58
Phlebotomists	7	4	4	na	3	1
Midwives	52	41	68	61	79	78
Dentists	na	na	na	5	10	17
Subordinate medical service	na	na	na	na	140	244
Farmers	na	na	4,640	2,590	5,727	5,039
assistants	na	na	na	340	6,608	4,784
Labourers in fields	10,536	8,706	10,480	12,094	9,407	na
Masons & plas- terers	2,940	3,408	3,472	3,179	3,968	na
Seamstresses	na	5,174	4,435	3,484	2,535	na
Embroiderers	8,072	113	53	83		
Lace-makers	na	2,785	3,618	4,512	3,718	6,467
Cottonspinners	9,741	7,379	5,771	5,535	2,491	782
Cottonweavers	4,705	4,018	4,843	2,857	2,258	1,272
Servants	3,451	4,184	4,247	5,573	5,066	4,682
Mendicants	474	383	603	725	523	494
Cigarmaking & tobacco	na	1,854	1,558	1,033	846	646
Mineral substances	na	na	na	na	2,543	2,978
Houses, furnit- ure, decorations	na	1,813	1,856	1,854	5,525	6,235
Food & lodging	na	291	369	476	3,233	3,423
Labourers	na	na	na	na	1,361	2,312

Note (a) The information is sketchy for two main reasons: a considerable number of people were engaged in more than one occupation; the classification of occupations varied from census to census.

(b) Nearly half of this total were government employees.

Sources: *Censuses of the Islands of Malta, Gozo & Comino, 1851, 1861, 1871, 1891, 1901.*

From 1871, Malta is said by many, including the Census reporters, to have become industrialised. The commercial and industrial workers outnumbered the agricultural workers. In the decade 1871-1881, while the population rose by nine per cent, the number of porters, carriers and coalheavers doubled; the number employed commercially rose by nearly thirty per cent and the number of petty vendors by one quarter. In the decade 1881-1891, the number of commercial workers, merchants, dealers and construction workers continued to

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increase many of them obtaining contracts from the British garrison. All these jobs concentrated around men in urban areas. The building of the railway in the early 1880's also drew men from the land and increasing the number of employees in the transport group. The basis of this so-called industrialisation, this positive leap in Malta's supposedly linear economic development, was unsound. The docks were being developed for Britain's convenience. Women's employment was falling drastically. Internally controlled industrialisation only occurred one hundred years after 1871.

In the last decade of the century 1891-1901, there was a shift from occupied to non-occupied classes. Commercially the heaviest fall was in the number of boatmen, coalheavers and carters. An exception appears to be the growth of the lace-making industry but, while the total number of females in this group decreased by over ten per cent between 1881-1891, the number of female children (under 15) rose by forty per cent. The temporary recuperation of the lacemaking industry was thus based on child exploitation. In total, the end of the century saw a further decrease in opportunities for women to work in textiles and cigar making, but an increase in building and connected trades and in the number of labourers.

Table 10

CHANGES IN MAJOR OCCUPATIONS MALTA: 1881-1931 (a)

	1881		1901		1911		1921		1931	
	male	female	male	female	male	female	male	female	male	female
I Professional	4031	600	6291	1100	6993	1158	8032	1607	8069	2200
Per cent	5.5	0.8	8	1	8	1	9	2	8	2
II Personal or Domestic	2759	3502	1526	4880	1665	4069	2657	4965	3154	6029
Per cent	4	5	2	6	2	4	3	5	3	6
III Commercial	19980	1656	17606	2045	19489	1507	17890	2450	19975	2558
Per cent	27	2	22	3	21	2	20	2	19	2
IV Agriculture	12543	3447	10274	3615	11908	3295	12368	3895	11219	2460
Per cent	17	5	13	4	13	4	14	4	11	2
V Industrial	12014	19111	19841	11267	21089	8178	20320	8748	25929	5255
Per cent	16	25	25	14	23	9	22	9	25	5
VI Unoccupied & Unproductive	22103	20025	25311	59046	31385	75310	29649	76707	34893	91762
Per cent	30	26	31	72	34	81	33	78	34	83
TOTAL	73430	76352	80849	81953	92529	93517	90916	98372	103239	110264

Note (a) Refers to total civil population over five years.
Sources: Censuses of the Islands of Malta, Gozo and Comino.

CHAPTER FIVE

CHOLERA

Disease is a consequence of social origin, social inequality and social change.
Virchow 1848

Wherever it (cholera) appeared it tested the efficiency and resilience of local administrative structures...It exposed, relentlessly, political, social and moral shortcomings...It prompted rumours, suspicions and at times violent social conflicts.
Briggs 1961.

The analysis of theory and the specific historical background to health and development in the preceding chapters enables us to approach the study of recurring nineteenth century cholera epidemics in the Maltese Islands. The basic contradictions in the dialectic of imperialism and development and of chauvinism and development are manifested in disease.

The epidemics of cholera starkly expose the consequences of merchant capitalism and imperial rule on a garrison island. The structural relationships between politics, religion, science and the economy are thrown into sharp relief by actions and reactions during each epidemic. Cholera highlights the disease generating conditions of the environment. In this impoverished colony, we might also assume that cholera exacerbated class hatred and stimulated religious fervour, although the evidence for these being pronounced effects has yet to be researched.

Like cancer, cholera terrorised. Its symptoms were terrible and its unpredictable course subjected everyone to fear. Its incidence, however, fell heavily on the working class in the inner harbour region. Death from cholera occurs in over one half of untreated cases within days of contact.

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Cholera is an acute infection of the small intestine by the bacterium, *vibrio cholerae*, which causes severe vomiting and diarrhoea, leading to dehydration. It is contracted from food or drinking water contaminated by faeces of a patient. It is therefore, like typhoid and polio, enteritis and dysentery, a faecally-related disease. Effective drainage systems and a pure water supply are therefore essential to its prevention. The *vibrio cholerae* was isolated and cultivated by Robert Koch in 1883. Recently, it has been found to have a lengthy survival period in water of high salinity (1). Thus, it was easily transmitted through saline Maltese water. The organism is killed, either by carbolic disinfectants or the chlorination of filtered water, but this was not known until the end of the last century.

Cholera had been native to India for centuries. It overran Europe in the four major pandemics of 1831-37; 1848-49; 1852-55; 1865-67 (2), 'spreading terror like the medieval plague, killing millions (in England and Wales alone c.a. 150,000) and constituting everywhere a tremendous medical, political, economic and human problem'. (3) For two main reasons, cholera incidence tended to be underestimated (4). First, the disease was not easily diagnosed as different from acute diarrhoea. Secondly, the tendency was to hush things up and allay suspicions because the adverse reactions to traders, visitors and the local people were not desired. We must remember that, just when cholera first hit Europe, the new textile magnates were at their keenest to accumulate more and more capital. This preceded the anti-contagionist lease of life from 1821-1867, contemporary scientific thought being subordinate to dominant economic interests in opposition to popular, traditional belief and the now-accepted fact that cholera is fast-spreading.

As Table 15 shows(a), the main cholera epidemics reached the Maltese Islands in 1837, 1850, 1865, 1867, 1887 and 1911, with decreasing impact. In the first epidemic, its comparative incidence was astounding; the death rate per thousand of the population reached over thirty-five in Malta compared to less than two in England and Wales; two and a half in Ireland and just over four in Scotland.

The prevailing English ideology in Malta at this time revolved around the primacy of imperial strategy and profit, racial superiority and maintenance of the status quo. So the anti-contagionist movement resounded positively in this small colony, since it provided merchants with the argument against imposing external and internal quarantine measures. Dr J. Davy(5) and Dr J. Sutherland(6) both used their observations in Malta to further their anti-contagionist views at home and abroad. Dr Max von Petenkoffer was a leader of those anti-contagionists who invoked complex social and environmental theories of cholera transmission, only later developing the notion of the 'carrier'. Meanwhile, local doctors tended to be contagionist, perhaps reacting more defensively. (7)

Local ideology, as expressed through the church, found a comfortable symbiosis in sin and sickness - one that exalted the powers and enriched the coffers of the parish priests. Piety bred intransigence. It was God's will. The traditional contagionist view of the Vatican (8) permitted an angry but contained undercurrent against British laissez-faire attitudes while also shifting the focus from appalling living conditions to the menace of foreign infidels.

(a) Table 15 in the appendix to this chapter.

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This explains why the social reform movement, which was gaining ground in so many European countries and that was the positive side of anti-contagionism, did not develop in response to the cholera outbreaks in Malta. Indeed, well passed the heyday of the miasmatics and the campaigners for improvements in sanitary facilities, only a few solitary Maltese voices called for public health measures. Moreover, the anti-reformists (the Partito Nazionale) organised into an effective bloc to progressive policies.(10)

While the anti-contagionist movement had swept away quarantine measures in Europe, it had also introduced important public health safeguards. But in Malta, the positive steps to improve local conditions were not taken. The multiple causes of this failure include the overriding interests of British merchants and the reactionary stance of local vested interests; the lack of socially enlightened local doctors, steeped in a tradition of individual causation (11); and the lack of strength of the working class.

The theoretical setting of the first pandemic

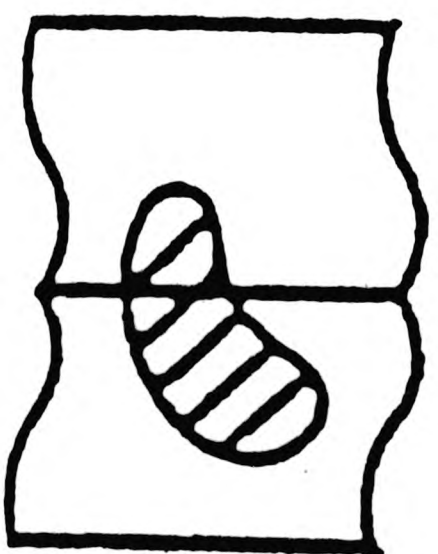
Contagionism had found its material expression in the quarantines and their bureaucracy...but quarantines meant to the rapidly growing class of merchants and industrialists a source of losses, a limitation to expansion and a weapon of bureaucratic control that it was no longer willing to tolerate. (12)

To understand the European popularity of the anti-contagionist movement, we must realise that it did not simply envelop scientists and merchants but also,

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as Ackerknecht notes, reformers fighting for the 'freedom of the individual and commerce against the shackles of despotism and reaction.'

On the anti-contagionist evidence primarily collected from yellow fever incidence(13), the British quarantine restrictions were relaxed in 1825. They were removed in Malta in the same year having been variously in force since the 1814 plague. When the cholera first hit Europe in 1831, the anti-contagionists were well-entrenched. Nicolas Chervin (1783-1843), one of their most able protagonists was awarded the Grand Prix de Medecine in 1820 by the leading medical corporation, The Academy of Science. The Anglo-Indian physicians, Russian, Polish and German Medical Commissions all investigated the cholera, rendered verdicts of non-contagion and gave results that showed quarantines were useless.

What they **counterposed** was less clear than their criticism. The atmospheric influence that supposedly led to the contraction of cholera was too antiquated an idea, so it was modernised into the 'miasma' of filth theory - the poison arising from decaying animal or vegetable matter. The miasmatics did accept the existence of some contagious diseases but not the Big Three : the plague, yellow fever and cholera. Therefore, they proposed cleansing and poor relief on a massive scale as opposed to quarantine and isolation. We can be left in no doubt that, compared to the strong Malthusian current of the day, these were progressive views. They struck a resonant chord in the masses who hated the disruption and break-up of family life that isolation incurred, just as they feared doctors' barbaric methods and anomic greed. Many people's livelihood.

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too, would have been threatened by quarantines and the curtailment of trade, business and factory-work.

It was against the background of this power struggle and its scientifically inconclusive ideological overtones that the local British administrative response to the terrible cholera epidemic shifted from strict, if belated, quarantine measures and the isolation of ^{the} first cases to an emphasis on special, if insufficient, attention to the poor victims. As R.J. Morris points out while reviewing administrative response in Britain, the British Government decided to do a little of quarantine & poor relief and cleansing but 'did neither very well'. Violence erupted in 1831, in Manchester, Edinburgh, Glasgow and London, as the working classes reacted against cholera and against doctors and hospitals. The ruling classes feared these popular riots would spread as they had done so in Moscow, Hungary and Paris and therefore the British Government decided not to use coercion to quarantine internally, to remove to hospital, nor to cleanse homes. (14)

In Britain, the first cholera epidemic of 1831 (15) and contemporary miasmatic theory were together an important stimulus to the study of relations between social circumstances and differential morbidity and mortality. Surveys and statistical analyses were undertaken for the first time revealing the state of the new working class concentrations.

Of particular importance, in Edwin Chadwick's *Report on the Sanitary Condition of the Labouring Population of Great Britain* (1842), was the observation that sewage and clean water were desirable because they saved

money for the ratepayers and because they assured a more productive group of workers for the industrialists (16). His was not only a humanitarian but above all a pecuniary argument. 'He hoped to reduce the number of state-supported widows and orphans by reducing the death rate among the working classes' and simultaneously he showed *'the average period of the working ability of that class might be extended at least 10 days by improvements to the place of work alone.'*(17)

In Malta, neither of these financial considerations held any sway. There were no British middle and upper class rate payers supporting the poor. Neither were there British capitalists wanting, on a large and consistent scale, higher Maltese labour productivity. Thus the anti-contagionist movement led to the relaxation of quarantine, controls without the introduction of social or environmental improvements. In Britain, however, the Public Health Act was passed in 1848, followed by a new Poor Law, the Contagious Diseases Prevention Act, the consolidation and amending of the Nuisances Removal & Disease Prevention Acts (1855) and the Adulteration of Food & Drink Act (1860). In the Maltese colony, the theories of personal behaviour such as reference to the inferior characteristics of the Maltese natives (18), and theories of the supernatural (19), were more important than either the contagionist or the anti-contagionist tenets, despite the fact that the latter used much Maltese data to uphold their case. These superior and/or spiritual attitudes could, perhaps, be maintained for so long by the British administrators and upper classes in Malta because they felt safely able to avoid its spread. Fear was not a motivator for reform, nor was self-defence a

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cause of public health improvements until after the increase in the garrison population and the 1860's epidemics' higher incidence among the troops.(19a)

Local response to the first epidemic 1837

In 1837, when cholera first broke out on a large scale in the Hospice for the Old and for Invalids, Floriana, the local population was, as discussed in the previous chapter, in the depths of an economic and social crisis. British military arrogance and civil halfheartedness toward the injustices and misery in the colony had fuelled disillusion into bitterness and hostility. A *People's Petition to H.M. Government*, in 1836 had called for an independent Board of Health to 'regulate the affairs of the Quarantine Department instead of leaving it under the control and to the caprice of military men.'(19b)

On 9th June 1837, the Governor at first ordered the removal of the Hospice inmates to Fort Ricasoli but by the end of the month this internal quarantine was reversed and those who had not yet shown signs of cholera were allowed to return to their families. A sign of the strength of anti-contagionism lies in the Government notice of 21 June 1837 (20) which threatened to sack anyone who said cholera was contagious.

A Central Committee for the Superintendence of Cases of Cholera was appointed on 19 June 1837 to advise the Government. It refuted allegations that cholera was contagious and began organising the supply of free medicines and medical attendance at home, encouraged phlebotomy and supervised the establishment of temporary hospitals in Valletta, Floriana, Senglea, Mdina, Zebbug, Hamrun, Qormi, Zajtun and Zurrieq. As the epidemic reached climatic proportions, the

Committee pointed out that *'the poor and those of low physique are the worst affected'* and subsequently a temporary committee for the Relief of the Destitute Poor was appointed. However this was a drop that fell, too little and too late, into the ocean of need. Only £1089 8 2d were raised through voluntary donations, less than a third of the sum distributed by the Government in alms in 1836 (21). Meanwhile, official neglect persisted.

External quarantine continued to be opposed. It was considered undesirable and futile to restrict maritime intercourse. Nay, by bringing supplies to where they were urgently needed they mitigated the sufferings of thousands. (21) Isolation and cordons were also officially opposed because they paralyse every branch of industry and stifle the disposition to assist' (23).

Thus, while thousands upon thousands of local people died of this terrible disease we realise the British Administration was indifferent and uncaring. It had had six years warning of cholera's advance from Britain to Southern Europe and the Mediterranean. It had the miasmatic evidence that better housing (24), hygiene and better standards of living were major factors in preventing this killer. The close connection between ill-health, death and poverty was in daily evidence before the local administrators' very eyes and it was also being carefully investigated at home(25). If the Colonial Office, British Government or local administration had felt the slightest responsibility toward the people it was now governing in its well-situated garrison colony they had ample warning and numerous devices at their command. Instead, local ignorance was encouraged: the Governor, the Naval Commander in Chief, HM Judges and Rear

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Admiral Briggs all attending a Te Deum Mass to thank God for the cholera's abeyance on 23 October 1837.

The relative impact of cholera epidemics

Cholera in Malta 1837, as elsewhere in this pandemic, showed itself chiefly as an urban disease, falling disastrously on the poorest quarters of Valletta just as it did in Dublin and Glasgow. The Mandraggio harbouring crowds of beggars in filthy overcrowded tenements became a focus of virulent infection. As Table 15 shows(a), over four thousand Maltese people died, raising the death rate to over 35 per thousand of the population, and having a marked demographic impact.

In the Maltese Islands, there is evidence that female absolute and relative mortality was greater than that of males both in the 1837 and the 1865 cholera outbreaks (26). The unprotected decline of the cotton industry on which so many women depended for their livelihood was, as we have seen, one of the major determinants of destitution that most families were suffering at this time.

The 1850 epidemic

Thirteen years later and one year after the 1849 Irish epidemic (27), the cholera again visited Malta, this time killing nearly 2,000 people but never reaching Gozo. The deaths included a higher proportion of British troops among whom the death rate rose to nearly forty per thousand. The fear that this instilled in the garrison town was an important motive for limited sanitary improvements. Again the Mandraggio was hit badly.

(a) See Table 15 in the Appendix and Table 4 in Chapter 4.

Meanwhile the political background was changing in the 1840's. Explosive republican movements had developed in France, Germany, Hungary and even closer to Malta, in Italy. Agitation for democratic rights had simultaneously increased in Malta. Between 1847 and 1851, Richard More O'Ferrall a civil reformer was appointed Governor and he introduced Malta's first colonial constitution in 1849. It was tokenistic. The Council of Government now included eight elected representatives but only a small minority of 2,000-2,500 people qualified as electors; secondly, a majority of official appointments was retained on the Council (28). Meanwhile, the economic situation of some Maltese harbour workers improved as Britain expanded its naval base in Malta during the Crimean War 1853, while commerce and the cigar industry expanded.

The 1865 epidemic

The 1865 cholera epidemic came via a new route of Egypt and Mecca, reflecting the increased movement of trade and military along this path. Dr Ghio, the Chief Police Physician to the Lazeretto (quarantine hospital) and a confirmed contagionist was among those who studied the impact of the 1865 cholera in Gozo and Malta. He castigated the slowness of British officials. For example, the British Consul at Alexandria took 12 days to inform the Government of cholera's spread. This time, acting on the opinion of the Board of Health, the Government did order 7 days quarantine for all ships from Alexandria.

The Mandraggio, Vittoriosa and other poor urban areas were hit badly but contrary to what might have been expected, people living in sparse country

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villages in both islands suffered more from cholera than the population of crowded garrison towns'(29).

Dr Ghio comments, 'Females and generally those who from age, natural unhealthiness, ill and insufficient nourishment and other causes were of weak constitution appeared to be more liable to cholera than others,'(30) The number of deaths to cases treated was the highest on record. Medical treatment still did more harm than good and although the economy was more buoyant, due to increased trade and military activity, the increase in income for some workers could not outweigh the negative effects of massive exploitation, lack of industrial development and lack of basic infrastructure such as sanitary facilities.

In his study of the 1865 cholera epidemic, Dr Sutherland came down squarely in favour of local conditions developing cholera. Both he and Dr Ghio agreed on the pivotal influence of dwellings: *Dwelling houses in these islands are with few exceptions built without the least regard to any hygienic principles with respect to ventilation, cubic space, situation of cisterns and drains.* Dr Ghio also noted that in hot seasons, lack of water means that house drains where they exist, are choked up with deposits especially in cities and places occupied by the poorest classes. Sewers were generally cut into porous rock so that the infected faeces easily sank into wells and drinking water.

'In lower parts of cities, ground floors and cellars are perpetually imbued with water and sewage', noted Dr Sutherland. He found that the number of cholera deaths diminished rapidly from below floors upwards and that death

rates also bore a particular relation to population density. He concludes that it was the worsening public health in the Maltese islands (31), and the appalling sanitary conditions that led to the outbreak and high incidence of cholera.

Whilst Dr Ghio did not recommend, Dr Sutherland did. He advised urgent execution of permanent sewage and water supply works by local Boards of Health and tighter and more informed police administration for the prevention of nuisances. His was an authoritative and cogent argument for improvements in local sanitary conditions both in town and in country, but most especially in the overcrowded and busy port area. If his recommendations had been acted upon, much misery and loss of life would have been averted in the second half of the nineteenth century. As it was, the capital necessary for installing even a limited sewage system was not made available, even though concern in the garrison centres was now becoming acute.

The 1867 epidemic

In the same year that Dr Sutherland and Dr Ghio published their reports on the 1865 cholera epidemic, cholera broke out again. In 1867, it killed 190 troops - the highest number yet. Six years previously, Dr Sutherland, together with Captain Galton had reported on the dangers to British troops health through lack of pure water and proper drainage facilities in the garrison towns.(32) These observations were also included in the summary of Dr Sutherland's 1867 report.

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The 1867 cholera epidemic reinforced Dr Sutherland's recommendations since sixty per cent of the cholera deaths in Valletta occurred in filthy cellars, ground and mezzanine floors. Again, as in 1865, and 1887, the poor living in villages suffered even more from the cholera than those in the garrison towns. In the country, as Sutherland had pointed out, there were no drainage arrangements, no pure water supply, no sanitary supervision and much poverty and overcrowding. Most homes had been built under the Knights, with defence against invaders in mind so they were windowless and hence airless. In the summer, cholera's preferred season, the lack of water and its increased salinity exacerbated contagion.

While local defence and commercial expenditure increased after the 1865 and 1867 cholera epidemics, no sanitary improvements were made to the villages. In 1871, the huge Somerset Dock, larger than any available at the time at the Royal Navy Headquarters of Portsmouth, was opened at French Creek in the Grand Harbour. In the same year, a hydraulic dock came into operation. Meanwhile, large sums of money were spent on fortifications, the grand Victoria Lines being built in the 1870's from Fomm ir-Rih at one side of the island to Madelena Bay on the other side. But despite the relative boom, the people were still bare-foot, hungry, uneducated and sick. Enteritis, typhoid, measles, smallpox, diphtheria, undulant fever and malnutrition were frequent bearers of debilitation and death. Housing conditions remained appalling and obviously injurious to health.

In 1873, a proposal was made to Council for a proper sewage system in the harbour area, where British troops and the upper classes were concentrated,

The plan was to replace and expand on sewage system made in Valletta, under the Knights, this being inadequate and a source of pollution. Its estimated cost was £70,000, of which the Admiralty proposed to contribute £30,000 (a). The nobility and local elite was entrenched in reaction. Despising everything British, its over-riding priority was to make the Italian language official. The *anti-riformisti*, the elected representatives on the Council, refused to be part of the British sewage proposal. Their refusal to vote for these vital public works may also have been prompted by their and their supporters' vested property interests: the laying of a sewage system would have interfered with their rent income and speculative plans.

In 1874, a Commission of Public Health was appointed. It noted the huge number of child deaths. One half of four thousand annual recorded deaths were of children under five years old. This may have been another spur to reform action.

Between 1873 and 1886, after the sewage proposal was pushed through Council on the official vote, a new system of drainage and flushing sewage was constructed in Valletta, Floriana and the Three Cities.(33) This inner harbour area was not only pivotal to naval and commercial activity, it also contained the most concentrated group of workers and the dockers were beginning to organise. In 1897, sewage extensions were also made to the garrison town near Sliema (34). This town was the centre of residence of the new Maltese commercial bourgeoisie, largely dependent on military favours and contracts.

(a) Working from Table 14 in Chapter 4, this contribution amounted to just over ten per cent annual military expenditure.

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Living conditions for the mass of Maltese and Gozitans did not improve, despite the trade boom of 1870's and 1880's. Their cause was not furthered by the middle and upper classes of Europeanised Maltese. Bowen et al commenting on the lack of progress made in the field of public health say, 'As late as 1936 the judgement of the Chief Government Medical officer was 'no scheme of sanitary reform ever met with greater opposition than the establishment of the modern sewer system in Malta.'" (35) Neither the imperial administrators nor the local mandarins put a priority on improving human life for the masses. Osbert Chadwick, the tireless reformer, commented in 1894, "The poorer classes for the most part go without pure water or take their supply from public fountains or draw it from cisterns', that were invariably contaminated (36). He noted that the consumption of water was too small for proper sanitation, especially to regularly flush the sewage in poorer classes. Only one quarter of the population, including the military, was taking its water supply uncontaminated from the pipes in the last decade of a century of British rule. The quality of water that a large portion of the population can and do use is wholly insufficient for cleanliness and health, asserted Chadwick referring to local conditions in 1896 (37).

The 1887 Epidemic

It is not surprising then that cholera struck the Maltese Islands in 1887 killing over 450 people, more than half the number of registered cases. It struck again in 1911 and 1917. No British troop is recorded as having been taken ill in these last three epidemics. In comparison, the last time cholera hit the British Isles was in 1865. In 1887 Malta, the fatality rate was, as mentioned, still extremely high despite the advances made in knowledge of transmission and preventive measures. And the epidemic brought with it the

all-too-familiar disadvantages of quarantine and downturns in economic activity. The people's health and living standards were so low that, like reeds in the wind, they easily succumbed to infections. In the Final Report of the President of the Committee on Cholera 1887, the Governor 'only wondered that diseases such as are due to the insanitary condition of dwellings, the bad supply of water and the total absence of drainage, were not more frequent and fatal.'⁽³⁸⁾

In 1887, the number of people reported as requiring relief was 13 per cent of a population of ninety-five thousand, according to the estimates drawn up by priests and district committees. One of the steps taken in response to the cholera outbreak was that less than half of those reported to be in need were given rations by the Committee on Cholera 1887. Each privileged recipient's ration was worth no more than 7d a day, the total cost of authorised rations per day being less than £45. The Committee also took some action isolating victims and providing disinfectants to their homes. Again, these measures were halfhearted.

It was, however, at the end of the cholera year, on 21 December 1887, that the British Colonial Minister announced Malta 'autonomous' under a new constitution. The fifth cholera outbreak may have been the catalyst for change. Eight years previously, a mass meeting had been called by deputy Roberto de Cesare at which nine thousand signatures to a petition were gathered. The petition asked for a civil governor; a majority of elected members of Council without whose agreement no taxes or expenditure would be passed and without whose agreement no part of the people's property would be acquired.⁽³⁹⁾ In

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the Letters Patent of 1887, the British Government established a Maltese assembly of 14 elected members and six Government officials, with elections to be held every three years. But the British Government reserved the right to veto any measures taken by the said assembly. The lower classes,

restricted by age, financial and legal qualifications were to be represented on the Council by ten members, themselves selected by rigorous financial and literacy qualifications. The remaining four elected members, even more rigorously selected by financial criteria, were to be elected by special electors viz. ecclesiastics, nobles, large landowners, senior members of the university and members of the Bourse. (40)

Thus the new constitution revealed the British at their best at divide and rule tactics. As Bowen et al observe, 'The old dichotomy between the Knights and the Maltese became perpetuated in a division between the upper middle-class Europeanised Maltese, and the remainder.' (40)

The sanitary reforms that were so vital to the prevention of cholera, especially when sea-borne contacts and the population round port areas were increasing, came late. They were limited to a specially targetted population that included the troops, the elite, the Bishop and Curia and some of the dockers. Instead of being treated as basic amenities to which all citizens had a right and upon which life or death pivoted, they were at most a 'distraction from unrest and political strife.' (41)

While the working classes in England, France and especially Germany had united and organised in trade unions and socialist parties, social reforms that improved their health had been won or given as palliatives or as human investments. The self-interest of the industrial bourgeoisie, now moving into new technologies and monopoly capitalism, led it to consolidate its gains and realise the value of human investment in health and education.

In the colonies, however, where the demand for labour was so much lower, especially the demand for steady, technologically advanced work, the lives of most local people were still subject to harsh exploitation and neglect. A docker, a coal-heaver and a maid could all be replaced one hundred times over, often at lower wage rates. Where British merchants were more important than British industrialists, the principle of *buy cheap and sell dear* was still paramount and included both commodities and people. Taking what suited them from Adam Smith's *Wealth of Nations* they could afford to ignore Ricardo's *Labour Theory of Value*.

Meanwhile, the advanced sections of the European working class, presuming conditions that did not exist in the colonies, made its main cry 'Organise for the Eight Hour Day,' reflecting the strength and unity of its workers. In contrast, 'Bread, Work and Freedom from Imperialism' were the yet unorganised demands of Maltese workers, so vehemently forwarded by socialist pioneer, Manwel Dimech, early in the twentieth century.

The 1911 and 1917 Epidemics

The total number of deaths in the 1911 and 1917 cholera epidemics did not reach one hundred. As Bowen-Jones et al note, 'In 1837 cholera killed 4,000 out of a population of c. 116,000; in 1917 fewer than a hundred people died out of a population that had doubled in size,' (42) The limited public works, the increased opportunities to work around the docks and in commerce, and the consequent higher standard of living contributed to the reduction of this epidemic disease. This was the constructive side of British imperialism. In the following chapter, we will see however, that contagious diseases, in particular, *undulant fever* (or brucellosis) still took a relatively high death toll and

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infant mortality rates remained appalling through most of the first half of the twentieth century. The decline in cholera incidence did not coincide with a transition in public health. It did not reflect a resolution in contradictory interests or a change in the mode of production. Britain's imperial interests remained uncompromised. Public works were necessary for the well-being of the garrison towns which were, after all, Britain's Mediterranean head-quarters, and of pivotal importance in both the first and second world wars.

Summary

Although the total number of cholera cases reported fell in each epidemic in the nineteenth century, epidemics continued to break out long after they had been prevented in Britain and other European countries. Health care, including sanitary reforms, enabled the accumulation of more profit and the reproduction of the forces and relations of production in Britain. The prevalence of a capitalist mode of production rested on a steady supply of cheap but healthy workers. In the fortress colony of Malta, internal development was not important to the British ruling class. State expenditure was not necessary to legitimise the system because the Imperial Government had sweeping powers unrestricted by responsibility. State expenditure as a social investment, to improve the productivity of labour, was not necessary when the labour supply was unlimited.(43) State expenditure was only necessary to maintain imperial strategic interests in Malta, 'as a great military and naval arsenal, and nothing more,'(44) So it was, that only after the 1860's cholera epidemics spread to the British troops, did the Imperial Government heed repeated warnings and recommendations, and propose a proper sewage system in the harbour area. Not only was this action late, considering over eight thousand

people had already died of cholera and thousands more had died of other water and food-borne diseases, it was also confined to the area where troops were stationed.

The local elite, as we have seen, did more to prevent than aid improvements in everyday life. The professionals, clergy, merchants and property owners deliberately ignored calls to improve hygiene, their representatives resorting continuously to legislative obstruction. Their local estate was enhanced by exploiting and maintaining inequalities and by emphasising cure rather than prevention of disease, whether a spiritual or medical cure.

The growing population in overcrowded and unhygienic port areas whose incomes were irregular and where sanitary facilities were, for most, non-existent, were especially susceptible to imported contagious diseases. Their reaction to these terrifying epidemics has yet to be fully researched. It seems that faith in God and belief in destiny were reinforced by their experience of sudden, painful losses. In the first part of the nineteenth century, some of these workers may have signed the petitions organised by local merchants and entrepreneurs, such as Mitrovich. By the end of the century, they were organising their own workers associations. The particular vulnerability of women to death from cholera, found in this study, reflects their particular oppression in the increasing division of labour between male paid productive work and female unpaid or low-paid domestic and service work. The un-arrested decline of the cotton industry left many Maltese women unable to contribute and control their family income and powerless to prevent disease.

Notes

- 1) Miller c., Drasar b., Feacham R., *Cholera and the Salinity of Water* The Lancet 29-5-82.
- 2) Creighton C., *A History of Epidemics in Britain* Vol 2, Ch 1X Asiatic Cholera pp816-821 points out cholera's urban, lower class breeding ground and dates two further pandemics as 1881-1896 and 1889-1923.
- 3) Ackerknecht E.H. *Anti-contagionism between 1821-1867* Bulletin of the History of Medicine 1948 Vol 22 pp 562-593.
- 4) Morris R. J. *Cholera 1832*. Croom Helm (1976) He doubles the number of registered deaths from cholera in nineteenth century British epidemics.
- 5) Davy J *Notes and Observations on the Ionian Islands and Malta*. London 1842 (*op cit*). Dr Davy was a liberal anti-contagionist pointing to local conditions such as poverty and overcrowding as the cause of disease. As Inspector General of the British Army he approved the anti-contagionist declaration on yellow fever in another of Britain's colonies - Guiana- at the very late date of 1850. Cassar P. Dr in *British Doctors and the Study of the Medical and Natural History of the Nineteenth Century* Melita Historica v.3n.4 1963 pp 33-41, has interesting biographies on many contemporary British doctors, of Davy, he notes. "What he wished to see established was a restrictive system (of quarantine) which while protecting the public health, caused as little vexation to individuals and as little loss of time and interruption of commercial intercourse as possible."
- 6) Sutherland J. *Report on the Sanitary Conditions of Malta and Gozo with respect to the Epidemic Cholera of 1865*. (London 1867) HMSO. Dr Sutherland concluded that it was the worsening public health and appalling sanitary conditions that led to the cholera outbreak in Malta & Gozo. In his contribution to the *1850 Report on the Epidemic Cholera of 1848 & 1849 in England*, he attributed the increased morbidity and mortality as compared to 1831-2 not to quarantine relaxations but to "overcrowding, filth, dampness, faulty drainage etc." pp37-36 Dr Sutherland, R.D. Grainger and J. Milroy provided the survey material for this seminal report.
- 7) On the anti-contagionists see Ackerknecht *op cit* p 581 also Rosen *op cit* p 640. In 1855 Von Pettenkoffer postulated that soil contaminated by human faeces and urine gave rise to a "cholera miasma" thus being very close to the mark. Meanwhile Dr Ghio, one of the most determined local contagionists, in *The Cholera in Malta & Gozo in 1865* (Malta 1867) reported that "The means by which cholera is communicated .. are not yet well ascertained. It seems, however, that excretions are the vehicles by which the cholera virus, reproduced and multiplied in the body of a person, is eliminated from that person and passes either directly or indirectly to other individuals." p 18
- 8) In 1546, the Pope's servant Fracastorius published contagionist theories.
- 9) Tesh S. *Political ideology and public health in the nineteenth century* p329, in referring to the supernatural theory of disease notes that Jesus himself saw disease as a manifestation of the ongoing struggle between God and

the Devil. International Journal of Health Services Volume 12, Number 2, 1982. pp321-342

10) The Partito Anti-Riformista which became the Partito Nazionale in 1887, did their utmost to combat 'infernal' reform schemes and those who wished 'to sacrifice our all for the sole benefit of this famous garrison and Royal Navy'. see D.D.M. no.15, 21 Oct 1880 and D.D.M. no.1. 1 July 1880.

11) see Cassar P *Pharmacists and Politics in Malta in 18th and 19th Centuries* St Lukes Hospital Gazette v.5 n.1 June 1970 pp37-41.
Cassar P. *Historical Review of the Development of Medicine and Surgery in Malta* Journal of Faculty of Arts, Vol 6, n.4. 1977 pp206-212.

12) Ackerknecht *op cit* p567

13) Ackerknecht *op cit* Yellow fever epidemics of Philadelphia 1793, San Domingo & West Indies 1802-3, Cadiz 1801, 1805, Gibraltar 1814, 1821 and Guiana 1850 were studied for anti-contagionist evidence.

14) Morris R.J. *op cit* p114 "the debate within the Central Board of Health during summer 1831, when their anti-cholera plans were laid, was guided by principles of avoiding conflict, and respecting popular rights, whilst maintaining social stability and their own authority.... The ability and willingness of the government to compromise with popular prejudice during the epidemic was one reason for the weakness of government authority in countering the epidemic and improving public health. The weakness was not only caused by merchant pressure groups anxious for their cargoes, but also by a fear of popular violence round burial grounds and hospitals. Croom Helm 1976.

15) Subsequent cholera epidemics occurred 1848-9, 1853-5 and 1865-66 in the British Isles. See Pelling, Creighton and others referred to at end of footnotes,

16) Tesh S. *op cit* p339

17) Chadwick E *Report on the Sanitary Condition of the Labouring Population of G.B.* p254 EUP Edinburgh 1956.

18) Gillkrest Dr. in Malta Government Gazette 21 June 1837 and MGG 8 October 1834 exhorted common people to change their mode of life.

19) Whilst Dr Paul Cassar indicates some influence of the Catholic Church on medical theory and practises, there has yet to be a thorough local analysis, along the lines of that of Guerra Francisco *The Role of Religion in Spanish American Medicine* in *Medicine & Culture* Poynter FNL, London Wellcome Institute of the History of Medicine 1969.

Pisani. S. *The Malta Cholera Epidemic in 1837* (SLHG N5 1970) pp150-156 quotes the report of the Central Committee on Cholera 6 June 1837 'the new cases of cholera being reduced by Divine Fervour'.

(19a) Table 15 p253 (19b) Mirrovich 5 (1836)

20) MGG 21 June 1837 and Cassar P. *Medical History of Malta* (London 1965) pp218-9.

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- 21) Royal Commission (1838) p51
- 22) Pisani. S. *op cit.* p155
- 23) MGG 26 June 1837
- 24) In MGG 8 Oct 1834 a copy of the Regulations drawn up by Dr Gillkrest Principal MO in Gibraltar was published regarding the necessity to improve cleanliness and reduce overcrowding to prevent the spread of cholera. Dr. J Sutherland's 'model buildings' had also been erected in Britain.
- 25) Amongst other Edmonds T.R. *Statistics of the London Hospital with Remarks on the Law of Sickness* Lancet (ii) 1835-6 p778 highlighted the lethal environmental factors.
- 26) Stilon Guiseppe Maria *Sul Cholera Morbus.* p7 & p40 Malta 1839. Chetcuti di Tommaso *op cit* (Malta 1838) p 39-40, p172-177 and those of Dr Sutherland and Dr Ghio for the 1865 epidemic.
- 27) Creighton C. *op cit* p818
- 28) Bowen-Jones et al *op cit* p127
- 29) Sutherland J. *op cit.* Of interest as well is the fact that a similar phenomenon occurred in the Irish epidemic of 1849 when a high proportion of deaths occurred in rural areas.
- 30) Dr Ghio *op cit* p 28.
- 31) Sutherland J. *op cit* There was a marked rise of all classes of gastric infections as well as other diseases six months preceding the 1865 cholera outbreak. A local board investigating local causes predisposing people to fever in early 1865 pointed to 'poor ventilation, overcrowding in houses and personal filth'. Note here the coincidence between the miasmatics, the concept of malaria (bad air) and public health reformers.
- 32) Galton Capt.D. & Sutherland J. *Report of the Barrack and Hospital Improvement Commission on the Sanitary Conditions of the Mediterranean Stations* London (1863) p174: 'house drainage was in a condition dangerous to health; domestic conveniences were most defective and unwholesome; water brought to the cities was badly distributed; hometanks for collecting water were liable to pollution and a better method of water supply was urgently required.'
- 33) Frendo H. *Party Politics in a Fortress Colony. The Maltese Experience* Midsea Books, Malta (1979) p7 refers to this as 'the most serious clash between government and opposition', but goes on to be very kind toward anti-reformist obstructionist tactics.
- 34) Bowen et al *op cit* pp127,128 and Fig 33 Malta Sewerage on p122.
- 35) *ibid* p177

- 36) Chadwick O. *Reports on the Water Supply of Malta 1884, 1885, 1894 & 1897.*
Chadwick O., Schinas G.C. & Agius P.P. *Report on the Sanitation of Notabile and Rabato Malta* (1887)
- 37) Chadwick O. *Report on the Water Supply 1897*
- 38) *Final Report made to the Central Committee appointed by H.E. the Governor to Check the Spread of Cholera. Malta* (1887)
- 39) Mercer Guze Ellul *Il-Martirju ta'Poplu SKS Partit tal-Haddiema (Malta 1982)* p 26.
- 40) Bowen-Jones et al *op cit* p 128
- 41) Bussuttil S. *Malta's Economy in the Nineteenth Century Malta* (1969)
- 42) Bowen-Jones et al *op cit* p130
- 43) Gough I. (1981) referred to in Chapter One Part Three of this thesis.
- 44) Duke of Wellington's statement on Malta to the House of Lords Hansard 1838 XLII 814. Quoted by Bowen-Jones et al p119.

Additional readings on cholera and the political economy of health used as background material include :

- Briggs A. *Cholera & Society in the Nineteenth Century Past & Present* Part 19 pp 76-96. (1961)
- Rosenberg C.E. *The Cholera Years* University of Chicago Press (1962).
_____ *Cholera in Nineteenth Century Europe : a tool for social and economic analysis in Comparative Studies in Society and History* Vol 8 pp452,463. (1988)
- Pelling M. *Cholera Fever and English Medicine 1825-65* OUP (1978)
- Benenson A. *Control of Communicable Diseases in Man* American Public Health Association Interdisciplinary Books (1975).
- Feachem R.G. *Environmental Aspects of Cholera Epidemiology 111. Transmission and Control* Vol 79. No. 1. 1982 Bureau of Hygiene & Tropical Medicine. *Tropical Disease Bulletin* (Jan 1982).
- Waitzkin H. *The Social Origins of Illness: a Neglected History* IJHS vol 11 no 1, 1981.
- Figlio K. *Chlorosis and Chronic Disease in 19th Century Britain : the social constitution of somatic illness in a capitalist society.* IJHS vol 8, no 4, 1978.
- Deeves C. *Can the war to contain infectious diseases be lost?* Am. J. Tropical Medicine & Hygiene. vol 21, pt 3 pp251-259. 1971.

30) Chadwick O. ...
Chadwick O. ...
and Rabato Maria ...
39) Chadwick O. ...
38) Final Report ...
to Check the ...
30) Meron: Case ...
1982 p 28
40) Bowen Jones et ...
41) Bassett S. ...
42) Bowen-Jones et ...
43) Ough ...
44) Duke of Wellington ...
XIII 81A. ...
Additional ...
background ...
Briggs A. ...
pp 76-90 ...
Rosenberg ...
...
pp 482-483 ...
Felling ...
Benenson A. ...
Association ...
Rescher R.G. ...
and Control ...
Tropical ...
Watkins H. ...
1, 1981.
Rigilo K. ...
constitution ...
Deves C. ...
Medicine & Hygiene ...
Health and ...

APPENDIX

Table 15. The impact of cholera on the Maltese Islands 1837-1911

	1837	1850	1865	1867	1887	1911
<u>Total number of cases reported</u>	8785(a)	4029	3109	1033	762	116
<u>Total number of deaths</u>	4252	1737	1880	449	462	85
<u>Total incident rate per 100 of population</u>	7.3	3.1(b)	2.3	na	na	na
<u>Death rate per 1000</u>	35.43	13.35	14.03	na	na	na
<u>Number of deaths to cases reported (%)</u>	50	43	60.5	43.5	61(d)	73
MALTA CIVILIANS						
<u>Number of cases rept</u>	8051	na	na	403	na	na
<u>Number of Deaths</u>	3878	na	1479	259	na	na
<u>Incident rate</u>	na	na	2	na	0.44(c)	na
<u>Death rate</u>	na	na	12.5	na	3.2	na
<u>Number of deaths to cases reported (%)</u>	48	na	62	64	74	na
GOZO CIVILIANS						
<u>Number of cases rept</u>	809	na	na	0	na	0
<u>Number of deaths</u>	366	na	256	0	na	0
<u>Incident rate</u>	4.9	na	3.5	0	na	0
<u>Death rate</u>	22	na	17	0	na	0
<u>Number of deaths to cases reported (%)</u>	45	na	46	0	na	0
TROOPS						
<u>Cases reported</u>	na	na	na	630	na	na
<u>Number of deaths</u>	99	135	145	190	na	na
<u>Incident rate</u>	10	7	3	na	na	na
<u>Death rate</u>	25	3	19	na	na	na
<u>Number of deaths to cases reported (%)</u>	25	59	71	30	na	na

Notes (a) taken from P. Cassar, whose source is *L'Ape Melitense* (1838). He points out that in 1837 many cases and deaths were not reported amongst civilians. Indeed, Chetcuti Di Tommaso (p.13), estimates that 8852 cholera cases were reported and 4237 cholera deaths occurred.

(b) a population base of 130,000 is assumed here.

(c) the 1887 data is taken from Professor S.L. Pisani (1881) and *Final Report of the Committee on Cholera 1887*.

(d) The number of deaths to cases reported varied from place to place. In 1837, for instance the lowest rates were 14% in naval and military hospitals (see P. Cassar p198). By 1887 the fatality rate of cases in hospitals was 53 while at home it was 69 per cent.

Sources: P. Cassar (1964); Chetcuti Di Tommaso (1838); S.L. Pisani (1888); *Final Report of the Committee on Cholera 1887* (1888)

Chapter Six

The Early Twentieth Century and Undulant Fever

Politico-Economic Background

The twentieth century opened with the first billion dollar trust (United States Steel). The age of steel followed the age of steam. Heavy industry preponderated over light industry. Free competition was being transformed into its opposite, monopoly.
Dunayevskaya (1)

In this international setting, Malta at the turn of the century was both insulated and deprived. Relative to the present-day it was insulated because of its backwardness. Its economy was bent to the needs of the British military base and thus not open to the full force of changes in a fast-expanding capitalist world. It was deprived because its economy and therefore its industrialisation was captive to imperial needs and its politics were locked in a British administrative dictatorship.

Undevelopment persisted, as in other capitalist colonies, but Malta's economic distortion was particular in its high degree of dependence on British military strategy and spending. For instance, the 1911 Royal Commission stated :

The present distress, and the greatly extended unemployment of the working people of Malta have fallen upon them as a calamity which they could not foresee, and against which they could make no provision. To appreciate this, it is necessary to recognise the entirely artificial nature of their former prosperity and employments, which depended to a large extent upon Imperial expenditure, upon the fortifications and military works, and upon the expenditure of the garrison and the fleet in the island.(2)

Fifty years later, and one finds post-second- world- war development similarly insecure:

In the last resort all economic activity derives from military spending. (Balogh T. & Seers D, 1955) (3)

The most obvious characteristic of Malta's economy in its external relationship is its amazing dependence... on factors outside domestic control. (Bowen et al 1964) (4)(5)

During the twentieth century, external power games brought Malta into the firing line in two world wars, and internally its people experienced political turmoil. The early years saw the birth of two significant movements : socialism under the local inspiration of Manwel Dimech leading to the founding of the Malta Labour Party in 1921 (6); and lay catholicism led by Dun Gorg Preca, the founder of the MUSEUM (7). Both these movements and their ideals have strong roots in working class mentality to this very day. The Nationalist Party, more a party of the elite and favoured by the Catholic Church heirarchy, has had a chequered past as it moved from being anti-reforms at the end of the nineteenth century, to being pro-Mussolini in the 1930's and to adhering, today, to Christian Democratic beliefs. In the period 1921-31 of 'responsible government'(8), the Constitutional Party led by Lord Strickland also enjoyed some popularity, but since its demise in the 1930's the Maltese community has been increasingly polarised between Labour and Nationalist. (9)

At the turn of the century, Malta's small industrial base was concentrated in the repairing and bunkering of the dockyards. But the tonnage of merchandise handled was falling as port facilities improved at a faster pace in other Mediterranean centres, such as Algiers and Naples, aided by the consolidation of French control of Algeria and the re-unification of Italy. Meanwhile, the lack of re-investment by the British Imperial Government and by local capitalists was a direct cause of Malta's lack of competitiveness. (10) Another disadvantage occurred due to the changes in the forces of production :the introduction of bigger and faster ships meant they had to make less stops. In addition, world trade-flow changes did not benefit Malta. In particular, because of the growing importance of the American and Japanese economies, less

East-West traffic came through the Mediterranean. As a result, Malta's commercial locational value was in decline before the British Empire had lost its primacy.

Although Malta was the British Mediterranean Fleet's most important naval base throughout the first half of the twentieth century(11) , employment at the docks was by no means steady neither was prosperity the luxury of more than a few (12). 'Large and rapid' changes 'of Imperial policy and expenditure' left the Maltese captive to outside exigencies that had multiple effects on this small economy.(13) For instance, after the first world war, the docks were run down and thousands of workers were laid off with no social services network to fall back on,(see Table 15 for figures). The riots of 7th June 1919 during which four Maltese workers were killed by British forces were in protest both at the layoffs and at the continuing high taxation of the staple food - bread.

Table 15 **Employment at the Docks, Malta:1914-1987**

1914	23,000
1919	10,000
1926	5,000
1940	15,000
1945	12,000
1968	4,850
1987 (a)	6,000

Notes: (a) includes Malta Shipbuilding Corporation.

Sources: H. Lee; C. Mifsud Bonnici and the M.D.D. Workers' Council

Unrest was such after the first world war, that constitutional rights could no longer be avoided. In 1921, (when one of Britain's other European colonies was divided and Eire given self-rule), a bicameral system was introduced in Malta,

with relatively wide franchise for the lower house - the Legislative Assembly. It was granted to all male British subjects over twenty-one, able to read and write and worth £5 or paying £5 a year in rent. The Labour Party, formed just before the first elections, promised the abolition of the bread tax, the introduction of direct taxation and compulsory education with Maltese as the medium of instruction. Such reforms would have done much to improve the health and welfare of the local people. But they were not to be introduced until after the second world war.

Malta's continued undevelopment was apparent in the condition of the working class during the first half of the twentieth century. Although, local dock workers were obtaining skills, becoming versed in the repair of steamships and then fuel-powered engine ships. Thousands of workers had no security at all as the above post-war layoffs show. They could also lose their jobs at the drop of a hat, not for anything as bold as reading Marx, the reading of George Bernard Shaw was sufficient evidence of subversion. As shipwright instructor Lewis Spiteri stated, highlighting the monopsonist market for labour that persisted up to the 1960's : 'There was not much choice in jobs here - either a maid, a priest or a dockworker. We were relatively fortunate at the docks but just when we were reaching the peaks in trade and skills, the wars came. After them, thousands would be laid off.'⁽¹⁴⁾ There was little alternative to emigration. By 1927, notes Dr C. Mifsud Bonnici, 'there were over six thousand Maltese ex-dockyard men in Detroit alone, in the Ford, Packard and other factories.'^(14a)

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It was after the first world war that the direction and quantity of Maltese emigration changed markedly. In the nineteenth century it had been largely restricted to the Mediterranean shores. By 1911, over 50,000, or about one quarter of the Maltese population had settled in Tunis, Algiers, Tripoli and Alexandria(15). But with the establishment in 1921 of the Department of Emigration to assist and guide Maltese emigrants, settlements began to grow rapidly in Australia (16), Canada and U.S.A.(17). During the interwars years, about twelve per cent of the total population emigrated at the average annual rate of 3,000. Nevertheless, unemployment and underemployment remained high.

Working hours in the first half of the century were practically unlimited. 'The present condition of our working classes is really one that existed in Europe one hundred years ago,' stated the 1929-30 Annual Report.(18) For instance, girl dressmakers worked from 6.30 a.m. to 9.00 p.m. with one hour break for lunch and 'mineral-water' factory girls often had to work till midnight. As more machines were introduced into dock and factory work in the 1930's, accidents at work increased while safety-training and -devices were non-existent. In 1935, the largest manufacturing firms were restricted to cigarettes, employing just over 900; furniture and cabinet making, employing some 700; boots and shoes, employing some 600; and other minor works. Agriculture remained the main industry of the Maltese Islands, marked by the small size of scattered holdings and lack of water. The 1935 Greaves Report also noted, 'Only thirty per cent of farmers can read and write, so cultivators are largely in the hands of middlemen to whom they are indebted for seed or in other ways.'(19) Calls for expansion of ship-repairing and ship-building

activities and for the British to pay adequate rent for the use of many large buildings and much land went unheeded.

Thus, the Maltese, like the inhabitants of other colonies, lived precariously on low pay and unsteady employment, without any back-up social services. Great inequalities in income persisted and the average standard of living was much lower than in Britain. The infant mortality rate remained extremely high until the 1940's due to the extreme exploitation that resulted from the triple oppression of nation, class and sex. Manifestations of this exploitation were found in poor diet, bad water, poor ventilation, dangerous sewage, lack of personal hygiene and the relative inadequacies of doctors and domestic child-rearing practices. A high death rate and a continual, if fluctuating, drain of emigration were the two main factors militating toward a relatively slow population growth throughout the nineteenth century and well into the twentieth century. The 1931 Population Census found the Maltese population grew at little more than half the rate of growth of Britain and other European Countries. According to the 1931 Census: 'In 103 years since 1828, the civil population more than doubled itself rising by 108%. In more advanced countries, population doubles in 60 years'. (20) (see Table 17)

In the context of the model of demographic transition, Malta remained in the first stage up to the 1940's, the crude death rate averaging 25 and the crude birth rate 25 per thousand inhabitants (21).

At the turn of the century, relatively few people had reached old age (22) and the mortality rate among people who did live to 65 years and over was

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increasing (23). Due to the high incidence of epidemic diseases, However, the death rate in the nineteenth century was subject to violent annual fluctuations. The death rate remained high up to 1943 (see Table 18). Poor nutrition and unsanitary living conditions were the main direct cause of loss of life. The fact that infant mortality rates were still over 200 per 1,000 live births in the 1930's highlights how much still needed to be done by and for the masses both in raising levels of nutrition and improving hygiene. Table 18 in the appendix gives the comparative infant mortality rates for the years 1922, 1931 and 1941 and shows Malta's appallingly high incidence of poverty.

Quite accurately, a British 1944 publication stated:

The standard of health in the colonies, only recently seriously studied by Governments, gives the following picture: Complete inadequacy of medical facilities; generally low standards of sanitation; high incidence of diseases; in places, an infant mortality rate of 50%; and above all, widespread malnutrition and hunger. (24)

This was Malta's experience after 145 years of British rule and immeasurable service in two world wars. It was reflected in the way people died. Until 1948, the main killers in the adult age group were ., in particular pulmonary tuberculosis, undulant fever and leprosy. Poverty was still so widespread that epidemics like cholera, smallpox and gastroenteritis would claim a large number of victims.(25) The change from infectious to non-communicable diseases did not occur in these islands until after the second world war. In the more advanced countries, Mckeown dates this transition from the end of the eighteenth century.(26)

It was pulmonary tuberculosis, the working class disease, that caused heaviest mortality. In 1922, an official report, commented:

TB is fast becoming a class disease, a disease of the poor, based essentially on adverse housing and economic conditions forming, with lack of proper or sufficient food and restricted education, a vicious circle which can only be broken by a well-determined and persistent public effort. (27)

In 1925, a decrease in the number of cases notified was officially explained as 'an indication of all round improvement of the standard of living of the lower classes... were it not for counteracting effects of overcrowding due to the scarcity of dwellings and the consequent soaring of rents, this factor would yield permanent and visible beneficial effects.'(28) But there were to be no permanent beneficial effects or permanent improvements in income and environment until the late 1940's.

Non-respiratory tuberculosis, gastro-enteritis and undulant fever are all predominantly caused by infected milk. Their decline in Great Britain can be traced to general measures to protect milk supplies after 1900. The rapid fall of deaths from gastro-enteritis contributed substantially to the decline of infant mortality and was largely due to the introduction of sterilisation, bottling and transport of milk (29). McKeown emphasises these improvements in hygiene together with the important role of improved nutrition, especially of mothers. The Maltese people did not share in these improvements. The particular history of the course of undulant fever, one of the main killers during the first half of the twentieth century and most certainly a major cause of incapacitation, is enlightening. We will therefore now examine it in detail.

Undulant Fever.

Undulant fever, (Mediterranean fever or brucellosis) is a milk related communicable disease. Together with salmonellosis, non-pulmonary tuberculosis and campylobacter enteritis, it can be prevented through hygienic production conditions and the heat treatment of milk (30). Undulant fever causes sweats, muscular pain, headaches, prostrations, fever and even death. Often the disease will lay dormant for years, returning with a vengeance whenever one's resistance is low, bringing pain and debility.

For many hundreds of years, undulant fever existed among the goats and the people of Malta. Dr Paul Cassar finds:

The earliest reference to be found is in an account of the island written in the late sixteenth century by Giovanni Battista Leoni... For almost three hundred years this type of fever continued to prevail undifferentiated from other 'intermittent' and 'remittant' fevers until the second half of the nineteenth century when its protracted course and disabling effects among the British troops began to engage the attention of the military authorities. (31).

In 1886, Surgeon Major David Bruce of the British Army and a local doctor G. Caruana Scicluna, studying deaths from this particular fever, succeeded in isolating the infecting microbe and described it in detail in 1887. At this time the mode of transmission was unknown and Dr Bruce blamed the insanitary conditions of the barracks.(32) Fifteen years later, Dr Thermistocles Zammit traced the source of the microbe to goats' milk and goats' blood. He therefore strongly recommended the boiling of milk before drinking.(33) Zammit's discovery thus enabled the complete and immediate eradication of undulant fever from the Maltese Islands. But as in the case of cholera, the steps that were taken were largely limited to the garrison.

At this time (the turn of the century) the prevention of undulant fever was becoming a financial priority for the British Admiralty and the Colonial Office:

This fever was seriously undermining the strength of the twenty-five thousand soldiers and sailors of the Mediterranean garrison. In fact, in 1891, it was calculated that the Malta garrison was costing the State, on account of the disease alone, an expense equal to that of a whole regiment one thousand strong in hospital for twenty-five days. (34)

So in 1904, at the request of the Admiralty, the War Office and the Colonial Office, a Commission was established to carry out a detailed investigation of the disease. It proved, without doubt, that pasteurisation destroys the microbe in infected milk. Without further delay, the Garrison began supplying only sterilised or condensed milk. As a result, cases of undulant fever amongst British troops practically disappeared.

As Table 19 and Graph 4 show, this was not so for the civilian population whose incidence of undulant fever did not definitively decline until after the second world war. The 1911 Royal Commission stated: 'The disease was soon stamped out among the soldiers and sailors. But the fever still prevails among the civilian population.' (35)

Loss of life and loss of efficiency were caused by the continuing Mediterranean fever. The Commissioners also pointed out some of the serious financial consequences for Maltese peasants and workers. 'Some 400 goats found to be infected are destroyed each year; Turkey has prohibited the imports of Gozitan cheese (or *gbejnijiet*); The loss of milk sales to the garrison and fleet caused a severe blow to Maltese farmers; The cost of imports of preserved milk is £10,000 a year.' It was of the utmost importance,

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they concluded, to find out how the infection is conveyed to goats and other animals and to immunise the animals.

From 1911, every case of undulant fever was supposed to be notified to the Health Office and a local sanitary inspector was to detail the source of milk. A routine inspection of as many milch-goats as possible was supposed to be made twice a year. Meanwhile, the Public Health Department annually recommended that milk be boiled. However, this was to little effect.

It was not until 1922 that there came an official recommendation to pasteurise milk sold to the public although it had been pasteurised for the garrison for eighteen years already. But despite repeated recommendations(36), nothing was done toward general pasteurisation until finally in 1938 largely thanks to the work of Maltese Professor Albert Victor Bernard, a Milk Pasteurisation Centre was inaugurated.

However, the subsequent decline between 1940-44 in undulant fever incidence rates (see Table 19) from 956 cases in 1940 to 173 cases in 1944, had more to do with the widespread slaughter of goats for meat during the second world-war shortages than the limited supply of pasteurised milk at, for most people, prohibitive prices.

According to as-yet unpublished correspondence at the Public Records Office, the situation in 1945, when notified cases of undulant fever rose again to 1,024, was deplorable:

There was ' a severe shortage of all kinds of milk; great confusion and irregularity in administration and distribution; and in the production of local raw milk, an entire absence of supervision and hygienic methods... The situation is one that would not be

tolerated for a moment in Britain, where in spite of wartime emergencies, the milk supply has been maintained on a far superior level.' (37)

The infant mortality rate in the early 1940's was still extremely high (see Table 18); over one third live babies born dying before reaching the age of one year. Low wages, widespread poverty and disease, total lack of ante-natal care and then massive destruction and disruption caused by wartime blitzes were all causative agents of high mortality rates and each had a higher incidence in the working class. But a major and avoidable factor was the lack of healthy milk.

There were four types of milk available at the end of the war.

Raw milk. Most workers and peasants could get nothing but this. According to a secret despatch from Governor General Schreiber: 'The conditions under which this is delivered are unspeakably unhygienic. Goats are herded into the streets and milked into buyers' containers on their doorsteps. (38) The contemporary Governor also realised that fever (tuberculosis, brucellosis, and foot & mouth) was rampant among the herds but there was still no adequate testing of the animals for disease.

Tinned milk. This was rationed for children up to 18 months and a small quota was allowed for invalids. The subsidised price in Jan 1945 was 2½d per pint but large quantities were sold on a rampant black market at 2/6d per pint or more. Writing in 1943, Ian Macleod M.P. found that a family of three spent as much as 18/-d on tinned milk over a fortnight. (39) This amounted to about a quarter of the wage of a docker, who in good times may have earned at the most 76/- a fortnight.

Full cream powdered milk. this was on sale through the Milk Marketing Union but extremely scarce and also unsubsidised. Children aged 19 months to 5 years were entitled to 1lb per fortnight at 2/2d per lb, which as noted in private correspondence was 'pitifully inadequate'.

Pasteurised cows' or goats' milk. This was sold under MMU arrangements to closed, garrison, areas of Sliema and Valletta at a subsidised price of 1/-d per pint. It was only possible for local people to buy this milk by queuing up very early in the morning and the bulk of the population even in these areas were unable to enjoy this healthy milk.

As the following table shows, contaminated raw milk was by far the most commonly consumed in 1946, while only the very privileged could obtain pasteurised milk, although the necessity of heat treatment had been proved a half century earlier.

Table 20 Rates of Milk Consumption January 1946

<u>Milk</u>	<u>Pints per day</u>
Raw milk	56,000
Tinned milk	40,000
Powdered milk	25,000
Pasteurised milk	11,000

Source : *Gov. Gen Screiber (Public Records Office) CD 158/557/896 67/46. 18*
January 1946.

Despite pleas from many, including the Governor, for the increase of the milk subsidy and the expansion of the pasteurisation plant supported by informed detail of the appalling state of affairs, the Colonial Office in fact abolished the milk subsidy at the end of 1944. According to the Secretary of State this cruel step was taken 'in view of the urgent need to bring the finances of Malta into better order.' (40) In correspondence from the Treasury Chambers in

London dated 11 August 1945 the position of no subsidy on milk was confirmed and the provision of new plant to the MMU was delayed, despite the acknowledged fact that the MMU had made a profit of £17,344 during the previous year, this amounting to half the estimated cost of necessary plant.(41)

At the same time, the British Government, with great flamboyance and commonweal spirit bestowed on Malta the honour of possession of the George Cross for heroism and sacrifice during the war. The people, who had lost so many lives, livelihoods and homes in serving Britain, saw the real face of British imperialism, the real stinginess and the real indifference to their conditions. Those who had the information also saw that the British scientific community was able to divert those desperately needed funds to veterinary research in Britain rather than to the immediate increase in the provision of healthy milk in Malta. It was from this date that a qualitative change occurred in the relations between local and imperial state. Where before there had been compliance, or conflict that was not in the interests of the working class, now the conflicts became of real consequence to the masses. 'A good deal of Trade Union and Labour agitation is going on at present against the recent reductions in the subsidies' wrote the Governor to the Colonial Office in August 1945.(41a) The Labour Party went on to win its first elections. The scene was finally set for real social changes.

Meanwhile, rubble and debris had accumulated in built up areas and became ideal breeding ground for rats. Bubonic plague broke out in 1945, with a case mortality rate of nearly thirty per cent. Although the Chief Medical Officer

had called the Government's attention to the prevalence of the plague in the Mediterranean in October 1944 and had recommended that clearing and preventative actions be taken immediately, limited measures were only taken to clear the harbour area i.e. the garrison. Meanwhile, the British forces remained in occupation of Lazaretto so there was no isolation hospital. Only after the first deaths was the public informed of the meagre measures that the Government had decided to take. Stocks of disinfectants, rat poison and vaccines were insufficient and the Governor asked, in August 1945, for the ability to overspend £12,270, to deal with the outbreak in the most basic preventative manner. The extra money was not approved until 1st August 1946, one whole year later. (42)

It was just when the local population was in these dire straits that the Colonial Office, in its characteristic attitude that Malta was like Gibraltar - just a fortress-rock - decided to reduce subsidies on basic foods, like bread and tomato paste and to relax the regulations prohibiting the sale of raw milk in 1945. It is therefore not surprising to see in Table 19 that the recorded incidence of undulant fever reached an all time peak in 1946 at 2,410 notified cases. Meanwhile the Treasury Chambers in London continued to postpone a decision on the provision of a new pasteurising plant to the MNU although its cost was estimated at the paltry sum of £35,000.

The Colonial Office not only refused to take Governor Schreiber's recommendation for increased pasteurisation seriously, it also strengthened its arguments against such a 'project'. It suggested, for instance, a system of boiling centres could prove just as effective. On the other hand, approval was

given to the establishment of a veterinary research centre in England to discover an immunising reagent so as to control and finally eliminate *Brucella Melitensis*.'(43)

So, from August 1944 a certain Doctor Taylor of the Animal Disease Research Association was employed at the Treasury's approval to work on this research. But a building had yet to be erected. Nevertheless, Dr Taylor's full salary for doing nothing from August 1944 to January 1946 was then charged against the funds of the Government of Malta. At the end of 1947, building of this research centre for brucellosis, which was making ill and killing more and more people in Malta, had still not begun. It is ironic to note that on 11th December 1946, the British Ministry of Works' correspondence to the Colonial Office, with reference to the proposed research centre, reveals that it had been 'put aside for review in six months as the new atomic research station at Harwell has special priority on Cabinet instructions and has therefore first call to the scarce labour supply.' (43a) In September 1947, the Ministry of Works submitted new estimates of building costs for the veterinary research station at Compton at 1) £14,530 using local labour or 2) £20,280 using the Mobile Labour Force. It asked for the latter to be provided from the Treasury through the Research Allocation of the Commonwealth Development and Welfare Allocation. Within just two months, the Treasury agreed to this allocation. There is no trace of subsequent files on this question. No doubt, after the various well-placed people siphoned off colonial funds before they ever reached the colony, the 'research centre' was adapted to some other use. In fact a vaccination against brucellosis had already been developed. 'Vaccination with live, attenuated S19 vaccine became generally available in 1914 in Britain',

according to the British Medical Journal, and 'when given to immature heifers appeared to halve the frequency of subsequent infection.' (44)

Let us contrast the consideration given to imperial use of meagre Commonwealth funds for 'scientific research' to the procrastination and total lack of response given to the use of the same funds for immediate preventative, life-saving measures in the colony. Governor Schreiber argued that 'the ordering of a new plant capable of pasteurising 10,000 gallons per day is an essential public service. The estimated cost of the plant and its installation is £35,000'. He also recommended that the scheme be adopted and financed under the Colonial Development and Welfare Act, even enclosing copies of tender forms for the installation to be passed to the Crown Agents for publication. These urgent recommendations were made at the much earlier date of 18th January 1946. For three months, the Colonial Office declined to reply. Then on 24th April 1946, it said it was sympathetic but 'we should prefer you to consider your recommendation in the light of the terms of the general financial settlement which MacMichael will communicate to you.' The Colonial Office asked the Crown Agents to see if the plant could be bought cheaper and it also excused its hesitation by voicing its 'fear that the scheme may be used to continue paying uneconomical high prices to the owners of goats for their milk'. The Colonial Office went on to ask if it would be possible to couple an announcement of the (pasteurisation) *scheme with a drastic reduction* in the price the MNU would be prepared to pay farmers for raw milk in the future. (45)

'In ordinary times,' wrote Ian Macleod M.P. in 1943, 'the Admiralty could force wages especially of the unskilled and semi-skilled workmen in Malta Dockyard to a very low level and the Malta Government could do the same with the pay of clerks.'⁽⁴⁶⁾ Wages had gone up in wartime but there had not been a parallel increase in purchasing power. Lack of price controls meant that basic goods such as eggs and especially tinned milk had exorbitant black-market prices. Milch-goat farmers in Malta and Gozo did not only have to cope with high prices for basic foodstuffs but also with the slaughter of their animals when found with brucellosis, tuberculosis or foot & mouth, and with varying demand for their milk. Faced with these war-time difficulties, the Gozo farmers formed a union and on 12th July 1946 they sent a telegram to the Secretary of State in Britain, pleading that the MMU not be closed down in Gozo.⁽⁴⁷⁾ Their very livelihoods were at stake.

Insufficient pure milk had been officially recognised as a major cause of malnutrition and disease by the British Economic Advisory Council in 1939. Before the war, the *Committee on Nutrition in the Colonial Empire* wrote: '*an unusually high proportion of the energy value of the diet is derived from carbohydrates...people frequently go short of food because of bad harvests...or absence of money*'. During pregnancy and lactation, infancy and childhood: 'Milk is of course much the most valuable food both as a source of protein and of vitamins and minerals etc.'⁽⁴⁸⁾ The Advisory Council concluded: 'The problem is fundamentally an economic problem. Malnutrition will never be cured until the peoples of the Colonial Empire command far greater resources than they do at present.'⁽⁴⁹⁾ The problem as we have seen was both political and economic, and the Colonial Office turned a deaf ear to the Advisory Council's report.

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The 'colonial regime's neglect of social equipment expenditure' was officially acknowledged in Sir G. Schuster's *Interim Report on the Financial and Economic Structure of the Maltese Islands in 1950* (48). The general hospital, St Luke's, had still not been completed, although work began twenty years before in 1930; sanatorium facilities were totally inadequate, there being over 3,000 cases of T.B. alone; no leper colony existed although there were 80 reported cases every year. Plans and sites had been reviewed in 1945, but no funds were made available; 'Not a single classroom was built under the colonial administration from 1933 to 1947', continues Sir Schuster. Paradoxically, the imperial government made primary school education compulsory but did not provide the necessary facilities. Meanwhile, secondary school education was only available for six per cent of primary school-leavers and even then the schools were badly overcrowded.

Thus, it is clear that the non-provision of pasteurised milk was just one part of a whole colonial policy that ran from milk, to water, to sewers, to hospitals and to education. It was as though the colony, outside the garrison and its immediate needs, did not exist. The effect that this policy had was nowhere so marked as that on health.

Summary

This chapter assesses the lack of health and the lack of development in the Maltese Islands in the first half of the twentieth century. High infant mortality rates persisted up to the second world war. The adult death rate fell very little so the percentage of Maltese people reaching 65 years and over was

very small compared to the United Kingdom. Mass emigration was comparable to the exodus of Irish workers who were similarly trapped in undevelopment and lack of local opportunities and advance .

Whilst the impact of epidemic diseases such as cholera was declining , tuberculosis and undulant fever continued to take their toll. Higher morbidity and slightly lower mortality rates among the adult population were the hallmark of this period, reflecting Malta's transitional state from a feudal to capitalist economy within the parameters of a imperial-colonial relationship.

It was this relationship that was central to the continuing prevalence of undulant fever among the civilian population. The public prevention of this fever was not so much dependent on those factors, such as income, education, distribution of income, hygiene, often itemised in health economics ; but upon the whims of the imperial government and the colonial office which held the purse strings and persistently refused to set up an adequate milk pasteurising facilities.

The contrast, between immediate provision for the garrison and the lapse of more than half a century before the local population could avail itself of pasteurised milk, is particularly notable. The story of undulant fever, like that of cholera, highlights the fact that health conditions cannot be understood separately from the political-economy of a nation. We must address the fact that for the first half of this century, there existed a colonial milk policy that compelled the public to consume disease-ridden milk ; thus the persistence of this recurrent illness in literally thousands of Maltese and Gozitans.

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We see in this detailed study of the course of one disease in one colony the play of dialectics. The interests of the imperial state being opposed to that of the local people resulted in limited health care policies. Not until after the second world war could this interaction of opposing interests be transcended and progress be made. Then the colonial state under a Labour Government represented the interests of the working-class. A welfare state was initiated and later expanded under the 1970's Labour Government. As we shall see in the following chapter, the fortress economy was transformed to one based on peaceful pursuits. Shipbuilding, textiles and tourist industries increased. The capitalist mode of production predominated. Tuberculosis and undulant fever died out and heart disease and cancer became the main killers. The aetiology of death and disease changed as Malta was transformed from a garrison colony to a republic.

Notes

- 1) Dunayevsky R. *Marxism and Freedom* Pluto Press (1971) p 161.
- 2) *Report of the Royal Commission on the Finances, Economic Position and Judicial Procedure of Malta* c.d. 6090 HMSO (1912) p12.
- 3) Balogh T. & Seers D. *The economic problems of Malta : an interim report.* Malta Government Printing Office (1955) p22
- 4) Bowen-Jones et al *Malta: Background for Development.* Durham University (1964) p167
- 5) Austin D. *Malta and the end of Empire.* Frank Cass & Co. London (1971) "In the mid-1950's Malta remained a "fortress colony", part of the chain of imperial defence from Gibraltar to Aden and the Far East and heavily dependent on British defence expenditure." p27.
- 6) In 1885, from a nucleus of Senglea dockers, the Society of Workers was founded and from this time, unity amongst the biggest concentration of Maltese workers increased.
For an understanding of Dimech's extraordinary foresight, especially on the importance of political and cultural freedom, reference to his own works is essential. For an overview see : Frenzo H. *Birth Pangs of a Nation : Manuel Dimech's Malta (1860-1921)* Med. Publications Malta. (1972)
- 7) MUSEUM stands for Magister, Utinam Sequator Evangelium Universus Mundus or Would O Lord, that the whole world follow the gospel. This society was founded in 1907 but not officially approved by the Catholic Church until 1932. Its members make a vow to chastity and aim at glorifying God through personal sanctification. It concentrates on indoctrinating the young. Now it has 117 branches and some 1,256 members in Malta & Gozo, while since 1952 it has also been active in the Maltese-Australian community.
Bonnici A. *Dun Gorg Preca* Malta (1988)
- 8) Dobie E. *Malta's Road to Independence* Norman University of Oklahoma Press (1967) Ch 3. "Responsible Government Gained & Lost" gives an interesting political overview of events from dictatorial rule 1798-1887 to independence within the Commonwealth in 1964.
- 9) Election results show this polarisation. See Fenech D. *The 1987 Maltese Election: Between Europe and the Mediterranean.* West European Politics Vol 1. no 1. Jan (1988) pp133-138.
- 10) Bowen Jones et al *op cit* p166
- 11) Lee H. *Malta 1813-1914 A Study in Constitutional & Strategic Development* University of London (1972) Ch 13.
- 12) Report of the Royal Commission (1912) *op cit* p 13.

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- 13) *ibid* For instance, as public works expenditure ceased and the garrison was reduced after the 1904 Anglo-French entente, this "Brought upon the industrial classes a crisis which they are almost helpless to meet"
- 14) Personal interview with Lewis Spiteri, shipwright and member of the Docker's Council
- 15) Census '85 *A Demographic Profile of Malta & Gozo*. Central Office of Statistics Malta (1986) Vol I p12
- 16) York B *The Maltese in Australia* A.E. Press, Melbourne (1986)
- 17) Cassar P. *Early Relations between USA and Malta*
- 18) *Annual Report 1929-30*
- 19) Mifsud Bonnici C. *Report of the Conference on the Position of Malta in the British Empire* (1927)
- 19a) Greaves J.B. *Report on the Economic Conditions in Cyprus and Malta* Department of Overseas Trade. HMSO. London (1935) p60.
- 20) 1931 Census p x.
- 21) Census '85 *op cit* p15.
- 22) 1901 Census 'The large number of deaths in the prime of life during the epidemics in the middle of the last century', was the main cause of the small proportion of old people. p v.
- 23) 1911 Census The increased rate of mortality in advanced ages was considered to be 'serious...and possibly permanent'. The rate stood as high as 114.9 per thousand population aged 65 and over in the 1893-1901 period. p xxvii.
Relatively high mortality rates among the aged have persisted, as shown by Milne R.G. in *The Contribution of Public Expenditure to Social Development : A Case Study of Malta 1945-1967*. University of London (1972) Table 4.2 p57 and p75.
- 24) Economic Council of the Communist Party : *The Colonies: the Way Forward* London (1944) p37.
- 25) Census '85 *op cit* p15
Census 1931 *op cit*
- 26) McKeown T. *The role of medicine: dream, mirage or nemesis*. Here he outlines the profound economic changes that resulted in a transition from 'poverty' to 'affluence' and the simultaneous changes in the character of common illnesses from infectious to non-communicable ones.
- 27) *Annual Report on the Health of the Maltese Islands 1922* pvii.

- 28) *Annual Report on the Health of the Maltese Islands 1925-26* Government Printing Office (1927)
- 29) Mckeown T. *op cit* p80.
- 30) Galbraith W.S. , Forbes, P., Clifford C., *Communicable diseases associated with milk and dairy products in England and Wales 1951-80* BMJ Vol 284 (12.6.82) p 1761-65.
- 31) Cassar P. Dr. *Medical History of Malta* Ch 24. Brucellosis. p240.
- 32) Cassar P. Dr. *The quest for Brucella Melitensis in man and goat*. Scientia Vol 30 1966.pp 102-109.
- 33) Cassar P. Dr *Sir Temi Zammit's Laboratory* Ministry of Health and Environment Malta (1980).
- 34) Cassar P. *Medical History of Malta. op cit* p 242. quoting from Hughes H.L. *Note on the Endemic Fever of the Mediterranean*. Medico-Chirurgical Transactions 1896 p 45.
- 35) Mowatt F., Russell Rea, Chalmers M.D. *Royal Commission Report on the Finances, Economic Position and Judicial Procedure of Malta*. HMSO 1912. Pt4. p39.
- 36) The 1922 Undulant Fever Committee made clear recommendations to this effect, so did subsequent doctors and Governors. Again, an unanimous recommendation was made by the Special Committee on Undulant Fever reporting in Feb 1932.
- 37) Letter from Private Foden (RAPC) to Mr Henry Hynd (MP) 12.11.45. CO 158. Public Records Office.
- 38) Secret Dispatch to the Colonial Office, for the attention of one S.E.V. Luke from Governor General Schreiber. 18.1.46. CO 158/557/896 67/46. P.R.O.
- 39) Macleod Ian, *Economic Conditions and the Cost of Living in Malta*. 1943.
- 40) Dispatch from the Secretary of State to the Colonies to the Governor of Malta. Dec 1944. PRO.
- 41) The MNU bought milk from the farmers at 5/11d a gallon and sold it at 8/- a gallon, hence the profit in 1944. PRO *op cit* 11.8.45.
Veterinary Research Brucella Mellitensis. CO 927 101/28 623/45. PRO 1945-1947.
- 41a) Governor Schreiber to the Colonial Office August (1945) *op cit*
- 42) *Outbreak of Plague* CO 158/558/ 897 92. See for instance the letter from W. Russel Edmunds at the C.O. to the Governor, date 29 Dec 1945, "I came to the conclusion that the existing provision must be sufficient." Again correspondence from the Colonial Office 26.1.1946 asks for more details before paying.

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43) A promise was in fact made to the Maltese population that as soon as possible after the war, the goat population would be replaced, the Governor giving an assurance that every possible assistance would be given to replace them. This was not done on the excuse that the improved, imported stocks of goats would become infected, according to the Colonial Office. See Veterinary Research PRO documents *Malta Research Scheme.op cit*

43a) *ibid*

44) *Human and Bovine Brucellosis in Britain*. British Medical Journal 1980 Vol.280,p 1458.

45) C.E.V. Luke to Governor 24.4.1946.*op cit*.

46) Macleod I *op cit*

47) For details of the more recent 'Gozitan resistance movement': Fitzwalter R. & Taylor D. *Web of Corruption* Granada Publishing ltd., London (1981) p147

48) Economic Advisory Council: *Committee on Nutrition in the Colonial Empire*. Part I. July 1939. HMSO. CMD 6050.

49) *ibid* p14.

50) Sir G. Schuster to Prime Minister Dr Boffa: *Interim Report of the Financial and Economic Structure of the Maltese Islands 1950*. Malta Government Printing Office 1950.

APPENDIX

Table 17

TOTAL POPULATION, Malta and Gozo: 1842-1985

<u>Year</u>	<u>Total</u>
1842	114,499
1851	123,469
1861	134,055
1871	141,775
1881	149,782
1891	165,037
1901	184,742
1911	211,564
1921	212,258
1931	241,621
1948	305,991
1957	319,620
1967	314,216
1985	345,418

Source: Census '85

TABLE 18

Vital population Statistics for the Maltese Islands:1881-1946

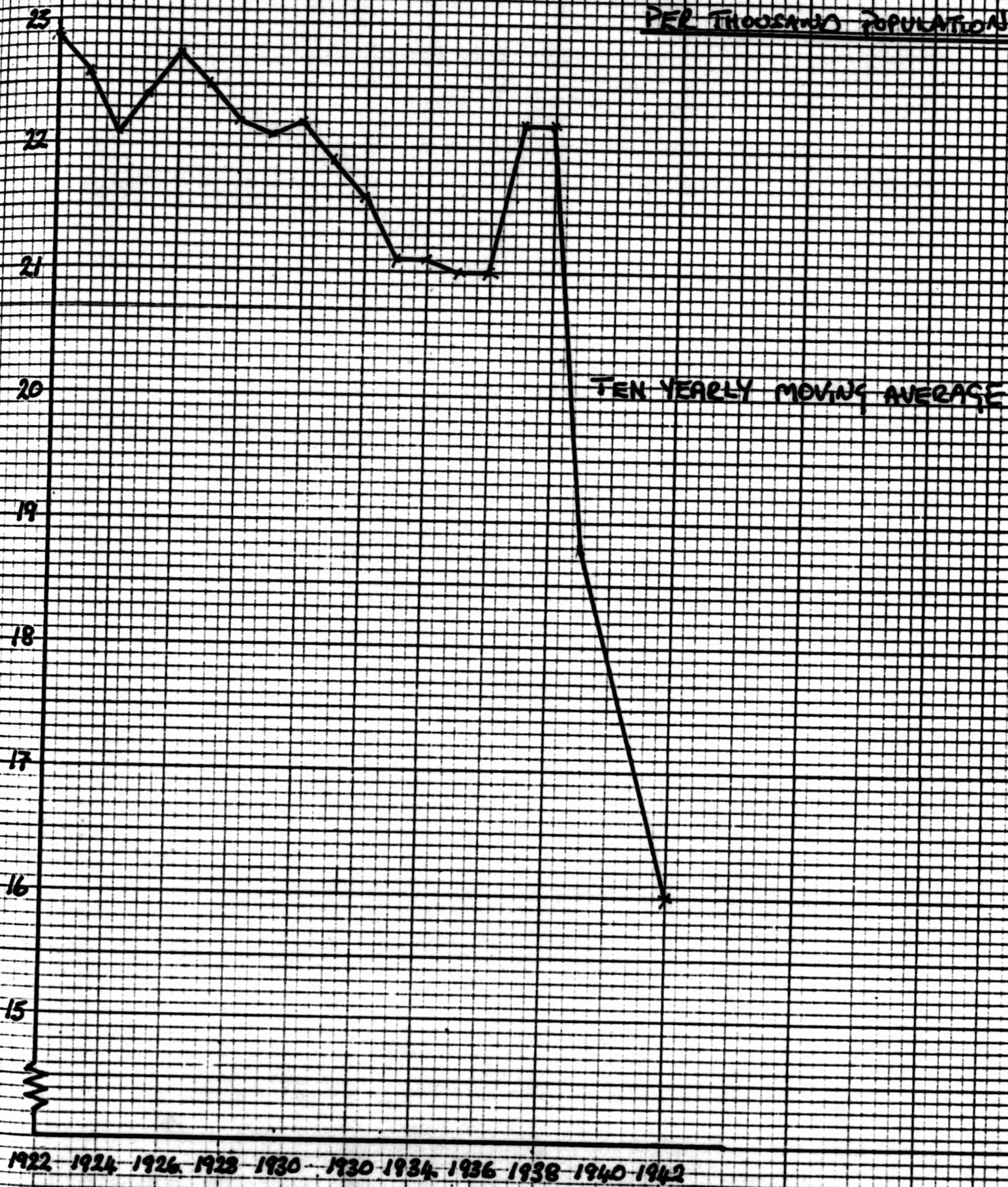
Year	Crude Birth Rate	Crude Death Rate	Infant Mortality Rate	Infant mortality rates	
				United Kingdom	Northern Ireland
1881	37.9	27.6			
1891	37.2	27.0			
1901	38.01	25.2			
1911	36.12	21.42			
1917	29.18	26.22	293.36		
1918	30.09	26.39	244.60		
1919	31.69	20.39	220.42		
1920	34.54	20.21	224.11		
1922	36.41	23.74	261.87	82	86
1923	34.53	22.68	280.13		
1924	34.64	23.22	268.59		
1925	33.31	22.25	271.58		
1926	32.92	21.02	260.81		
1927	32.66	23.03	301.32		
1928	31.77	22.53	267.91		
1929	32.25	21.72	260.75		
1930	34.15	23.88	296.70		
1931	32.82	23.4	306.5	67	75
1932	32.3	20.76	257.47		
1933	33.04	20.21	258.26		
1934	33.48	22.34	277.03		
1935	33.96	23.49	285.71		
1936	33.85	17.16	190.3		
1937	33.54	20.04	242.7		
1938	32.39	20.09	224.83		
1939	33.08	19.95	227		
1940	32.53	22.7	276.45		
1941	27.09	23.74	303.45	59	80
1942	25.15	31.97	345.15		
1943	31.06	20.49	210.0		
1944	39.26	13.25	116.3		
1945	38.37	14.01	144.03		
1946	38.29	13.72	130.75		

Source: Demographic Reviews of the Maltese Islands. Note 1917 to 1921 are financial years. Comparisons taken from Rowthorn B & Wayne H. *Northern Ireland: The political economy of conflict*. Polity Press (1983) p 71.

FIG. 5

CRUDE DEATH RATE MALTA: 1917-1946

PER THOUSAND POPULATION



SOURCE: TABLE 18

FIG. 6
INFANT MORTALITY RATE MALTA 1917-1946
PER THOUSAND LIVE BIRTHS

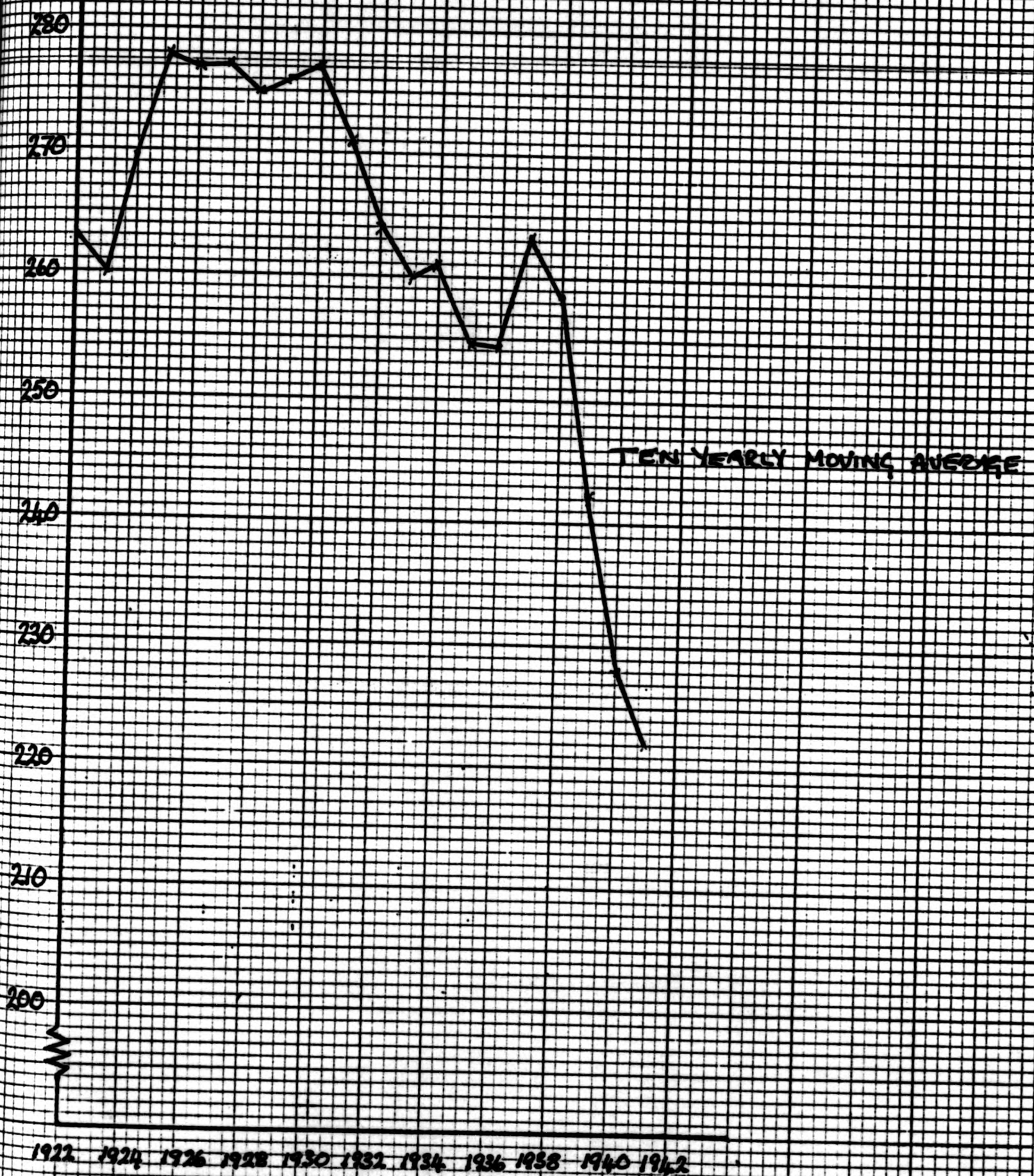
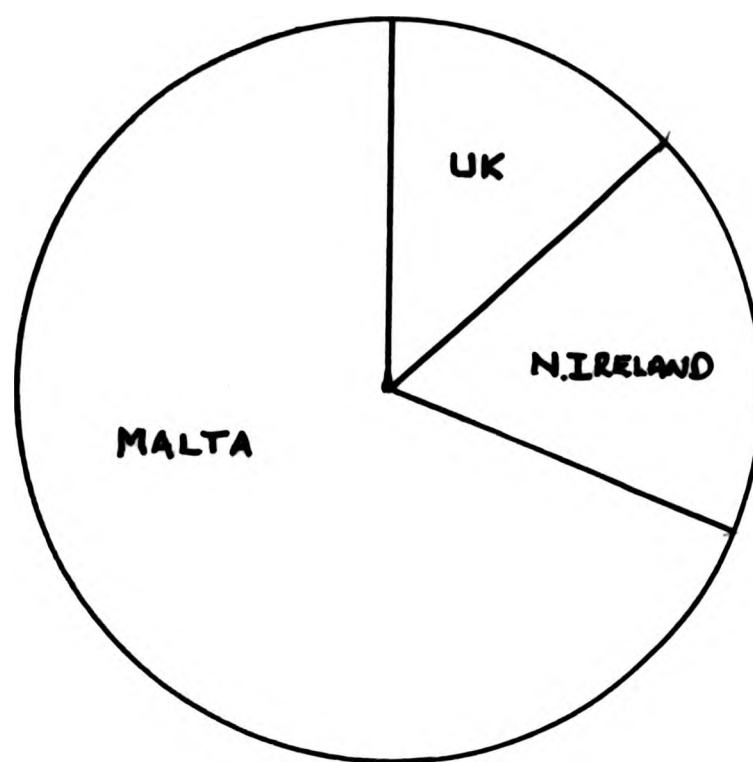


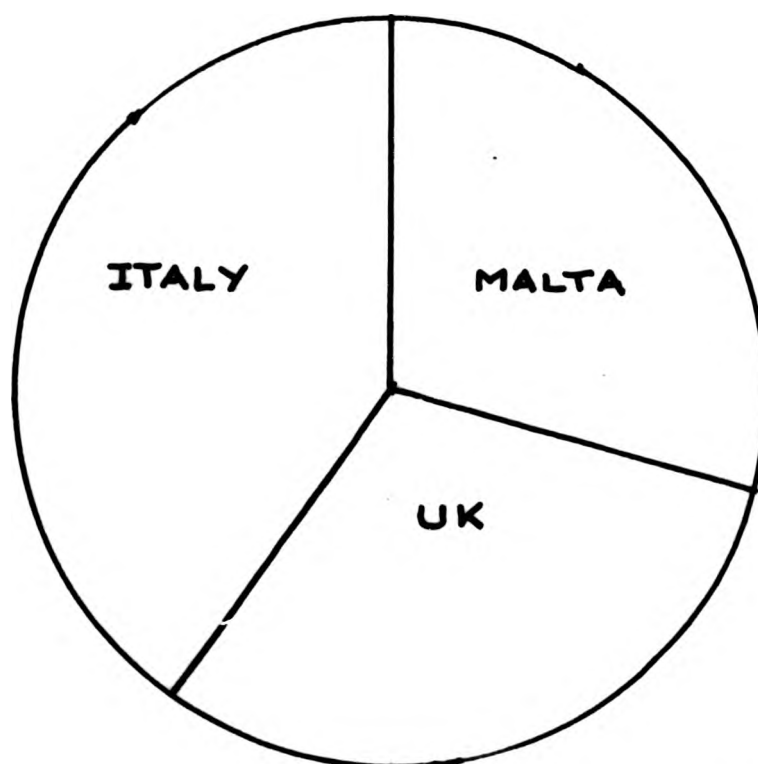
FIG 7

COMPARATIVE INFANT MORTALITY RATES

1941



1987



Source: Drawn from Table 18 and Table 24.

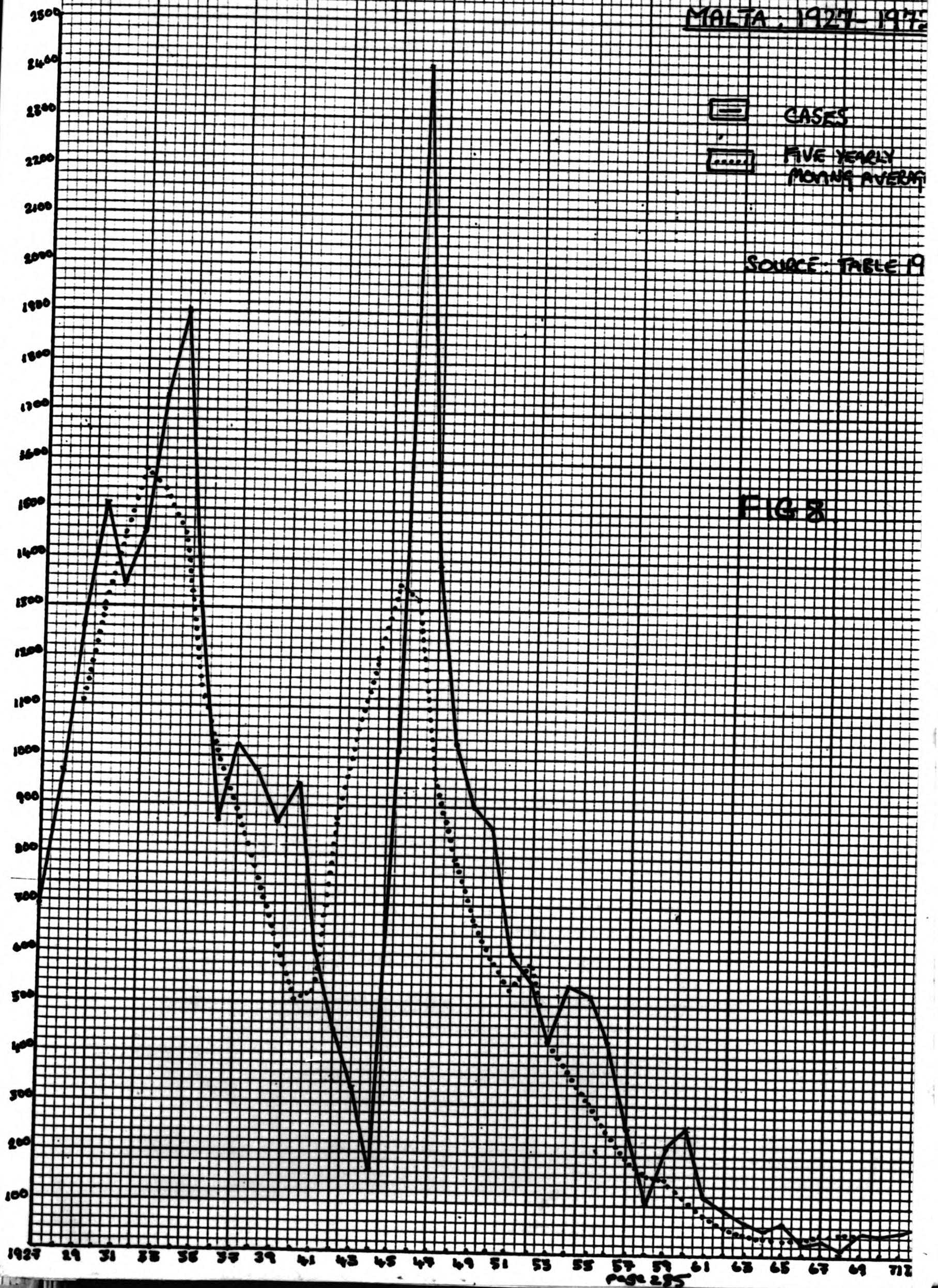
APPENDIX
Table 23 Incidence and Mortality of Undulant Fever, Malta: 1927-1974

YEAR	CASES	DEATHS
1927	699	28
1928	962	42
1929	1282	61
1930	1471	85
1931	1345	72
1932	1462	82
1933	1713	67
1934	1909	88
1935	1310	80
1936	873	52
1937	1034	60
1938	985	50
1939	873	52
1940	956	38
1941	619	31
1942	456	16
1943	334	9
1944	173	8
1945	1024	26
1946	2410	
1947	1390	
1948	1039	
1949	902	
1950	864	
1951	613	
1952	550	
1953	425	
1954	548	
1955	522	
1956	432	
1957	257	
1958	117	
1959	220	
1960	260	
1961	127	
1962	90	
1963	69	
1964	56	
1965	70	
1966	24	
1967	29	
1968	14	
1969	57	
1970	51	
1971	56	
1972	63	
1973	34	1974 31

Source: *Demographic Reviews of the Maltese Islands.*

DUNGUENT FEVER REPORTED MORBIDITY

MALTA, 1927-1972



Chapter Seven

THE ROAD TO FREEDOM

Introduction

Before examining the recent rise in cancer morbidity and mortality, this chapter details the major political, demographic and socio-economic changes experienced by the Maltese people during and after the second world war.

Politico-economic changes in the late twentieth century

For many ex-colonies 1930/1 was the turning point. The collapse of both the gold standard and the system of British colonial trade undermined alliances and eroded the livelihoods of masses of people. This economic and financial crisis spelt the ^{beginning of the} end of the British Empire with its highly integrated structure. Kay, amongst others, argues that there were three emergent forces in the 1930's. The rise of nationalist aspirations in many underdeveloped countries together with the realisation by capitalists in these countries that the old system was doomed and they needed to strengthen their position vis a vis international capital and the increasing American pressure to get an 'open door', all accelerated the decline of the British Empire. (1)

The realisation in Malta that the old system was doomed was strengthened during the devastations of the second world war and reflected in the 60 per cent vote for a Labour Government in 1947. Malta's strategic value had once again been vital to the retention of British dominance in the Mediterranean in the second world war. The local price was death and destruction. Between 1941 and 1943, the Maltese suffered 33,437 air raids by German and Italian fighters and 14,000 tons of bombs - more than the equivalent of a Hiroshima-type

atomic bomb - destroying over 100,000 buildings (2). The dead and wounded amounted to the highest percentage of population to suffer in any theatre of war, apart from the Soviet Union. Communicable diseases, as we have seen in the previous chapter were rampant, including tuberculosis and the plague.

For those who survived the war effort, life was not easy. The Imperial Government's reward was as useful as the George Cross. Britain still regarded Malta as little more than a garrison and as the most superfluously populated place in her increasingly turbulent Empire. The underlying economic facts were bleak. The cost of living had risen eightfold over its prewar level, but wages had only doubled. The only industry was still the Naval Dockyard and from here, thousands of workers were being laid off. By 1949, 42,000 Maltese were registered for emigration (3).

The rundown of British bases in Malta meant its lifeline was being severed. But like a baby trapped in the womb, it could not break free. Despite the massive vote in favour of self-government and social reform, 'the tidal wave of popular enthusiasm for local taxation reforms and the introduction of sorely needed welfare schemes'(4), British autocracy continued. Defence and foreign affairs remained imperial affairs and the extent of reserved matters was ill-defined. Whitehall maintained the right to 'control trade, foreign affairs, aviation, navigation, coinage and language.'(4) So whilst the 1947 Labour Government aimed, 'to allow the people of Malta the same political freedom as that enjoyed by the people of Britain and the Dominions,'(5) it was not to win this freedom until the 1970's. However, it did lay the basis for a

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transition in demographic and health conditions for the mass of people by its egalitarian policies and defence of workers' rights. In particular, an extensive programme of public works and infrastructure, of hospitals, schools, roads, and the introduction of social services was initiated.

The political and economic obstacles it faced were great. Malta's economy was undeveloped and distorted. In 1950, the British Economic Advisor, Sir Schuster, wrote:

Total activity at present is dangerously dependent on employment for, and expenditure by, the British Services. The size of the population creates serious problems (now 315,000 and increasing at the rate of 8,000 annually), Malta with its 42,000 acres of cultivated land and its lack of indigenous raw materials, cannot support such a population unless it can develop new sources of production (industrial expansion, agricultural improvements etc.) or new sources of earnings as from tourist traffic. (6)

Although the remedy was obvious to the perspicacious, the wherewithal was not. Population may have been large and growing, but the supply of skilled labour was fast disappearing. In 1955, Balogh and Seers realised, 'In the years of maximum emigration (1946-54) Malta appears to have been deprived of up to 50% of the skilled manpower available. The losses seem to have been especially heavy in engineering and building. '(7)

Not only was appropriate labour scarce, so was capital. Without advanced technology and access to an external market, few capitalists were ready to risk investing in Malta in the 1950's. Although the economic base for a 'new' Malta was long-projected as tripodal: more manufacturing industry, tourism and more intensively developed agriculture; underdevelopment and massive emigration dominated the 1950s and 1960s.

In short more than a third of Malta's labour force in 1955 was directly absorbed by the British Armed forces.

As a result the impact of foreign military expenditure in Malta and of the heavy bias in the island's employment structure towards employment in the military base, the levels of activity in the civilian economy remained virtually static. No local initiatives emerged to supplement economic activities in the service of the island's military masters and to earn non-military exchange.(8)

During Britain's Suez fiasco of 1956, Maltese dockers were outraged at being used as a base to fight their Mediterranean neighbours. The MLP heralded Nasser's victory and toughened its stand over integration negotiations. But although some like Sir Anthony Eden were determined to maintain the empire and respond effectively to rising nationalism even through novel integration round-table conferences, the logic of both the new forces of production and new world balance of powers made Malta no longer vital as a base. As Nasser forced the British out of Suez, so slowly but surely, Britain's Mediterranean ascendancy was eclipsed:

The Suez adventure, swan-song of British imperial assertiveness, was also that of the traditional Mediterranean naval power on which Malta's importance had so largely rested.

Malta's unbalanced economic structure, heavily dependent on one activity - the export value of the island's strategic asset - was further exposed as Britain's overall Mediterranean strategy and Malta's role therein underwent a drastic change. As a result, the island began to face serious problems of insecurity.(9)

Talks on finance and freedom broke down in 1957 and riots broke out at the docks, resulting in the British Government again imposing direct rule from 1958-62. From 1960, as it continued to raze the naval dockyard, the British state started to favour granting Malta 'independence'. In 1964, Malta became an independent sovereign state under a Nationalist (conservative) government but it remained primarily a British military base (10). The lack of local opportunities is highlighted by the fact that no less than 49,000 Maltese settled abroad between 1960-69(11), and that during this decade population hardly increased as shown in Table 21 below.

Table 21 Annual average per cent rates of population growth: 1948-1985

<u>Period</u>	<u>Maltese Islands</u>	<u>Italy</u>	<u>G.B.</u>	<u>Greece</u>
1948-1957	0.5			
1957-1967 (a)	-0.02	0.65	0.6	0.7
1967-1985	0.55			

Note (a) The period for international comparison is 1955-65, which was in Britain in absolute contrast to Malta, a period of relatively rapid population growth.

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Source: Census '85 & United Nations 1973 The Determinants & consequences of Population Trends, New York (1973) Vol 1 Table 11.8 p32.

On coming to power in 1971, the Labour Party was determined to demilitarise the local economy. It imposed exchange controls, closed down NATO's Mediterranean headquarters and started negotiating for total withdrawal of British military forces. A Malta-Britain agreement was signed in March 1972 after tough negotiations providing a yearly rent of £14million for the use of military facilities while British bases were to be gradually removed altogether. In 1974, a new constitution was instituted making Malta a republic and five years later the last British warship left the Grand Harbour. In 1987, Malta's neutral and non-aligned status was enshrined through amendments to the constitution. The consensus of opinion was that economic and political progress could only be made through a policy of equi-distance from the super-powers, special agreements with the European Common Market members and the pursuance of peace and co-operation in the Mediterranean.

The situation in the Mediterranean was, as ever, tense. The demise of the British Empire left the sea to the new superpowers. American (Sixth Fleet) and NATO warships and submarines stalk the sea, having bases in many countries on the northern shores of the Mediterranean. In 1986 and 1989, U.S. forces attacked Libya and Libyan planes, respectively. Russian military sea-power is also prevalent, and President Gorbachev's proposals for bilateral withdrawal from the Mediterranean and limitation of sea-based nuclear missiles have fallen on deaf ears. To Malta's east, the island of Cyprus is divided, the Turkish forces having invaded and remained there since 1974.

Meanwhile, Israeli-Zionist expansion continues , since the creation of a Jewish state in Palestine in 1948. Israel is also an important new nuclear power.

Opportunities for co-operation between Arab countries and between them and Malta have increased in the past twenty years. At present about one thousand Maltese workers earn a relatively high wage in Libya. During the sixteen years of Labour administration 1971-87, bilateral agreements were also reached with Italy, China and the Soviet Union among others.

Malta's transition to an industrialised capitalist society involved a changing system of power, changing property relations and a changing role of religious institutions to name but a few of the most important aspects of contemporary life. Its late and uneven development must be seen against the long experience of undevelopment as a garrison colony within a changing world. It is patently inadequate to posit a circular explanation, based totally on external factors to explain Malta's development in the 1970's. Local economist, J.C. Grech, makes this mistake:

Just as the coming of the British to Malta played a determining part in the structural changes that Malta experienced in the nineteenth century, so now the rundown of the British military presence launched Malta into a new era. (12)

Such a myopic view gives no credit or place either to international changes in capital investment or local class struggles, in particular the important process of national liberation that took place in the early 1970's.

Malta's experience both parallels and diverges from that of other colonies. Its attempts to diversify and industrialise date back to the post-second world war period but did not 'take-off' till the early 1970's. The years between 1973-

1979, saw a nearly eighty per cent real increase in investment expenditure, mostly going to manufacturing and infrastructure. The expansion of the manufacturing sector, coinciding with the final phasing out of the British military services, was exceptionally fast and by 1987 it employed about 32 per cent of all employees.(13)

Malta's development, in contrast to other colonies, has thus been relatively extensive, fast but late. It remains, as in other ex-colonies, a partial and fragile industrialisation, but for particular reasons. In the experience of most of the underdeveloped world, industrialisation has been restricted to certain branches of industry, offering employment to only limited sections of the working class, while dependence on one or two primary goods exports persists. Malta's experience is different because, instead of dependence on the sales of a primary good, it has primarily been exploited for its military and mercantile strategic value. Its proximity to Europe and the advantages it has gleaned from special association with the Common Market also make its recent past more comparable to that of Ireland and Cyprus than to any other ex-colony. So that, although the export of clothing and electronic parts manufactured by foreign-owned companies, the repairing and building of ships and the attraction of tourists are the main characteristics of contemporary Maltese economy, it is less vulnerable to price fluctuations and adverse terms of trade than many ex-colonies that are endowed with much more natural wealth and resources.

The long-term importance of the dockyards and the shipyard workers cannot be underestimated. Without this base, the political and economic transformations

of the past twenty years could not have been made. Although internationally this is a declining industry, it is in Malta still the biggest employer and its workforce has been throughout this century the motor of social change in the interests of the working class. The transformation within the docks from oiling war-machines to advancing peaceful commerce has been enacted through a transformation in its organisation from management in London for Imperial strategic needs to self-management, workers' control and decentralisation. (14)

Before reviewing the forces and relations of production in the three biggest industries, of docks, clothing and textiles and tourism, and the proletarianising and equalising tendencies of the 1970's, the next section will analyse the most salient demographic changes of Malta's post-second world war experience.

Late Twentieth Century Population Changes

In the ~~forty~~ ^{fifty} years from 1931 to 1985, population increased by one hundred thousand at an average annual rate of 0.8 per cent compared to a rise of 1.03 per cent in the early twentieth century period 1901-1931. The rise in population and population density is shown in Table 22.

<u>Year</u>	<u>Total Maltese Population and Density</u>	
	<u>Total</u>	<u>Density per sq km (a)</u>
1901	184,742	590
1911	211,564	676
1921	212,258	678
1931	241,621	772
1948	305,991	978
1957	319,620	1021
1967	314,216	1004
1985	345,418	1104

Note (a) Area is 313 sq km.

Source: Census 1985

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This 1931-85 population rise would have been doubled if it had not been for massive emigration. 'Between 1931-1980 no less than 155,000, nearly half the present Maltese population left Malta to settle abroad,' records the 1985 Census report.(15) Maltese emigration, through the assisted passage schemes of 1946-76, amounted to 140,440, with half of these going to Australia, thus making the total Maltese population in Australia larger than that in Malta. (16) A ^{surprising} proportion of those emigrating to Australia in the early 1950's were women - in 1951 nearly one half and in 1953 nearly seventy per cent - probably because of the lack of employment opportunities in post-war Malta, combined with women's increased independence due to wartime employment and family break-ups.

Such largescale international migration had economic and demographic internal repercussions on these small islands. The emotional cost was also high. York suggests a possible political effect:

In the post-war decades, Australia siphoned off the cream of the Maltese population, especially its skilled tradesmen. It may be that the systematic selection that operated to leave behind the more cautious and less disposed to change, the more traditional and religious, can explain the rise in Catholic Church/Nationalist power during the 1960's.(17)

Crotty also points to the 'fat-cat' mentality of Irish people who do not emigrate (18).

The demographic picture was affected in terms of growth, age and sex structure. The majority of emigrants being young men contributed to the fact that in 1955, there were three women to every two men in the 20-30 age group.

Emigration rates were particularly high in the 1960's, nearly 49,000 Maltese settling abroad in just nine years 1960-69.(20) But since 1976, there has been

a large influx of returning migrants (again mostly from Australia). In just two years these averaged 1,200 per year in 1975-77. (21) York suggests that the improvements in social services and pensions in Malta were the main reason why 9,000 Maltese permanently returned from Australia to Malta between 1976 to 1979. (22) A push factor may well be the chronic structural unemployment in capitalist countries.

Until recently, the number of returnees has tended to be higher than the number of emigrants so that, perhaps for the first time in Maltese history, the homeward movement of Maltese was increasing Malta's population growth rate and density. This can but reflect Malta's relative prosperity in the late seventies and early eighties. However, after 1985, net migration outflow was resumed.

As at the end of 1987, the Maltese population was estimated at 350,000, fifty-one per cent of whom were female. The density of the population was therefore 1,100 people per square kilometre - the highest in Europe. The Netherlands come next with less than half this density at 431 people per sq km of land area.

Table 23 Vital Population Statistics Malta:1947-87

Year	Crude birth rate per 1000	5 yrly average	Crude death rate per 1000	5 yrly average	Infant mortality rate per 1000	5 yrly average
1947	38.2		12.62		120.3	
1948	36.04		12.21		113	
1949	34.05	34.32	10.7	11.4	83.76	101.1
1950	32.95		10.33		88.51	
1951	30.38		11.10		99.8	
1952	29.3		10.69		71.75	
1953	28.29		8.98		64.82	
1954	28.11	27.95	9.6	9.4	66.95	58.23
1955	27.23		8.53		45	
1956	26.8		9.29		42.65	
1957	27.53		9.25		40.71	
1958	26.5		8.56		39.99	
1959	26.16	25.92	8.73	8.81	34.95	37.18
1960	26.07		8.58		38.3	
1961	23.34		8.92		31.93	
1962	22.83		8.63		35.01	
1963	20.33		8.93		33.57	
1964	19.76	19.47	8.51	8.89	33.94	33.53
1965	17.63		9.4		35	
1966	16.8		9		30.15	
1967	16.7		9.4		26.73	
1968	16.1		9.03		27.22	
1969	15.8	16.4	9.37	9.34	24.14	25.93
1970	16.32		9.43		27.66	
1971	17.09		9.49		23.9	
1972	16.9		9.1		16.7	
1973	17.7		9.8		23.1	
1974	18.3	18.12	9.2	9.48	19.9	18.44
1975	19		9.6		17.5	
1976	18.7		9.7		15	
1977	18.8		9.3		13.8	
1978	18.1		10.5		15.1	
1979	18.5	17.9	9.4	9.78	15.6	14.14
1980	17.6		10.1		15.2	
1981	16.5		9.6		11	
1982	17.8		9.2		14.9	
1983	16.9		9.4		14.9	
1984	16.5	16.48	8.6	8.74	11.7	
1985	15.9		8.3		13.6	
1986	15.3		8.2		10.1	
1987	15.4		8.4		7.3	

Sources: Demographic Reviews of the Maltese Islands. Caution: figures vary in recent years according to which review one refers.

The most striking feature of the past forty years is the fall in infant mortality, see Table 23. 'Though there has been a general trend of improvement in life expectation at all age groups, the maximum increase has been registered in the first year of life', summarise Fenech et al (23). At 345 infant deaths per 1000 live births in 1942, the rate was five times higher than that of UK and three times higher than that of Italy. 'By 1977 the IMR was marginally less than that of UK and a fifth below that of Italy'(24), see Table 24 and Figure 7.

Table 24

International Comparisons of Infant Mortality Rates, 1950-1987

Year	Malta	UK	Italy
1950	88.5	32.2	68.1
1960	38.3	22.6	43.3
1970	27.7	18.3	29.4
1978	15.1	13.2	16.8
1987	7.3	7.8	9.3(a)

Note (a) 1986

Sources: *Ernisch J.F. Table 1.6 p10.; Census 1985; Recent Demographic Developments in the Member States of the Council of Europe (1989)*

The steep decline in the infant mortality rate after 1942 is quite breathtaking. As highlighted in the table below, the big fall in infant and child death rates from 1942 to 1944 caused a marked decline in the overall death rate, despite war-time casualties.

Table 25

The particular significance of the 1942-1944 period

	Infant Mortality Rate	Crude Death Rate
1942	345	31.8
1943	210	20.5
1944	116	13.4

Source: *Demographic Reviews of the Maltese Islands.*

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The reasons for this phenomenon are many but perhaps the most important is the rise in employment opportunities in wartime and the unionisation of many workers. Improvements in nutrition and hygiene also came through Red Cross Aid, Donations and then Marshall Aid and subsequent measures taken by the post-war Labour Government. The Emergency Medical Services and establishment of Child Care Medical Services during the second world war reached parts of the population that had never before had professional care in child-birth and child rearing. The availability of penicillin and simultaneous T.A.B. inoculation campaign was officially considered as 'helpful' in bringing about the remarkable fall in the number of deaths and cases of enteric fever 1943-1944 (26). Again, as part of the emergency medical services, thousands of children were inoculated against diphtheria from 1942 onwards and this together with social improvements reduced the mortality rates of diphtheria among children. (25) Child morbidity from whooping cough and measles persisted, as did pneumonia and bronchitis, but mortality rates were reduced. Also, the increased government control of rodents and insects, inadequate as it was to prevent the 1946 plague outbreak, was a positive factor on health. According to official sources, an excessively high number of deaths as late as 1944 was due to diarrhoea and enteritis in under two year olds (26). The subsequent increased supply of safe water, improved sewage disposal and reduction in gross overcrowding contributed to the subsequent reduction in mortality rates due to digestive infections. Of interest here is Milne's gallant attempt to quantify the effects of some of these sanitary improvements (27). Perversely, the destruction of many inner city slums by enemy fire led to rehousing and less overcrowding.

Deaths under one year have continued to decline, from 120.3 in 1947 to 27.8 in 1970 and to 7.3 per 1,000 live births in 1987, an overall fall of 94 per cent in forty years. To compare, in 1987, the rate was 11.7 in Greece, 12 in Cyprus, 9.1 in U.K., 7.8 in Ireland and 6.8 in Switzerland (28). Malta's present comparatively low infant mortality rate is also highlighted in Table 24.

Child and adult mortality has also fallen. Milne has looked in depth at the changes in age group mortality rates from 1948 to 1970 and compares these to changes in Scotland. He finds that children aged 1 to 4 years were less and less likely to die from infectious, respiratory and digestive diseases so that in 1970 their death rate was 'exceptionally' low.(29) In 1967, the main causes of death in this age group were cancers and accidents. Children aged 5 to 14 years experienced a steady fall in mortality rates of 48 per cent in the 1948-70 period again mostly because of the decline in fatal infectious diseases like tuberculosis. (30) By the mid 1960s over half the deaths in this age group were attributed to cancers and violence .

The steady fall of 60 per cent was experienced in the death rate of 15 to 44 year olds from 1948 to 1970, becoming lower than that of Scotland by 1957.(31). By 1970 no deaths were attributed to what had been the main killers - tuberculosis, undulant fever and leprosy. The main causes of death were now cancers and heart disease. The death rate for middle aged people (44-65 year olds) declined more slowly at 20 per cent between 1948 and 1970, but in comparison with Scotland, for instance, this was still a fast rate of decline. Again, a transition was made from most deaths being caused by infectious diseases to most being caused by 'degenerative diseases', in particular

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arterio-scleriosis and degenerative heart disease, cancers and diabetes. After standardising for age and sex composition, Milne finds no significant change, 1948-1970, in the death rate of over 65 year olds.(32)

One obvious result of lower child and adult mortality rates is higher life expectancy. The following table shows how a man in 1948 could only expect to live, on average, 56 years and a woman 58 years but in 1985 life expectancy had increased respectively to 71 and 76 years. The growing female advantage in life expectancy will be touched upon in the forthcoming chapters on cancer.

Table 26

Changes in average life expectancy, Malta: 1948-1985 (in years)

	1948	1957	1967	1985
Males	55.7	65.7	67.5	70.8
Females	57.7	68.9	71.6	76

Source; Census 1985, p126

Compared to other European countries, the life expectancy of Maltese people was much lower than both Italians and British in the immediate post-war years (1948-50) but by the end of the sixties (1967-70) they were equivalent. This highlights Malta's late but fast development - in particular the rise in disposable incomes of the masses and improved medical services. (33)

A restructuring of the population has taken place because of this longer life expectancy. There are now, to mention just a few of the economic consequences, more dependents on working groups, increased demands on social services for the aged, a delay in the inter-generational transfer of capital. In 1948, six per cent of the Maltese population was aged 65 and over but by 1986 this proportion had risen to ten per cent and was forecast to double by the year

2050.(34) However, compared to most European countries, Malta's population structure is still young (35).

The fact that the main killers are now heart disease and cancer has been popularly attributed to this aging process. Hence today's most common ailments are often described as 'degenerative'. But the relatively fast rate of increase of cancer incidence in the Maltese Islands cannot be squared with the relatively slow aging of their population structure. This raises but one doubt that cancer can be understood within the framework of 'individual degeneration'.

In the past forty years, the so-called 'degenerative' diseases, heart disease, cancer and diabetes, have become the most important causes of death in Malta and Gozo. The following table gives an indication of the increase in the percentage of deaths due to these causes. While comparison is hindered by changes of disease classification, the increase is clear.

Table 27

<u>Deaths from principal causes per 1,000 deaths, Malta: 1960 and 1979</u>			
1960		1979	
<u>Causes of death</u>	<u>per 1000</u>	<u>Causes of death</u>	<u>per 1000</u>
1. Arteriosclerotic & degenerative heart disease	192	Ischaemic heart disease	250
2. Cerebral haemorrhage	120	Cerebrovascular disease	87
3. Malignant neoplasms	114	Malignant neoplasms	143
4. Diabetes Mellitus	44	Diabetes Mellitus	70
5. Diseases of the arteries	41	Hypertensive diseases	34
6. Other causes	489	Other causes	418
Total	1,000	Total	1,000

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Sources: Report on the Health Conditions of the Maltese Islands 1960 App A p26; Health Department report No.9A 1979.

During these years, it can be seen from this table that related diseases of the heart and circulatory system (1+2+5) caused thirty-five per cent of deaths in 1960 but thirty-seven per cent in 1979. Malignant neoplasms caused eleven per cent deaths in 1960 but 14.3% in 1979; and diabetes caused four per cent in 1960 but seven per cent in 1979.

Birth rate, fertility and marriage

The crude birth rate, (number of births per thousand of population per year and therefore affected by such factors as migration and marriage rates), remained fairly high until the 1950's when it started to decline very fast (see Table 23). This fall in birth rates is quite phenomenal when compared to other countries. Take for instance two other British colonies, Ireland and Cyprus. We see that in Cyprus, despite the annual death rate being lower than in Malta, the birth rate is still relatively high and equal to Ireland's (see Table 28 below). The crude birth rate fell in 15 years from 36.04 in 1948 to 20.33 in 1963 in Malta, whereas it took about 50 years to fall from about 35 to 20 in U.K., Austria, Italy, the Netherlands and the U.S. in the nineteenth century. A major decline again occurred in Malta's birth rate in the 1960's to 16.32 per thousand in 1970. However in the 1970's a relatively high number and rates of marriage, combined with a high rate of immigration to push birth rates up (36). Family size, however continued to average not more than three children in the 1970's and through the 1980's. The mother of ten had definitely become a thing of the past.

Table 28a

Comparative birth and death rates 1950-5 and 1970-5.

	<u>Annual Average Birth Rates</u> per 1000			<u>Annual Average Death Rates</u> per 1000		
	Malta	Ireland	Cyprus	Malta	Ireland	Cyprus
1950-55	29.3	21.4	27.4	10.2	12.6	7.5
1970-75	17.5	22.1	22.2	9.0	19.4	6.8

Source: extracts from U.N. World Population Prospects cited in Census '85 p19.

The 1948 Census is the first from which a precise calculation of family size can be made. Looking at cohorts of women with completed fertility it found that one quarter had ten or more children and 70 per cent had four or more. Whilst the latest Census suggests a rapid decline in average nuptial fertility rates (number of births to the number of married women of child-bearing age), this generalisation overlooks the particular transition made in the 1950's and 1960's. Bowen-Jones et al suggest that Malta's nuptial fertility rate remained one of the highest in the world in the early 1950's. (37) Perhaps, due to women's higher standard of living; to changing aspirations as Malta sought to take an independent and equal place in the world; to the previous and on-going fall in infant and child mortality rates (38); to family-welfare work of the newly founded Cana Movement; and other as yet unresearched factors; the number of births per marriage started falling drastically in the late 1950's.

Table 28b

Changes in nuptial fertility rates, Malta: 1912-1960
Births per ever-married woman (per 1000)

1912/23	7.38
1924/35	6.71
1936/47	5.63
1948/60	3.93

Source Census 85 p67

Changing customs and medical technology of child-birth accompanied the change in family size. In 1957 "most births" were natural and "at home" (39), but by 1977 most births were in hospital and controlled by high technology.

The 1980's has seen a decline in the marriage rate (from 10.9 in 1975 to 7.5 per thousand in 1985) paralleled by a decline in the rate of immigration (from 2,957 in 1975 to 700 in 1985). The recent trends have been for marriage to be postponed to later years, although on average Maltese women marry younger than most European women, and child-bearing is being postponed to the 25-29 female age-group. (40)

Summary

In the Maltese Islands, both birth and death rates have reached 'low' levels resulting in slow population growth, namely the fourth and final phase of the demographic transition cycle. This demographic transition only occurred in the last forty years. Delayed development due to Malta's continuing national, class and sex oppression as Britain's fortress colony meant that post second-world war nutrition and hygiene levels were low. The contrast in the standard of living in Malta and that of U.K. and even of Northern Ireland is no better

underlined than by the relative infant mortality rates for 1922, 1931 and 1941, as shown in Table 18 and Figure 7.

The transition in the type of prevalent illnesses - from infectious to non-communicable, has been accompanied by a change from high mortality rates to high morbidity rates. A historic sequence can be discerned. High mortality rates correlate with pre-capitalist, colonial modes of production. The ravishes of feudalism, scarcity, and the dominance of humanity by foreign lords and by nature led to one in three children dying before reaching the age of one. These high infant mortality rates did not persist in capitalist countries like Britain, although they did have a lagged response to changes in the mode of production. At first, largely due to the high availability of labour, labour's health was used and abused in the process of capitalist production. But as wages had to be raised to attract more workers, and as ideology changed from preventing laziness and population growth to encouraging efficiency and maximum use of labour time, so workers were more able to improve their health. In the colonies, however, this transition occurred some one hundred years after it occurred in advanced capitalist countries.

The next section will discuss some of the changes in the relations and forces of production that underlined Malta's late development and her demographic transition.

Part Two

Malta's Post-War Development

A standard actuarial text, by Benjamin B and Pollard J.H., argues that in studying changes in death rates and disease :

We are concerned with a broad spectrum of elements which determine man's interaction with external conditions; his resistance to the inimical forces of nature, his approach to the economic struggle to supply himself with living needs, his position in society, participation in group behaviour, and attitude to social mores. We regard this whole process of adaptation to external stresses as reflective of health; we regard failure to adapt as ill-health. (1)

This holistic approach covers everything but says nothing. Definitely, in the context of the dramatic changes in health in Malta in the past forty years, the first factor- resistance to inimical forces of nature-had negligible influence. Secondly, one cannot analyse, changes in man's 'approach to the economic struggle... his position in society... his attitude to social mores' (1), without first understanding man's and woman's role in production and the tools at hand. Thirdly, as emphasised in the first section of this chapter, the changes in global politics, especially the balance of forces in the Mediterranean, are of particular relevance to the vicissitudes of fortune of an island people, as Braudel so magnificently portrays.(2)

The past forty years were a time of profound transition for the Maltese people: from vast inequalities in income and wealth to a compressed wage structure, to the total disappearance of beggars and to the majority of households becoming property-owners living in relative comfort; from a fortress colony to non-aligned republic; from the prevalence of death through diseases such as tuberculosis and undulant fever to the predominance of heart diseases and cancer. This interpenetration of opposites occurred within one generation.

Personal ill-health and mass diseases are catalyses of personal and social change. They not only reflect past and present modes of existence, they also very often signal a new future. But just as a prostate patient may be full of good intentions and grand designs to change her/his working or eating habits yet unable to put these into practise on recovery, so too the masses in the throes of an epidemic may resolve to improve their lot and in particular the life-prospects of their children yet be unable to secure that change. This was the Maltese people's recurring experience during one hundred and forty years of British imperialism. Loyalty and subservience had not won them health improvements. British official medical policy had remained predominantly clinical rather than preventive and had rested on the primacy of health care for expatriates.(3) The vital ingredient that changed ill-health from a latent to an active catalysis of social change was the mass unionisation and mobilisation of the working class during the second world-war.

The terribly high infant mortality rates and the prevalence of mass infections were a catalysis of social change, in a way that mass poverty was not because it was class-bound. Fear crossed the boundaries of nationality, class and sex and the social segregation that had been possible in peace time, largely broke down during the terrible blitz years 1940-42. And during wartime, the health of all people becomes more vital while the ill-health and premature death of children becomes more contradictory and appalling.(4)

Whilst the necessity for survival in the Great War led to action in Britain(5), where the numbers and varieties of health services and health visitors increased, and maternity and child-welfare centres were established, this

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type of action was not taken and sustained in Malta until the second world war. The post-war sense of urgency over people's health - too many fathers killed, too many babies unborn - was no doubt as acute in Malta in 1919, and manifested in the June 7th riots, as it was in Britain. But the wherewithal for securing that health only came in the second-world war.

As already mentioned, Malta was never 'profitable' to British investors in agricultural, extractive and public utilities sectors as other colonies were. It was not to industrial investors but to military and mercantile interests that possession of the Maltese Islands was beneficial. The continuing negligence of public health reflected the fact that imperial concern was limited and volatile. Official attitudes to Malta's welfare were contradictory. On the one hand, they argued, particularly at the Colonial Office, that Malta should be self-supporting and not a burden on the British. On the other hand, they realised Malta's strategic importance and the impossibility of her becoming self-sufficient. (6) This contradiction was never officially recognised but led to official inaction. It took a militant Malta Labour Party to exploit the inconsistency and demand payment of rent for the use of military bases. (7)

Changes in global politics and in the forces of production lessened Malta's strategic value to Britain after the second world war. Since 1946, the US Government had been putting pressure on to gain a foothold in Britain's island fortress. (8) As Howe points out, Malta's fate 'was determined by the place of the fortress colony in a chain of British fortresses' and when these fortresses started crumbling, as in India 1947, Palestine 1948, Suez 1956, Cyprus 1961, so Malta's future became more determinable by the local Maltese

people.(9) Malta's strategic value as a mid-Mediterranean naval base was also undermined by the growing supremacy of air power and the development of nuclear weapons. The post-war Labour Prime Minister, Clement Attlee, foresaw the effect that changes in the forces of production would have on military strategy, as S. Howe notes:

In early 1946 he argued that the new conditions of warfare, based on airborne striking power and in the last analysis on nuclear weapons, as well as the rise of colonial nationalism and Britain's diminished strength, meant that British dominance in the Middle East was increasingly precarious; and in British thinking Malta was decidedly part of the Middle East rather than of Europe, however the Maltese themselves may have seen it. Gladwyn Jebb of the Foreign Office spelt out what he thought were the implications of Attlee's view:

As I understand it, the Prime Minister's suggestion is that we should abandon all attempt to defend our communications in the whole of the Mediterranean and Middle Eastern areas. This would presumably entail the withdrawal of all our forces from the Middle East, and presumably in the long run from Malta, Gibraltar and Aden also.(10)

In the long run, the 1950's, 1960's and 1970's, this prediction became reality, with the exception of Gibraltar.

Changes in global politics and in the forces of production also combined to lessen Malta's mercantile value. British commerce and industry turned increasingly toward Europe while the development of large ships and supertankers lessened the need for bunkering, trans-shipment and a port of call in the mid-Mediterranean.

It is then against these changes that we can now discuss the nature of Malta's post-war development. Of particular importance to Malta's transition were two periods : 1943-51 and 1971-79. The first saw working-class mobilisation and Labour's first electoral victory: the introduction of social services and implementation of a radical programme of public works and infrastructure. The second saw a fundamental change in the basis of the Maltese economy, in the relations of production at the docks and in Malta's political alliances. Both periods of progress are starkly borne out by comparing the infant mortality

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rates in Table 27 above. The average infant mortality rate for 1942-44 was about 223 and this was more than halved to an average of 101 in 1947-51 and again the average infant mortality rate before the labour Government in 1967-71 was 26 but this was reduced to 14 by 1977-81.

The degree of transformation is reflected in all ways of life. Sant seeks to highlight its quantitative developmental value(11). He points to the fact that in 1944, Malta's national income was £17million and forty per cent of this derived from British services salaries; in 1955, one out of three Maltese workers earned his and his family's living from the British services; in 1981, Malta's gross domestic product was over £530 million(a), the British Services no longer existed but work in manufacturing, shipbuilding and ship-repairing sectors contributed over £165 million output value or thirty per cent of national income.

The Malta DryDocks (MDD) and Shipbuilding Industry now employs some 6,000 workers in two establishments. It has the largest concentration of workers in one workplace and is an important source of training and skill formation for industry on the island whilst also directly servicing many local firms. However, the biggest industry in terms of employment in 1985, was textiles, clothing and footwear employing ten thousand in 187 establishments. The tourism industry is the third main plank of the economy, employing in 1987 nearly five thousand workers. The public sector employed, in 1987, forty-five thousand, or nearly forty per cent of the gainfully occupied population.

(a) converting the Maltese lira to sterling at the 1981 exchange rate of 1.36.

Ship-building and -repairing

Let us begin with a short history of the docks. A shipwright instructor and member of the Workers' Council explained:

Shipbuilding and shiprepairing are old skills for the Maltese. Living on an island in the middle of the Mediterranean, once abundant with trees, made the building of sailing boats possible and vital. The Phoenicians are said to have taught us their viking-style of shipbuilding and under the Romans we were known for our skill in making honey and cotton but above all for building ships. Every imperial ruler used our large natural harbours for berthing and repairing both merchant and war ships.(12)

On colonising Malta in 1530, the Knights of St John depended on their naval strength for survival so they developed the dockyards.(a) Similarly the British, especially after the Crimean War proved Malta's strategic importance, invested in developing wharves, docks and mechanical equipment.(b) But after each war, the docks were run down (c). And after the second world war many thousands of dockers were threatened with the sack. In 1949, whilst the deputy leader of the Malta Labour Party, Dom Mintoff, and the Minister of Labour and Emigration, EC Tabone, were pleading against the dismissal of a further 1,500 Maltese workers from the Imperial Dockyard, Lord Hall for the British Government, announced:

Malta has lost its strategic value. The British Government cannot afford to sink money indefinitely in an enterprise no longer profitable. We do not close down the shore establishments altogether because the blow will be too hard for your people. Now that you have self-government it is your responsibility to provide work for your men.(13)

As the reduction in levels of military spending and the rundown of British forces gathered momentum in the late fifties, part management of the naval dockyards was granted on long lease to a private British firm. In 1959, when

(a) see Chapter Three

(b) see Chapter Four

(c) see Chapter Six, Table 15.

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Malta was again under British direct rule, the Welsh ship-repairing company, Bailey's, was given £6million to supervise the transition of 6,000 dockers to commercial work, while 6,000 remained under the Admiralty. However, Bailey transferred most of the money to a Bahamian account while doing little more but contain the militancy of local dockworkers, offering promotion to leaders and unlimited overtime. 'Lots of money, meant lots of danger', commented the present safety officer, John Darmanin. Safety consciousness among the workers rose. In 1963, largely due to the dockers' successful campaign against Bailey's corruption, the British Government threw him out and brought in managing agents Swan Hunter & Wigham Richardson on a yearly management fee of £100,000.

Although not given a carte blanche, Swan Hunter's annual fee was not dependent on performance. In the 1960's, differentials between white and blue collar workers at the docks increased. Overtime became an open cheque. And Swan Hunter tried hard to break the workers' unity. 'The British for most people were still superior beings but the shipyard workers, being strongly united under a new young leadership, resented their exploitation and the constant health hazards that they faced. Swan Hunter set up the first safety unit in 1964. But it was not until 1975 that a safety code was established,' said John Darmanin. However, Swan Hunter did train some workers in ship-building rather than just repairing. But it totally failed to successfully commercialise the docks. The degree of subsequent bankruptcy is highlighted by the fact that in 1970, of a total National Debt of £40million, thirty per cent was Docks' Debt.(14)

In 1971, the new Labour Government asked Swan Hunter to leave and nationalised the docks, wiping off a large debt. A transitory stage to workers' control and total commercialisation was launched. With the Amendment to Dockyard Act of 1975, the democratically elected Workers' Council took over management of the M.D.D. In 1977, democracy was deepened with the election of works committees - finance, commerce, purchasing, personnel, and various workshops.

Parallel to this process of transforming the relations of production from a classical bipartite collective bargaining process to one of worker's participation and control (15), were strident and successful efforts to diversify both products and markets. The result was greater versatility and productivity and a relatively buoyant shipyard. Progress in the 1970's was based on infrastructural investment. Two drydocks were built, one for supertankers with the aid of Chinese experts. The Seven Year Development Plan (1973-79) also allocated capital for a new shipbuilding yard at Marsa and the conversion of some ship-repair facilities at the Drydocks to small ship building. One result of these policies was that turnover at the MDD more than doubled in the five years 1974-1979, rising from Lm7 million to Lm16 million. While a large number of shipyards throughout the world were either rundown or actually closed in this period of recession, the MDD registered profits for six successive years. Its real contribution to GDP doubled between 1973 and 1979.(16) Diversification during this period included structural steel fabrication, the building of single point mooring buoys and the repair of off-shore oil rigs. In the 1980's, American passenger liners were overhauled and Chinese and Soviet tugs and ships were built.

In the early 1980s, Mediterranean shipyards suffered the after-effects of another oil price rise and reduction in oil production. Simultaneously North Sea oil was becoming more viable. Tanker trade in the Mediterranean fell at the same time as all industries began raising productivity to cut costs. Nevertheless, the Labour Government launched a big capital investment project to build a new port at Kalaxlokk in the south-east of the island. This area is being developed as a centre for transshipment, storage and processing so 'that Malta can become again a leading centre for entrepot activity in the Mediterranean' (17).

However, the 1980's saw a severe undercapitalisation problem emerge in the MDD, because, despite the successful transformations and growth, as detailed above, funds for investment and updating technology were scarce. Foreign exchange shifts against the dollar, in which even Soviet shipbuilding contracts are made, exacerbated a rising MDD debt and interest bill. In 1989, the Workers' Council successfully argued for a subsidy to cover at least its interest bill since other exporting industries were receiving generous government aid. In 1988, the MDD's turnover topped US\$ 70 million (at current exchange rates Lm23.33 million). This meant that on average each MDD worker made a net foreign currency contribution of US\$ 12,000 (or Lm4,000) to the Maltese economy in 1988.(18)

Manufacturing : Clothing & Textiles: Micro-Electronics.

In 1960, the clothing textiles and footwear industry accounted for only about ten per cent of total manufacturing net output but by the 1980's this percentage had risen to over thirty per cent of all manufacturing net output.

It had become the biggest industrial employer. The Aids to Industry Ordinance of 1959, planned by the abortive 1955-59 Labour Government and incorporated in the First Development Plan (1959-1964), offered comprehensive incentives to foreign investors including a ten year tax holiday, grants, loans and subsidized factory premises. However, the costs and flaws of open-door industrialisation were high. In 1968, the Malta Development Corporation (set up under the Second Development Plan 1964-69) took over the administration of this incentives scheme, inheriting many salvaging problems because branch firms of multi-nationals tended to move on to greener fields after harvesting super-profits both from the public's purse and the workers' low wages. (19)

A New Incentive Scheme was introduced in 1973, including special measures to increase Maltese ownership in firms paralleled by efforts to diversify sources of foreign investment from dependence on Britain. The new politics of the Seven Year Development Plan 1973-1980 favoured joint industrial ventures between Maltese and foreign industrialists to guarantee bigger markets and updated technology rather than granting concessions (20). At the same time, the state increased its direct participation in industry both as partner and as sole owner. Firms, such as Telemalta, Enemalta, Reverse Osmosis or water desalination, the buying and distribution of oil, imports of basic commodities, that had previously been run by private foreign firms were brought under public control. New local commercial companies with majority shares held by the public sector included Sea Malta and Air Malta. To summarise, the new politics not only included joint industrial ventures and a mixed economy but also industrial democracy, de-militarisation and social development. (21)

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The fast growth of Malta's clothing and textile industry in the 1970's was mostly due to West German investment. In 1973, the German Industrial Advisory Team was invited to Malta and was instrumental in significant subsequent investments by German clothing firms. Between 1973 and 1979 textiles and clothing manufacturing output rose faster than any other sector and West Germany became the leading receiver of Maltese textile products. The industry is overwhelmingly export-orientated. In 1975, for instance, virtually all of its output was exported. Its foreign ownership has been the cost of entry into foreign markets, of capital input, technology and management skills. In 1976, 85 per cent of all share capital invested in wearing apparel, footwear and made-up textiles industries was foreign owned (22). To sum up, the industry is dominated by foreign investment, highly export oriented and also highly concentrated by product and market outlet and by sources of inputs.

Malta has inadvertently become a pawn in a game controlled by international companies. The Clothing Industry has progressively expanded in developing countries while reducing employment in the industrialised world. In the period 1966-75, this expansion from base in search of lower labour costs and higher profits has spread in particular to the Far East, the Mediterranean and to Eastern Europe. The make-up work is subcontracted out to these lower wage countries while the market, cloth- and machinery-production and the technology remain in the old location. In this way, Malta, Tunisia and many other developing countries are experiencing partial industrialisation not in any vertical or indigenous sense but as captive workshops.

As the factory mode of producing clothes in larger, branch establishments based on abstract, alienated labour, has spread in Malta, so the employment of female operatives has increased. Increased opportunities for female employment was in fact an overt aim of the Seven Year Development Plan. Female factory operatives' wages are relatively low, being the minimum (nearly Lm30 a week now) plus a bonus dependent on efficiency and performance. Ruled by time and motion studies measuring the quantitative and qualitative output of repetitive tasks, they are at the receiving end of multinational attempts to cut labour-time, labour-skill and thus labour-costs. The level of stress is high. Marriage is a popular salvation.

The 1981-85 Development Plan recognised the importance of diversifying out of the cheap-labour-textiles-branch-industry-ghetto that had mushroomed. It emphasised the need for a shift to high value goods using skilled labour and advanced technology. One remarkable success was the opening of a branch of SGS-Thompson Micro-electronics of France which from a workforce of 167 in 1981/2 expanded to 1,100 in 1989, to become a major source of foreign earnings. However, while the forces of production may be more advanced in this new factory, the relations of production are just as antiquated and exploitative. Thompson's threat to move to Morocco unless the local laws were amended in 1990 and factory nightshift for women introduced, is just the thin end of the wedge.

It is tempting to extrapolate from the dockers' experience and to argue that the only way to secure the development of manufacturing industry in Malta would be to similarly transform the relations of production. Unless the means

of production come under workers' control, the conflicts and instabilities will only increase, in particular the conflicts between the interests of multinational capital and local labour, and ultimately between profit and health.

Tourism

After the tourist and construction boom of the late sixties, the seventies saw a massive increase in tourist arrivals and in hotel building. Income from tourism rose four-fold in monetary terms from Lm16.2 million in 1973 to Lm76.2 million in 1979, while arrivals increased by nearly 200 per cent and foreign exchange earnings at constant prices increased by seventy per cent(24).

In 1986, with sixty per cent of arrivals, British tourists were still the majority, neo-colonialist ties persisting despite repeated plans to diversify the market. However, the number of West German visitors has been increasing in recent years. The 1986-88 Development Plan aimed to 'diversify tourist flows as regards seasonality' as well(25). In fact, regulations were introduced in 1975 aiming at maintaining employment 'fairly stable' despite strong seasonal fluctuations. However, the vast majority of tourists still seek certain sunshine and so the tourist trade and its complementary catering, agriculture, banking and retail trades all experience higher demands, employment and income in the Summer months.

Malta's growing dependence on tourism for foreign exchange earnings, income and employment has, in combination with the growth of the textile industry, been an important buffer to the rundown and closure of the foreign bases (25). And tourism has the added bonus of relatively high multiplier effects.

However, the tourist trade's dependence on the state of foreign economies and incomes, on fashion, and on the level of military tension in the Mediterranean have led to fluctuations beyond local control.

The five thousand workers in the tourist industry are mostly on the minimum wage in scattered hotels and complexes. Their rate of union membership, as shown in Table 31, is understandably, therefore, the lowest of these three sectors under discussion. For them too, history repeats itself but in altered shape and form. Their mothers' mothers were maids in the houses of the nobility or of British forces; they are now chambermaids or waitresses in hotels catering largely for British tourists. Malta's past has shaped its present and this new big industry has all the hallmarks of vulnerability contingent on service to rich foreigners. Many of the larger hotels and complexes are also run by foreign owned companies such as, Hilton, Holiday Inn and Trusthouse Forte, despite the stress made in the 1981-85 Development Plan for the need to have local control of tourism.

However, the tourist industry has also had its examples of workers' participation, though rather by default than by design. At the Villa Rosa complex in 1971, the Bailey Industrial Group parent company, when having financial difficulties, initiated a scheme of workers' involvement in management, with bonuses and profit-sharing depending on the state of the company. But the worker-directors were denied voting rights and could only attend the Board meetings on invitation. (26) In the prevailing climate of reform, workers' expectations outran the management's schema for involvement and 'the harmonious labour relations that were expected did not

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materialise'.(27) In the 1980's the Dragonara Palace Hotel and Casino also had financial difficulties and the General Workers Union initiated a salvaging scheme under workers' control.

Relations in most other tourist centres remain traditionally exploitative. The power to extend probation periods and to hire and fire lies squarely in the hands of managers (28) . The relations of production being set in the old mould of worker versus owner, often native versus foreigner, gives rise to continual tensions and frustrates improvements in efficiency that are vital to the industry's future competitiveness. Where these contradictions were containable or even surpassable through the loyalties of a family business, they cannot be so easily overcome in the typical large hotel business.

Health & Safety at Work.

Whilst employment has increased from a total of about 89,000 people in 1960 to 115,000 in 1986 (29) in the face of what seemed insurmountable difficulties, transforming the economy from dependence on British bases and British rent in the face of a fourfold rise in oil prices and international economic recession and a growing and aging population; and whilst real wages have increased and differentials narrowed, health and safety conditions at work have been sorely neglected.

With reference to health services in general, Milne found in 1968, after six years of Nationalist rule, that 'the role of the public sector has not radically changed since 1957'(30). A two-tier system was still in operation

with the poor usually getting very poor service or none at all. The Medical Services Commission reported in 1957 that:

The poor are separated from those who pay; the latter choose their doctor; the former cannot, but must use the district medical officer no matter what their feelings about him may be... (It finds) evidence that the medical officer gave poor treatment to those who did not pay and good to those who did; compelling more people to pay. (31)

On coming to Government in 1971, the Labour Party's first priority was to provide one free health service. To what extent this aided the change from a declining population to an increasing one would be difficult to quantify but its positive effect can be in no doubt, from the point of view of non-Illychians at any rate. The extension of this service to workplaces was not however seriously discussed during Labour's seventeen-year term of office. The law remained outdated and limited, based on 1945 Factories (Health, Safety & General Welfare) Regulations, until the passing of the 1986 Factories (Health, Safety and Welfare) Regulations. This makes it the duty of the employer to 'substitute a harmful substance, process or technique at a place of work by a less harmful substance', and specifies sandstone grinding wheels; benzene; white lead and sulphate of lead; white or yellow phosphorous; sand in sand-blasting; and polychlorinated biphenyls. (32) No general regulations cover a long list of dangerous items and the processes that are subject to no control include the use of asbestos and ionising radiations. Special regulations were passed for dockers in 1952 and those involved in building in 1968 but the ship building and repairing industry and the rubber and chemical industries were not covered by any special rules. Agricultural regulations are limited to the prohibition and control of a very small number of pesticides.

Until 1986, the operative factory ordinances and regulations did not bind employers to notify the Department of Labour & Social Welfare or what is now

the Ministry of Social Policy of any industrial disease that came to their knowledge, but Article 42 of the 1986 Regulations now makes this compulsory. Not only was notification wanting, responsibility was also lacking. (33) The 1986 Regulations, remedy this by concentrating powers in the hands of the Director and Superintendent of Public Health. The Sanitary Authority is now empowered to take offenders to court. But an employer or other responsible person may not be found guilty of an offence if he proves that it was 'committed without his knowledge' or that 'he exercised due diligence'.(34) This loophole is an easy way out for recalcitrant employers especially when there is no provision made for health and safety committees to be elected by workers. Responsibility for protecting the public outside the factory from hazards originating inside the factory is not only lacking it is non-existent. A victim, according to the Sanitary Authority, has to be certified chronically sick due to the said hazard before any steps will be taken. This want of progress on health and safety in industrial processes is pertinent to the subsequent analysis of cancer trends.

Class inequalities narrow

After the second world war, the first Labour Government introduced income tax and pensions for the very first time. In the 1970's taxation was made even more progressive. Table 31 gives trends in tax revenue for three types of taxes, and shows monetary revenue from personal income tax in the decade 1972-1982 rose by over nine hundred per cent. The second item, expenditure tax, is mostly made up of customs and excise duties on consumer goods and from being the main source of revenue in 1972, it fell to second place by 1976. Price rises were controlled through various methods including subsidies

on basic foods, bulk-buying from abroad and fixed limits imposed on price rises and profit margins. Corporation tax in 1986 amounted to about 32.5% of gross profits while declared dividends received by local people are taxed as personal income.

Table 29 Taxation Trends Malta: 1972-1986

Year	Personal Income Tax	Net Expenditure Tax	Company Income Tax	Total Tax
	Lm millions			
1972	6.3	12.6	2.4	21.3
1976	18.8	14.3	4.1	37.2
1982	63.7	44.0	17.1	124.8
1986	61.1	50.1	15.4	126.6

Source: L. Briguglio Table 7.1 ; National Accounts of the Maltese Islands

The Labour Government's wage policies also helped to reduce inequalities. In the public sector wages began to be increased on a flat rate instead of a percentage basis in order to contain differentials. A study of the local labour market and wage determination in 1975 found Maltese wages extremely low for Western Europe but the wage structure was very compressed - with relatively low differentials and a high degree of knowledge of who gets what.⁽³⁵⁾ In 1979, the ratio between the highest and the lowest earnings of the public sector employees had narrowed to 3½:1.

Also lowering differentials was the introduction of minimum wage legislation in the private sector in 1974 and equal pay for women in 1976. The introduction of a children's allowance, a national minimum pension and many other social services further reduced the income gap between men and women,

small families and large, the employed and unemployed, the propertied and the propertyless.

Real disposable income per head nearly doubled between 1973 and 1979 while the percentage of the labour force registered unemployed decreased from 7.4 in March 1973 to 2.4 in August 1979 (36). The difference between mens' and womens' wages decreased markedly in the mid -1970's. The unprecedented rise in hourly money wage rates in private industry in the 1970's is dramatically shown by Briguglio. (37)

Finally an important levelling force in the recent past has been the proletarianisation and unionisation of many workers. The percentage of self-employed (own-account) workers has dropped dramatically. The following table highlights this process showing how in 1985, nearly all of the female workforce were wage and salary earners compared to only fifty-five per cent in 1957. Whilst the rise in male wage/salary earners was not been so steep, from nearly seventy to eighty-five per cent of male workers, they make up by far the greatest number with a total of seventy thousand in 1985.

Table 30.

Proletarianisation Process Malta: 1957-1985

Males - per cent			Employment Status	Females - per cent		
1985	1967	1957		1957	1967	1985
2.7	2.1	1.2	Employers	0.5	0.5	0.7
12.0	20.4	31.2	Own-account workers	45	22.9	4.2
85.5	77.5	67.6	Wage/salary earners	54.6	76.7	95.1
-----	-----	-----	Total	-----	-----	-----
100	100	100		100	100	100
-----	-----	-----		-----	-----	-----

Source: Censuws '85 p87

Malta is a heavily unionised country. In 1970 over 45 per cent of all wage & salary earners were dues paying union members compared to 40 per cent in Britain, 35 per cent in Italy, 26 per cent in FRG, and 16 per cent in France(38). At the end of June 1986 trade union membership amounted to sixty thousand or just over 60 per cent of wage and salary earners (39). The biggest union is still the General Workers Union, the second biggest the Union Haddiema Maghqudin.

The following table, based on GWU membership returns and gainfully occupied population in sections of industry in December 1982, gives some indication of the relative strength of the working class in each industry that has been considered above.

Table 31

General Workers Union Sectoral Membership 31.12.82

<u>Section</u>	<u>Number in GWU</u>	<u>Total employees</u>	<u>Percent</u>
Malta Drydocks	4,168	5,854	71
Textiles & Garments	4,220	7,800	54
Hotels & restaurants	3,541	7,589	47

Source: *GWU and Annual Abstract of Statistics 1983* Central Office of Statistics, Malta.

Summary

This chapter has analysed the transition in health patterns in the past fifty years on the premise that class struggle and class exploitation are fundamental to understanding essential aspects of Malta's neo-colonialist economy. The power of the imperialists rested finally in their ownership and control of the dockyards. It was the pivot of their existence, unsurped by the later development of an air-base. It was crucial in determining the level of industrial wages. It was the base of worker's power.

The relationship between the dockers and the Admiralty was economic, but the Admiralty's reason for establishing and maintaining that relationship was both political and economic. This chapter has examined some of the salient factors affecting Britain's military and mercantile interests, in particular changes in the forces of production and in global politics.

Worker's power is crucially affected by essential elements - the demographic profile of society - birth, fertility, mortality and emigration. This is especially true in a small society with a high labour to land or labour to capital ratio, and where the basic units of production are small and based on the family. Increased workers' power was an important determinant in the decline of infant mortality rates. While, in its turn labour power was strengthened by that very fall in infant mortality and child morbidity. The crucial factor in determining labour power, however, is neither numeric nor a technical ratio, but the ability to struggle successfully for more control and wealth. The Maltese worker in neo-colonial society, successfully organised to protect common wealth, fix minimum wages, prices and profit margins, ensure

social security rights and reduce the clergy's power and privilege. As Brenner succinctly argues, in analysing divergent paths of social and economic development : 'Historically evolved structures of class relations and especially differing balances of class power are central.'⁽⁴⁰⁾

We have seen how three sectors, the shipyards, textiles and tourism, have significantly contributed to the rising living standards of the past twenty years. Despite their continuing vulnerability to changes in foreign demand and investment, these sectors have traditional and locational advantages. The historic links of Malta's partial industrialisation have been drawn. The threads go back from chambermaids to maids; from machine operators in a jeans factory to sail making at home; from welders at the Malta Drydocks to riveters at the Imperial Naval Docks. Local capitalists have long experience in both shipping, trade, textiles and the provision of local services. Their development on an independent commercial basis was only possible when a new nation state took a dynamic role in organising and accumulating social capital, attracting diverse foreign investments and accompanying technology whilst reducing inequalities. Reciprocal agreements replaced unequal interdependence. The political levers passed, for the first time in over two thousand years, from the hands of foreign nations to the nation state.

Recent fast development has involved both interaction and destruction. A mixture of tradition and progress persists today. The old and the new, the Arab and the European world are uniquely combined in the attitudes and the language of the Maltese. The Catholic Church, still owning about one third of the land and half the schools, has a strong conservative ideological influence;

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while tourists, returned emigrants and a proud socialist heritage all contribute to radicalising the community. The interpenetration of opposites manifests itself in a polarised political community and stress on the social and environmental fabric. The sudden transformation from a poor fortress colony to an advanced developing economy has led to unforeseen negative externalities : deterioration of the atmosphere and disappearance of the countryside.

At the workplace, as noted in the survey of the three biggest industries, the contradictions in capitalist accumulation have been acute. Malta has increased its manufacturing and tourist sectors on the basis of cheap, efficient labour. The be all and end all has been to provide employment for the people. While both productivity and consumption per head have increased phenomenally , quantitative progress has not been paralled qualitatively. While mortality rates have decreased, morbidity rates have increased. The chronic diseases of today, namely heart disease and cancer, result from the new forces of production, new life-styles and the lack of controls on work-processes and dangerous substances. Physical and mental dysfunctions increase as the contradictions between profit and health deepen. Life in Malta, although insular is very exposed and vulnerable to the international contradictions and changes in capitalism.

Notes

- 1) Kay G. *Development and Underdevelopment: A Marxist Analysis* MacMilland Press (1975) p180.
Also of interest are Lapping B. *End of Empire* St Martins Press New York (1985)
Howe S. *British Decolonization and Malta's Imperial Role in The British Colonial Experience 1800-1964 : The Impact on Maltese Society* edited by Mallia-Milanes V. Mireva Publications ,Malta (1988)
- 2) York B. *The Maltese in Australia* Australasian Educa Press Pty, Melbourne, (1986) 'There were 1,493 civilians killed and 3,764 wounded'. p117n.
- 3) *ibid* p122.
- 4) Cutajar M. "*Il-Pinna setghana minn 'The Knight' 1951-1955*". Printex Malta (1979) p38
- 5) Howe S. *op cit* "Malta was the base from which the British fleet steamed for Port Said, as so many great navies had done since the Phoenicians.." p352
Cutajar M *op cit* p41.
- 6) Schuster Sir G. *Interim Report of the Financial and Economic Structure of the Maltese Islands*. Malta Government Printing Office (1950) p xviii.
- 7) Balogh T. & Seers D. *The economic problems of Malta: an interim report*. Malta Government Printing Office (1955) p22
- 8) Economic Division of the Prime Minister *Malta Guidelines for Progress. Development Plan 1981-1985*. Malta Government Press August (1981) p3.
- 9) *ibid* p 4
- 10) Sammut D. *Too Early for Freedom. The background to the independence of Malta -1964*. Union Press Malta (1984)
- 11) For further information on post war emigration see:
The demographic review of the Maltese Islands 1986 Central Office of Statistics (1987) fig 32 p44
Briguglio L. *The Maltese Economy* David Moore publications (Malta) fig 3.3 p 29
Bowen-Jones et al *op cit* p157
- On the 1960's population decline see ;
Demographic Review of the Maltese Islands for the year 1969. Central Office of Statistics, Malta (1971) "After the year 1962 the population reversed its long history of almost uninterrupted growth and began to show a tendency to decline rather slowly." p1.
- 12) Grech J.C. *Threads of Independence*. Malta University Press (1978) p8
- 13) Briguglio L. *op cit* pp15-18

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- 14) Personal interview with the Chariman of the Docks Works Council, Sammy Meilaq.
Zammit B.L. Gauci A. *Case Studies in Industrial Democracy : MDD & Mondragon Co-operatives* In Issues: Aspects of an Island Economy edited by Azzopardi E & Scerri L The Economic Society. Malta (1984)
- 15) *Census '85 A Demographic Profile of Malta & Gozo* Central Office of Statistics Malta (1986). Vol I p 13
- 16) York B. *op cit* p121
- 17) *ibid* p122
- 18) Crotty R. *Ireland in Crisis: a study in capitalist colonial undevelopment* Brandon Press Ireland (1986)
- 19) *Census '85 op cit* p13.
- 20) Briguglio L. *op cit* pp28,29.
Vassallo M. *From Lordship to Stewardship* Table 1.2-1
- 21) *Demographic Review of the Maltese Islands 1986* Central Office of Statistics (1987) Fig 32 p44
- 22) York B. *op cit* p120.
- 23) Fenech et al *Changes in the epidemiological pattern of disease in the Maltese Islands JFA VI 4 (1977)*. "though there has been a general trend of improvement in life expectation at all age groups, the maximum increase has been registered in the first year of life ". p 223.
- 24) *Census '85 op cit* p15.
- 25) Milne R.G. *The contribution of Public Expenditure to Social Development : A case study of Malta 1945-1967* University of London. LSE. Dec (1972) pp93-103.
- 26) *Report on the Health Conditions of the Maltese Islands and on the work of the Medical & Health Department including the Emergency Medical Services 1944*. Government Printing Office (1947)
- 27) Milne R.G. *op cit* p62.
- 28) *Country Reports prepared by members of the European Population Committee Recent Demographic Developments in the Member States of the Council of Europe*. Strasbourg (1989) Table 9.b.
- 29) Milne R.G. *op cit* pp57-65
- 30) *ibid* pp85-97
- 31) *ibid* pp66-70

- 32) *ibid* Relatively high mortality rates among the aged have persisted throughout this century . Table 4.2 p 57 and pp70-75.
- 33) Ermisch J.F. *The Political Economy of Demographic Change* Heinemann London (1983) Table 15, p9.
Country Reports of the European Population Committee *op cit* Table 10a
- 34) Bowen Jones et al *op cit* Table 28 p146
The Demographic Review..op cit p4.
- 35) Census '85 *op cit* p66
- 36) *Demographic Review of the Maltese Islands 1979* Malta Central Office of Statistics (1980)
- 37) Bowen-Jones et al *op cit* pp155-7
- 38) Okore A. *Effect of changing child mortality on value of children to parents* in *Consequences of Morality Trends and Differentials* published by the United Nations, New York (1986) especially pp52-60.
- 39) Medical Services Commission 1957
- 40) Country Reports of the European Population Committee *op cit* pp94-102

Notes (Part Two)

- 1) Benjamin B & Pollard J.H. p410
- 2) Braudel F. *The Mediterranean and the Mediterranean World in the Age of Philip II* Pontana/Collins (1978)
- *Civilization and Capitalism 15th-18th Century* esp Vol 1. harper & Row Publishers New York (1817)
- 3) Doyal L. with Pennel I *The Political Economy of Health* Pluto Press (1979)
- 4) Dwork Deborah *War is good for babies and other young children. A history of the infant and child welfare movement 1898-1918.* Tavistock Publishers London (1987) quoting the Bishop of London p 210 .
- 5) *ibid* quoting Josephine Baker (1873-1945) p210
- 6) Howe S. *op cit* p333.
- 7) The rent in 1971-79 was £14 million a year.
- 8) Howe S. *op cit* p351
- 9) *ibid* p353,4.
- 10) *ibid* p350,1.

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- 11) Sant M. *Economic Development of Malta* in *Issues Aspects of an Island Economy* edited by Azzopardi E & Scerri L. The Economic Society Malta 1984.
- 12) Personal interview with Lewis Spiteri.
Also drawn upon are :
Galea K.E. *L-istorja tat-tarzna Stamperija il-Hajja* (1973).
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CINIRA February (1988). *Malta's Changing Labour Market.*
- 13) Cutajar M. *Il-pinna setghana: Mintoff minn 'The Knight' 1951-55.* Partit tal-Haddiema (1979) quoting Lord Hall p36.
- 15) Zammit E.L. & Gauci A. *op cit*
- 16) Economic Division of the Prime Minister *Malta Guidelines for Progress 1981-85.* Malta Government Press (1981) p 26.
- 17) *ibid* pp227-30.
- 18) see *The Sunday Chronicle* 29-1-89 p13.
- 19) Crotty *op cit* for similar experience in Southern Ireland.
Malta Development Corporation annual reports.
- 20) Sant M. *op cit* and relevant Development Plans.
- 21) Sant M. summarises the new politics in five points : neutrality and peace in the Mediterranean; joint industrial ventures with foreign investors; a mixed economy with the public sector playing an active role in economic activities; social development is a corollary of economic development; industrial democracy.
- 22) Grech J. *op cit* p82.
- 23) *ibid* pp74,75 & Table 3.3.
- 24) Economic Division of the P.M. *op cit* p26
- 25) *Malta still has the lowest female activity rate in Europe at 26% compared to 61% in EFTA and 49% in the EEC. See the Consultants in Management-Industrial Relations Advisers (CINIRA) Malta's Changing Labour Market: The proceedings of a conference. (1988)*
- 26) Kester G. *op cit* pp95-98.
- 27) *ibid* p97
- 28) Both the Phoenicia and excelsior Hotels were summarily closed in February 1990 sacking over 300 workers.
- 29) Annual Abstract of Statistics and Briguglio *op cit* pp35,36 Fig 4.1.

The degree of courage need to make this transformation is perhaps made clear by contrasting what happened to the 1964 U.N. Economic Mission predictions in the Stolper Report. This stated that Malta would need 15-25 years to overcome its difficulties and at least 10,000 people would have to emigrate annually.

30) Milne R. *op cit* p49.

31) Farrer-Brown L. Boldero H., Boldham J. *Report of the Medical Services Commission* (1957)

32) Factories Ordinance (Cap. 169) *Factories Health, Safety and Welfare Regulations 1986* Government Printing Press Article 39.

33) Much of this section is drawn from personal inquiries and also Zammit-McKeown LLD Thesis: *The Law relating the Health & Safety at Work: A comparative study* Malta University(1981) esp pp222-9.

34) Factories Ordinance (1986) Article 62.

35) Koziara E.C. *The Labour Market & Wage Determination in Malta* Malta (1975) p48

36) Economic Division of the P.M. *op cit* p48.

37) Briguglia L. *op cit* Table 26, p43.

38) Koziara E.C. *op cit* The international comparisons are for the year 1968. p49.

39) Briguglio L. *op cit* p46

40) Aston T.H. & Philpin C.H.E. editors *The Brenner Debate : Agrarian Class Structure and Economic Development in Pre-Industrial Europe* Cambridge University Press (1985) p37

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Cancer

Whereas microbiological pollution of water used to be responsible for much disease among our ancestors, chemical pollution of the air is now becoming a great public health problem. Dubos R. p82.

Cancer is now the disease that people fear most. In this respect it is similar to cholera in the last century. Cancer today kills one in five of all people dying in the Maltese Islands, being second only to heart disease. It symbolises, as cholera did in the last century, human vulnerability and helplessness: loss of control over one's body. Many of us have watched friends and relatives suffer indescribably as cancer grows, first on one site, and then relentlessly spreading, from the lung to the brain and from the breast to the ovaries. It is such a terrible death that many people flinch from naming it. The victims are so debilitated and transformed that many people feel they should be hidden away from society. A cancer victim experiences, as it were, a suspension of the dialectic : loss of physical control; an inability to determine the future; failure to overcome cancerous growth and to conceive a healthy state. This is the limbo state of creeping cancer. It is the threat that enters our psyche. It highlights the historical limitedness of improvements in medicine, of reforms and of development.

The general view is that most cancers are caused by the way we live and work. On the one hand it is argued that material prosperity and individual choice are causing a rise in cancer; on the other hand, working class exposure to multiple hazards and general environmental pollution are prioritized.

Consequently, there are, two distinct positions about what is to be done. 'Each has its own view about the relative importance of the different causes of cancer, its own recommendations about how the disease could be prevented, and, underlying both of these, its own political philosophy,' note Doyal and Epstein. The two views have been named the establishment and the radical approaches, 'though there is inevitably some degree of overlap between the two'(1). The establishment view, embraced by industry and most governments, rests on 'the assumption that cancer, except that due to cigarette smoking, is not increasing, and that changes in diet and treatment offer the best opportunity for reducing cancer rates'(2). But the radical view asserts:

Cancer is the plague of the twentieth century. Cancer is now the only major killing disease whose incidence is on the increase...An informed consensus has gradually developed that most cancer is environmental in origin and is therefore preventable.(3)

The main reason why a radical view has entered the academic debate in USA and Western Europe is the increased awareness and organisation of workers. In their experience, industrial processes and hazardous chemicals play a significant part in cancer causation. The importance of smoking, diet and other factors that an individual could perhaps control is recognised but more emphasis is placed 'on industrial exposures over which the individual has little or no say'(4). Disease has been directly linked to the mode of production. For instance the Association of Scientific, Technical and Managerial Staffs argue that 'the regulation of carcinogens in the workplace must be the first and most decisive element in any cancer prevention policy.'(5)

Class incidence

Just as the miasmatics in the last century shifted the focus of aetiology from the particular individual to the general atmosphere so too the

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environmentalists of today but with the difference that class analysis is clearer. The profits of many companies have been and are being achieved at grave human cost. 'One in every four American workers (approximately 21 million) currently may be exposed on either a full or part time basis to OSHA-regulated hazardous substances. Upwards of 40 to 50 million persons or 23 per cent of the general population of the United States may have had exposure to one or more OSHA-regulated carcinogens or hazardous substances during their working lifetimes.' This is not the estimate of an extremist but of the United States Senate Committee on Human Resources in its report *Monitoring of Industrial Workers Exposed to Carcinogens 1977* (6). The fact that millions of workers are debilitated due to occupational exposure to carcinogens is not only a human cost but also a socio-economic one, details the report.

The struggle for humane working conditions has taken many forms during its long history. In the 1960s, the climate was right in many developed countries for health and safety consciousness to rise once again. The shortage of labour, the civil rights movement and the growing environmental, anti-nuke and anti-chemical & biological warfare movements (7) co-incided with a growing awareness that cancer constitutes not an individual but a social problem.

With increasing evidence and increasing action in a buoyant labour market, demands for quick and effective control of carcinogens, including pre-testing, increased. The U.S. government, reacting to this pressure , took progressive action at the end of 1979 promulgating Guidelines for the General Regulation of Carcinogens.(8) The connection between cancer and particular occupations is

now well-known. In Britain, particular studies in occupational morbidity and mortality proved that many factors of production are carcinogenic including: soot, tar and mineral oil leading to skin cancer and cancer of the scrotum (described as early as 1775 among English chimney sweeps); gaseous nickel compounds leading to lung cancer; asbestos leading to mesothelioma; aromatic amines (such as beta-naphthylamine) leading to bladder cancer; vinyl chloride monomer leading to angiosarcoma; while work in the footwear industry is linked to cancer of the nasal cavity, work exposed to wood dust is linked to adenocarcinoma.⁽⁹⁾ The latest official longitudinal study of the relationship between cancer and social factors in Britain confirms that mortality from lung, stomach and cervical cancer is higher in the lower social classes. Whilst breast cancer shows a higher mortality in Class 1 than Class V,

the difference appears to be narrowing and still appears to have most connection to patterns of childbearing...Lung cancer shows the largest class differential among males but in women the largest class differences are for cancer of the stomach and the cervix. ⁽¹⁰⁾

Specific site studies of relevance to us here include the analysis of death certificates 1959-1977 by Najarian and Cotton for cancer and leukemia mortality amongst naval shipyard workers. At Portsmouth Naval Shipyard, they reported a five and a half-fold increase in mortality from leukemia and a two-fold increase from all cancers among these workers. They posit multi-factor causation : in particular exposure to asbestos, welding fumes and nuclear radiation. A retrospective occupational cohort study by Tola et al of Finnish shipyard and machine-shop workers from 1945 to 1960 finds 'an increased risk of lung cancer among the shipyard workers. The most probable explanation for this finding is exposure to asbestos. The excess was most prominent for pipe fitters, who were especially exposed to asbestos fibres. Autopsies of the lungs of men who had been exposed to asbestos dust at the

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Royal Naval Dockyards of Devonport, Plymouth showed a correlation between occupational asbestos dust exposure and severity of lung pathology. Wagner et al found that slight asbestosis led to mesothelioma and medium to severe asbestosis led to pulmonary carcinomas. It is now scientifically accepted that all shipyard trades carry the risk of mesothelioma, lung cancer and pleural fibrosis caused by exposure to asbestos and other fibres. Some studies, also show a thirty to forty per cent higher rate of lung cancer amongst welders exposed to stainless steel, since chrome and nickel are cancer-causing agents. British national death statistics also show excess lung cancer in welders.(11)

Studies like these and working class action based upon them have led to both individual compensation to the victim and government control of industrial hazards. Nevertheless, even where such actions have been taken, much remains to be done. Recognised experts on the political economy of cancer believe that the bulk of occupational cancer in both USA and Britain remains uncompensated and even unrecorded (12).

It is just this class analysis and class action about cancer and health in general that is lacking in Malta, and most other developing countries. In Britain, on the other hand, 'the very obvious and dramatic *class* differences in cancer mortality' (13) are officially shown in the Registrar General's Decennial Supplements. In Malta, despite the lack of local social class data, there is every indication that there is a similar class gradient. Unskilled and skilled manual workers being considerably more likely to die from cancer at any age than professional and managerial workers.(14) It is among the working classes that multiple causation conspires and cancer victims increase. In the

following chapter, discussion of the locational incidence of lung cancer bears out this hypothesis.

The establishment view

While the momentum for the radical approach to cancer aetiology has come from organised workers and socialist scientists, the establishment view that cancer is caused by personal lifestyles, has a ruling class base of capitalists, governments and rightist scientists. The Chemical Industries Association, shifting the blame for the cancer epidemic, is one of the most vociferous proponents of the orthodox view.

Many economists and medics view health as an individual consumption good and therefore ill-health, including cancer, as an individual distortion in personal choice and lifestyle. Two assumptions underly this view: that industrial products and processes play very little part in causing cancer and that working class people voluntarily lead less healthy lives than their enlightened peers. One conclusion reached is that health education, rather than changes in industrial processes, is necessary. Another solution proffered to redress the 'distortions in individual consumption' is improved medical care and more individual consumption of pharmaceutical products. The success of this line of thinking is evident in the present hallowed status of the medical profession and the fact that the pharmaceutical industry is second only to the armaments industry in world-wide profitability.(15)

The *Causes of Cancer* (1982) has been particularly important in supporting industry's position. In it R. Doll and R. Peto argue that only four per cent of

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cancers are caused by occupational factors and 65 per cent of cancers could be avoided if individuals changed their smoking habits and their diets (16). However, they admit that: 'Our estimates of the small proportion of current cancer mortality due to occupation, pollution etc. relate, of course, chiefly to those factors for which it has been possible to secure some direct evidence of an effect on humans.' (17).

It is over the question of what constitutes 'direct evidence' that differences polarise (as they so often do in politics) between those oncologists who tend to support and those who question capitalist interests. The long latency period of cancer; the widespread use of trade-name products and lack of uniform systems for labelling hazardous materials; the subordination of company doctors and the media to power and profit(18); the real fear that many exposed workers have that they will lose their jobs if they object to hazardous working conditions (19); and the fact that trade unions have neither prioritised nor generalised struggles for humane and healthy working conditions. All these conspire to make 'direct evidence' hard to come by. There is also a tendency to think linearly and to search for one germ or one virus instead of accepting that cancer develops through a series of events and there are many links to its chain.

Cancer Research

Cancer is a disease of the cell. A cancer cell proliferates, destroys and colonises. In the end it destroys the organism at whose expense it survives(20).

Most oncologists have concentrated on the specific behaviour of this cell disorder. Many have searched for a specific cancer virus - a specific disease

entity - that is isolatable and quantifiable. Growth promoters or oncogenes have been the subject of much research at the ICRF in London and the California Institute of Technology, substantiating the autocrine theory that tumours secrete their own growth factors. Others have tried to identify the substances responsible for weakening the immune system. The lack of growth inhibitors or suppressor genes in cancer cells has been identified in almost all lung and bone cancers and in breast cancer tissue. (20) As Bennette points out, orthodox cancer research studies 'biochemical and biophysical changes' and seek to explain these in terms of 'reducible, objective evidence' (21). The mechanism of carcinogenesis, its long latency period, its mutagenicity and then its carcinogenicity, has been researched with billions of dollars of public money. Its primary aim is to discover the magic bullet - the wonder-commodity, or wonder-dose or wonder-combination that will kill the cell, molecule or virus that is identified as cause of cancer. Although the World Health Organisation recognised in 1980 that one third of cancers are preventable, public education and prevention of cancer accounts for a very small proportion of cancer society's and government's expenditure. Usually, over 85 per cent of public funds are directed to orthodox research and treatment. And the results are not encouraging. The treatments for some rarer cancers have improved but for the main killers, lung and breast cancer, hardly any progress has been made. As reported in the Economist (1989), 'Survival rates after diagnosis of breast cancer have barely crept from 61% in the 1960's to 62% today'. (21a) And in the United States, 'analysis of overall cancer rates... has demonstrated a steady increase since the 1930s. In recent years, the incidence rate has risen more sharply, by some 2 per cent a year and mortality rates have risen by 1 per cent a year'. (21b)

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Even the most conservative oncologists agree, however, that the increase in cancer deaths cannot be explained in congenital or degenerative terms. Firstly, the probability that descendants of cancer patients will themselves develop cancer is very slight. Hereditary transmission has been cited as a risk factor in the development of breast cancer under certain conditions, but whilst this may cause geographical differences it can by no means explain the rising trends(22). Secondly, the rise in cancer deaths after standardising for age, proves that this is not just a disease of old age - individual degeneration. But the longer you live the more time there is for things to go wrong - for genetic mutations to accumulate.

The lack of success of orthodox cancer research has led to an outcrop of cancer epidemiologists, studying the distribution of malignant tumours according to the patients' geographical location, ethnic origin, social and occupational status and mode of life, and isolating external rather than internal conditions conducive to cancer(23). For instance, the first generation of Japanese in USA imported their cancer incidence profile without modification but the third generation has almost entirely the same incidence profile as the American population. Such cross-sectional medical studies together with retrospective cohort studies and animal studies have proven the link between, for instance, asbestos and mesothelioma; vinyl chloride monomer and angiosarcoma; benzene and leukemia; and mineral oils and skin/scrotum cancer. They provide ample evidence that chemical pollution of our air, water, food and the workplace is the major cause of cancer. In other words they have substantiated the link between new forces of production and a dominant disease. However, conservative oncologists chose to ignore this evidence while

protagonists of more practical cancer control argue only for more efficient detection and treatment (24), never questioning the mode of production.

Lung and Breast Cancers

Cancer is not one single disease - it is a group of diseases which may originate in any part of the body affecting it in different ways to produce a wide variety of signs and symptoms. All forms of cancer have one thing in common - abnormal cell growth (as a result of an alteration in their DNA). Instead of growing in an orderly, controlled way to become healthy tissue, the cells increase in number until they take over the area in which they are growing. Sometimes a few of these cells may travel round the body and start new growths in other sites - known as 'metastases' or 'secondaries'. There are some 200 different forms of cancer but they fall into four main types:-

- Carcinoma - occurring in the skin or lining of organs
- Leukaemia - occurring in the blood
- Lymphoma - occurring in the lymphatic system
- Sarcoma - occurring in muscle and bone.(25)

Lung and breast cancers are a form of carcinoma. Lung cancer includes cancer of the bronchus, trachea and lung as well as cancers localised in the intra-thoracic region.

Among the chemicals known to induce lung cancer in humans are arsenic compounds, asbestos, bischloromethylether, cadmium, chloromethyl-methylether, chromium and mustard gas. (26) Miners, glass and pottery workers, foundry moulders and coremakers, fettlers and metal dressers, metal plate workers and riveters, plumbers and lead burners, bricklayers and tile setters, coal tar and pitch workers, textile users, plasterers, charmen, window cleaners, chimney sweeps, radiologists and chemical workers are among those who have been shown to have an excess risk of contracting lung cancer (27).

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The evidence linking smoking to lung cancer has been widely accepted (28). Cigarette smoke contains a wide variety of mutagenic chemicals which irritate the lungs and are absorbed into the blood stream, circulate through distant organs and concentrate in the urine of smokers. However, there are good grounds for concluding that the relationship between smoking *alone* and lung cancer is being overestimated. Recent studies show that there 'may be synergistic or multiplicative interactions between smoking and certain types of occupational exposure-especially asbestos- in producing increased risk of lung cancer.' (28) Recent trends in site-specific cancers in USA have brought the 'smoking causes lung cancer' mentality into question because bladder cancer, closely associated with smoking, has decreased while lung cancer has not (29). And from another point of view we can again question the individualistic explanation for cancer. Men and women have an *apparent* choice in whether or not to smoke or to stop smoking. But the pressures on them to take up smoking and to continue cannot be ignored.

Breast cancer does not kill as many women as lung cancer kills men, but its rising incidence in the Maltese Islands, and in many other developing countries in particular South America, the Caribbean and Eastern Europe has been more dramatic (30). This geographical variation, together with the higher incidence in upper class women suggests a connection between breast cancer and increased affluence. A severe drawback to informed analysis is the fact that class or occupational data is even less obtainable for women as it is for men. And in the case of cancer of the breast its very location suggests a hormonal as well as an industrial determinant. Comparative studies have shown over the centuries that breast cancer occurs more often in women, like nuns, who have

not given birth or nursed, bearing out the hypothesis of a hormonal determinant. Research subsequently showed that estrogen is capable of, 'either stimulating specific genes that lead to cell growth or of altering the way in which genes control cellular activities'. (31)

The link between five or more years continual intake of hormonal contraceptives and breast cancer has also been made. One such hormonal drug, the synthetic chemical substitute diethylstilbestrol (DES), was introduced in the 1930's and subsequently prescribed liberally as an oral contraceptive and morning after pill; in estrogen replacement therapy for menopause and miscarriage; for menstrual cramps and irregularity; general itching, acne and hirsutism; in feed additives especially as growth stimulants to poultry and cattle to make them convert the feed to fat at a faster rate. Other hormonal drugs such as estrone and estradiol prolactin, have also been found to stimulate breast cancer. For instance, Eli Lilly company experiments have shown that breast cancer is double the norm and there is a higher incidence of other hormone related cancers among women who took DES in the early 1950's. Some of these drugs also have the ability to cross the placenta, reach the foetus and then cause serious disease such as vaginal cancer twenty to thirty years later.(31) Hormone replacement treatment at menopause has also been associated with the development of breast cancer.

Among reproductive variables, the later age at which a woman has her first full-term pregnancy, the higher is her risk of breast cancer; the earlier the age at menarche and the later the age at menopause the higher is the risk. (32). Kelsey & Berkowitz of the Columbia University School of Public Health

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list the established risk factors for breast cancer, but warn that the association is weak and known risk factors listed can only account for about one quarter of breast cancer cases. (33) The list of known risk factors reflects however the establishment bias toward individual characteristics and omits reference to synthetic hormones and other carcinogenic chemicals as well as to environmental and food pollution.

Among post-menopausal women, obesity is associated with an increase in risk of breast cancer. What you eat affects among other things your hormonal balance. It has been shown that where the consumption of animal fats and meat is high this leads to higher estrogen levels and higher cancer rates (34). A high association between high sugar consumption and breast cancer mortality for women over 55 years of age has been found by S.Seely and D. Horrobin in their epidemiological survey of 21 countries using World Health Statistics Annals 1966-1981 and food consumption statistics. They conclude thus :

We suggest that aetiologically breast cancer falls into two categories, one related to dietary influences, particularly sugar consumption, and the other to unknown factors which may be hormonal. The latter is probably more malignant, with a shorter latent period, and predominates in younger women. The diet-related form has a long latent period and predominates in older women. (34a)

In explanation of their findings they posit:

The connecting link between sugar and breast cancer may be insulin, the secretion of which occurs in response to rising blood glucose level... The effect of insulin on normal mammary tissue is similar to oestrogens and prolactin. All three hormones are necessary for the growth of the breast as a whole or some of its constituent tissues. Many mammary cancer cells are, at least, initially, dependent on these substances. (34b)

Meanwhile, many direct and indirect food additives have been shown to be carcinogenic. Whilst some do not have a proved direct link with breast cancer, food contamination in general and diet and hormonal balance in particular have been substantiated as contributory factors. 'Food is the single most

important route of exposure for humans to synthetic chemicals. In a year the average American eats about 1500 pounds of food containing 9 pounds of chemical additives (other than sugar and salt).' (35)

Whereas natural plant extracts were once used as flavouring agents and colours, these have been ousted now by, among other things, synthetic dyes based on coal tars. Now, many coal-tar derivatives are known carcinogens, for example, 2-naphthylamine and benzidine cause bladder cancer in occupationally exposed workers (36). The red colouring agent, Red 2 or amaranth, used widely by the food industry has also been shown to be carcinogenic. But as of the late 1970s most food dyes had not been adequately tested. The long controversy over whether or not saccharin is a carcinogen highlights the inadequacy of many so-called epidemiological studies(37).

Indirect food additives include the residue of pesticides that enter our bodies from ingesting sprayed vegetables. Perhaps best known are the carcinogenic and mutative hazards of 2,4,5-T herbicide and the impurity , dioxin, that is produced in its manufacture.(38) The human tragedy following explosions at manufacturing plants, for example, Coalite,USA in 1968 and Seveso, Italy in 1976 , and the spraying of Agent Orange herbicide (made of equal quantities of 2,4,5-T and 2,4-D) by the Americans in Vietnam exposed the horrific dangers of these toxic chemicals to the world. However, carcinogenic pesticides, such as Vegadex weedkiller and Malthion, are still widely used especially in developing countries such as Malta where controls are few and outdated and spraying is popularly done with great abandon. The sprayers, the sprayed and those who consume the sprayed food are thus contaminated.

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Since the 1940s, hormones, like DES, have been implanted as small pellets in the neck of male chickens to caponise them. After finding that the edible flesh contained large quantities of this carcinogenic drug, the American Food and Drug Administration banned this practice. However, even in USA, DES was widely used as a fattener and food additive for beef cattle and sheep up until 1979, and despite the rising incidence of cancer, President Bush has recently proposed weakening food safety regulations with respect to dietary residues of carcinogenic pesticides.(39)

Stress, too, has increased. Popular theories connect cancer to repressed emotions and major life disappointments. (40) Here, there is much room to question definitions, but most oncologists would nevertheless agree that 'stress', whether individual or systemic, is a significant contributive factor. Inability to cope with the deep contradictions and fast changes of our times has an effect on our health and our resistance to diseases. Whether this is seen as individual breakdowns, general maladaptation or class alienation it is popularly referred to as the residual factor in cancer causation. The hypothesis that dis/stress situations cause a lowering of the immune system and result in the outbreak of cancer and other diseases is upheld by many psychologists and psychiatrists today. Mind and body are inextricably related.

Stress may have particular relevance to female breast cancer. As women, we are caught between twin destinies in trying to break out of our retarded condition: our ancient destiny to bear children and be mothers, and our modern destiny to be equal to men, fulfil ourselves at paid work and in society.(41) A cotton spinner or cotton weaver suffered greater economic hardships and greater human

losses, especially of her young, but she was not torn from her home by the need to earn money neither was she isolated within it to bear and rear her children. In stressful times, plenty of hormones are secreted. And as Ruth Kushner argues: 'A stress hormone that stimulated estrogen secretion could help to create the nourishing endocrine environment that breast cancer needs'(42).

Taking the view that reproductive changes, the taking of hormonal drugs, diet, stress and exposure to radiation are not purely a consequence of individual volition but are rather resultant on development, we can conclude that breast cancer like lung cancer is environmentally caused. Here, I hypothesise that the dramatic increase in breast cancer in Malta in the past twenty years results from dietary changes, pollution and from the dramatic transition in women's reproductive role - a role that is still an antithesis rather than a synthesis. In our grandmothers, who bore twelve to fourteen children and worked manually for a meagre existence all their lives, we see our opposites. In our transition from quantity to quality of children and childcare, in the interpenetration of opposites, cancer rises like a spectre as the negation of the negation, reducing the quality of so many people's lives to decades of pain and dread.

RADIATION

The growing pollution of the air, water and sea by carcinogens multiplies the risk of cancer. The list is endless. It includes many pesticides, benzene, certain hydro-carbons produced by the chemical processing of petroleums, car exhaust fumes, sulphur dioxide emission from conventional power stations and the increase in ionising radiation from nuclear power stations, nuclear weapons testing and nuclear accidents. I will now discuss some health hazards of

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nuclear radiation because they are curiously overlooked both by those fighting for nuclear free zones who focus on fear of the ultimate explosion and those calling for cancer prevention programmes that focus on cancer screening or anti-cancer diets both ignoring the radiated air we inhale every second of our lives. (43)

Indeed, the experience accumulating from observation of the atomic bomb explosions at Hiroshima and Nagasaki and of patients treated by radiotherapy strongly suggests that ionizing radiations can cause cancer in nearly all organs of the body and that some small effect is produced even by small doses and by doses given at low dose rates(44). The Hiroshima and Nagasaki nuclear bombs led to an epidemic of leukemia and thyroid cancer. The atomic fall out also led to higher rates of breast and lung cancer especially after 25 years, the average latency period for these cancers. Recent research by Dr Yoshimoto et al, taking a 1950-1984 timespan, suggests that susceptibility to radiation-induced cancers is higher in prenatally exposed survivors than in exposed adults.(45)

The open air atomic weapons testing carried out by the US Government from 1951 to 1963 led to hazards that are only just being realised due to this long latency period of cancer. In Southern Utah, 1979 reports show that two and half more children died of leukemia here than elsewhere in USA and that other products of irradiation such as cataracts and thyroid disease are relatively high. (46)

Our exposure to radiation has also increased most insiduously through the daily leaks from nuclear power stations, nuclear-laden transport, nuclear waste recycling centres like Sellafield (Windscale) and increasing accidents to nuclear ships and submarines. The geographic distance over which leaks are dangerous and their long-term effects are inestimable. For instance, recent research links Chernobyl with a rise in US death rates and shows that vulnerable groups such as new born babies and the elderly also suffered higher death rates in 1954, 1955 and 1957 which were peak years for atmospheric nuclear testing as well as in 1980, the year of the Three Mile Island accident. The atmospheric testing of the mid-fifties also damaged the immune systems of babies so that the 25-34 age group was then more vulnerable to Chernobyl(47).

To recapitulate, cancers associated with exposure to radiation include :

- 1) leukemia : especially in those who received radiation as fetuses or young children;
- 2) thyroid cancer: higher susceptibility in females than in males and higher susceptibility in children than in adults. Most thyroid tumours appear within 25years.
- 3) lung cancer: it occurs more often in uranium miners who inhale radon gas and in radiologists exposed to X or gamma rays.
- 4) breast cancer: women who have had periodic mammograms (diagnostic X rays of the breast tissue) have shown a higher breast cancer incidence.
- 5) bone cancer: usually due to ingesting radioactive isotopes such as radium eg female painters of luminous watch dials licking their brush. Again the younger the person, the higher the risk.

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6) skin cancer: the large increase in Malta's incidence in the 1960's could be explained by growth of nuclear power stations in nearby countries such as France and Italy - irradiation through air, rain and sea. Two areas of the Mediterranean sea, near nuclear-powered NATO naval bases have been found to be radioactive. Increased exposure to ultra-violet radiation may be the cause of general rises in skin cancer in the Mediterranean over the past thirty years.(48)

The long latent period and multi-factorial causes of cancer make difficult, in many cases, the identification of a direct causal link between irradiation and cancer. Yet, even the most conservative scientists could not dispute this association. The acute short term effects of irradiation include sickness, nausea, headaches and balding; the long term chronic effects include leukemia, cataracts and cancers. But there are also developmental and genetic hazards. Children born to exposed women have a higher risk of mental retardation, nervous system disorders and bone malformations. The jelly babies of the Pacific Islands where French atomic bomb testing was rife are a case in point. Radiation increases the probability of a birth defect and this increase varies with dosage. The extreme vulnerability of the foetus to radioactivity in the first trimester of pregnancy is now a scientific fact. Even the smallest radiation dose will produce mutations in chromosomes of gonadal cells that become sex cells. A simple example is a sex cell with 47 instead of the normal 46 chromosomes leading to Down Syndrome in offspring.

Summary

The recent history of many carcinogens is a saga of past regulatory incompetence coupled with pre-occupation with industry interests. The social costs of industry are more easily avoided by their perpetrators for two particular reasons. Many scientists are stuck in an inappropriate historical paradigm for disease. Due to the adulation of past scientists such as Curie and Koch, due to the exaggeration of medicine's role in disease prevention and due to the subordination of scientific research to capitalist interests, adherence to free market economics and the search for a wonder cure are the basis of this paradigm. The individual microbe-hunters were successful, as we have seen, in isolating the mosquito as the agent of yellow fever and malaria and in isolating the vibrio cholerae as the specific agent in faeces that transmitted cholera. But it was the changing of the broader back-cloth of people's lives, in particular their conditions of material existence, that eventually overcame these contagious diseases.

Secondly, radical oncologists, forwarding an alternative paradigm, are severely handicapped by the inherent limitations of cancer epidemiology. The long latency period and the inavailability of large populations of exposed and unexposed individuals combine with poverty of data to often prevent clarification of the role of carcinogens.

In Chapter Five, we have seen how a particular co-incidence of interests between capital and labour in Britain resulted in a successful public health movement for clean water and adequate sewage disposal. Individual causation remained, however, the common philosophy in the Maltese Garrison colony where

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imperial dominance, excess labour and religious conservatism delayed social reform.

This century, cancer like cholera demands radical and expensive action for its successful prevention. Again, the pressures, prescriptions and regulations against carcinogens in the advanced capitalist countries are in advance of those being made in Malta and most other developing countries. The gap is still wide but it is more easily traversed. Communications and education have narrowed differences in knowledge. The strength of the working class and the power of state capital in neo-colonial systems has increased. The green movement is becoming as strong in the Mediterranean as it is in Northern Europe. The realisation is deepening that we are exposed to common hazards, have common interests and must fight for a common aim - a world free of carcinogens. In the last analysis, the success of the new environmentalist movement hangs on either a coincidence of interests between capital and labour, which is unlikely, or increased unity and ultimate dominance of working class interests putting health before profit. In the face of such a challenge, the following chapter is but a small step in honing a tool in local cancer epidemiology for evidence, argumentation and progressive actions against the increasing carcinogens in the Mediterranean.

This chapter has reviewed the basic trends in cancer incidence and the accepted connection between cancer and particular occupations. It has also discussed the seemingly more confounded aetiology of breast cancer. Its data is drawn from studies done in advanced capitalist countries where labour market buoyancy and working class strength have contributed to the success in

exposing and controlling the hazards of certain forces and relations of production.

Notes

1) Doyal L. & Epstein S. *Cancer in Britain, The Politics of Prevention* Pluto Press, London (1983) p2.

2) Davis D.L. & Schwartz J. *Trends in U.S. Mortality: US Whites Males & Females 1968-1983* The Lancet 19.3.1988. pp 633-635.

They find a rise in site-specific cancer mortality rates amongst elderly whites, in particular lung cancer in the 45-84 age group and brain cancer in the 75-85 age group. Due to the fall in bladder cancer mortality, which cancer is strongly associated with cigarette smoking, they point to other factors at work, in particular the increase of carcinogens at work and in the environment like synthetic organic products.

For more detail see : Davis D.L. Bridbord K., Schneiderman M., *Cancer Prevention: Assessing causes, exposures and recent trends in mortality for US males 1968-78*. International Journal of Health Services Vol 13, no.3, (1983) pp337-373.

Metlin Curtis *Trends in Years of Life Lost to Cancer 1970-85*. CA - Cancer Journal for Clinicians Vol 39 no 1 (1989) pp33-39. He finds an 11% rise in age-adjusted rates of years of life lost due to cancer of respiratory and intra-thoracic organs in USA 1970-1985.

3) Epstein S. *The Politics of Cancer* Doubleday-Anchor New York (1979) p11 & p18.

4) Doyal L & Epstein S. *op cit* p4.

5) ASTMS Policy Document *The Prevention of Occupational Cancer* London (Feb 1980) p 4.

This invaluable document also points out that carcinogens 'pose a hazard which is qualitatively different from that of other toxic substances :

- 1) there is no known safe level of exposure;
- 2) there is a long latent period between exposure and contracting the disease;
- 3) the disease is irreversible and usually fatal, except in some cases such as skin cancer;
- 4) detection of susceptible individuals is not feasible;
- 5) there is no widely available screening procedure.

Particular studies of cancers caused by work processes include:-

Dalton A.J. *Asbestos Killer Dust* A BSSRS Publication London (1979);
Le Serve, Vose, Wigley and Bennett *Chemicals Work and Cancer* Nelson (1980);
BSSRS *Oil* London (1975)

6) Committee on Human Resources Hearing before the Subcommittee on Labour, United States Senate, *Monitoring of Industrial Workers exposed to Carcinogens 1977*, U.S. Gov. Printing Office, Washington (1978). pp 42-82 The Right To Know prepared by the National Institute for Occupational Safety and Health, Centre for Disease Control and U.S. Dept of Health, Education and Welfare. p 46.

7) See for instance Sigmund E. *Rage Against Dying Campaign against Chemical and Biological Warfare*, Pluto Press (1980) and Murphy S., Hay A., Rose S., *No Fire No Thunder* Pluto Press, London & Sydney (1984).

- 8) This scheme established three fundamental principles :-
 a) animal carcinogens must be recognized as human carcinogens;
 b) it is impossible to define a 'safe' level of exposure to carcinogens;
 c) all carcinogens need to be treated in the same way, with standard regulations limiting exposure to the "lowest feasible level".

see ASTMS document *op cit* pp 48,9.

9) Doyal L & Epstein S, *op cit*. p 17.

10) Leon D.A. *Longitudinal Study 1971-75. Social Distribution of cancer* HMSO (1988).

Reviewed in *The Lancet* 12.3.88 p602

11) Hajarian T & Cotton T. *Mortality from Leukemia and cancer in shipyard nuclear workers* *The Lancet* 13.5.78.

A Naval Shipyard Revisited *The Lancet* 2.4.88. p783.

Tola S., Kalliomaki P-L., Pukkala E., Asp S., Korkala M-l., *Incidence of cancer among welders, platers, machinists, and pipe fitters in shipyards and machine shops.* *British Journal of Industrial Medicine* (1988) 45:209-219. esp p216.

Wagner J.C. Moncrieff C.B. Coles R. Griffiths D.M. Munday D.E. *Correlation between fibre content of the lungs and disease in naval dockyard workers.* *British Journal of Industrial Medicine* (1986) 43:391-395.

References to studies of welders

Newhouse, Beamont and Weiss *Lung cancer among welders.* *Journal of Occupational Medicine* (1985) Vol 23 pp839-844

Blot, Fraumeni *Cancer among Shipyard Workers* Banbury Report No 9. Cold Spring Harbour Laboratory, New York (1981) pp37-49.

Zober, Welte *Cross Sectional Study of Respiratory Effects of Arc Welding.* *Journal of Society of Occupational Medicine* (1985) Vol 35 pp79-84

Asbestos Diseases

Dalton A.J.P. (1979) *Asbestos Killer Dust* BSSRS London.

Harris (1968) *Asbestos Hazard in Naval Dockyards* *Annals of Occupational Hygiene* Vol 11, p135-45.

Selikoff I. Profs (1978) *Asbestos Disease in US Shipyards.* *Mount Sinai Medical Centre New York*

GMB Safety Circular no 281 (May 1982) *Asbestos Diseases in Shipyard Workers*
 My thanks to David Gee and Nick Balfour at GMB Health & Safety Research Unit.

12) ASTMS *op cit* pp50-53.

13) Doyal L. & Epstein S. *op cit* p 13.

14) There may even be a higher class differential due to deliberate disregard of health and safety at work. Evidence for this attitude is discussed amongst others by Castleman B. *The Double Standard in Industrial Hazards.* *IJHS* Vol 13, no 1, (1983) pp5-14.

15) The big pharmaceutical companies' priority to maximise profits makes them essentially authoritarian and ruthless and often diametrically opposed to

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working class interests to minimize hazards and prevent illness. In a dialectic model, this is discussed by Gregory J.W & Piche V in *Inequality and Mortality: demographic hypotheses regarding advanced and peripheral capitalism*. IJHS Vol 13, no 1 (1983) pp 89-106

For exposure of drug company methods, profits and promotion see Melrose D *Bitter Pills* Oxfam (1982)

16) For the opposite assertion, see Epstein S. *op cit* " a series of epidemiological studies have concluded that environmental factors cause from 70 to 90% of all cancers". p19.

17) Doll R. & Peto R *The Causes of Cancer* Oxford University Press (1981) p1243.

The orthodox economists 'establishment' view is forcibly put by Harris R & Seldon A. *Over-ruled on Welfare* Hobart Paperback IEA.

18) Bertell Rosalie Dr. *No Immediate Danger: Prognosis for a radioactive earth* The Women's Press London (1985) See her interesting section on *Media Coverage* This 'moulding' of public opinion has become a highly developed art, propounding and endorsing misperceptions and frustrating the information-sharing necessary for informed judgement and democratic decision-making. It also prevents the feedback from reality on which the future of human life on earth depends. pp263-268.

19) This is itemised in the above mentioned U.S. Senate Subcommittee on Labour etc. p 10. as an 'additional barrier in assuring adequate follow-up of exposed workers'.

Also Berman D.B. *Death on the Job Occupational Health & Safety Struggles in the United States* Monthly Review Press, New York & Londondn (1978) esp Ch 1 Why Work Kills : Killing Him Softly - The story of Marcos Vela. pp1-37.

For a philosophical discussion of whether a worker is free to take or not to take unhealthy jobs see Cohen GA *History Labour & Freedom*. Calrendon Press Oxford (1988) pp239-255.

20) Israel L. *Conquering Cancer* Pelican Books (1980) Chapter 2 What Cancer is. pp 32-47.

The enemy with a thousand faces. The Economist (5-8-1989) p66

21) Bennette G. *Psychic and cellular aspects of isolation and identity impairment in cancer: a dialectic of alienation*. Annals of the New York Academy of Sciences Vol 164 Part 2 (1969) pp 352-364.

21a) *The enemy with a thousand faces* p 67

21b) Epstein S. *Losing the war against cancer: who's to blame and what to do about it*. IJHS v.20, n.1. (1990) p53.

22) Weitzman S., Kuter I., Pizer H.F. *Confronting Breast Cancer :New options in detection and treatment*. Vintage New York (1987) If one's mother has a history of breast cancer before menopause, and if the cancer was noted in both breasts then there appears to be a hereditary risk.

23) Epstein S. *The Politics of Cancer* Anchor Press, New York (1979).pp 47-50.

- Muir C., Waterhouse J., Mack T., *Cancer Incidence in Five Continents Vol V* Lyon IARC no.88 (1987)
- Parkin D.M. Skiller C.A., et al *International Incidence of Childhood Cancer* IARC Scientific Publication no.87. (1988)
- Gardner M.J. Winter P.D. Acheson E.D. *Cancer. Variations in Mortality.* BMJ 13-3-1982 vol 284 p784n
- 24) Greenwald H.P. *Social Problems in Cancer Control* Ballinger Publishing Co. Massachusetts (1980) p4.
- 25) Gann R. & Lancaster R. *Cancer Wessex Regional Library and Information Service.* Spouthampton (1988)
The enemy with a thousand faces- op cit - summarises three characteristics of cancer : it has many guises, it is persistent, it is hidden.
- 26) Epstein S. *op cit* Appendix 1 pp 512-518.
- 27) Doyal L. & Epstein S. *op cit* Table 2.3 pp18,19. and Epstein S *op cit* p78 Table 5.1.
 McDonald J.C. *Exposure Relationships of Malignant Mesothelioma.* Proceedings of Asbestos Symposium, Johannesburg South Africa 3-7 Oct 1977 H.W. Glenn Editor Randberg Nat Inst for Metallurgy pp67-92
 Occupations involving asbestos exposure in these studies include men working in insulation, heating, and plumbing,; shipyard work; those employed in the construction industry or as painters, in sheet rock spackling or in building demolition; and others involved in the transport industry, garage work, plastics industry, rubber manufacturing industry, paper factory, in the area of building maintenance, in a dry cleaning facility, welding carpentry and lathing.
- 28) Epstein S. *op cit* pp152-179 on Tobacco.
 Doll R. & Peto R. *op cit* Estimated that 30% of cancer deaths in USA in 1978 were caused by tobacco.
 Sterling T.D. *Does smoking kill workers or does working kill smokers?* IJHS Vol.8 no.3. (1978)
- 29) Devra D.L. & Schwartz J. *op cit* National Research Council & US Environment Protection Agency Washington .
 Also an interesting debate in Science magazine on the relative importance of carcinogenic hazards of pesticide residues and general increased exposure to synthetic organic carcinogens. (1987) Vol 238 pp 1633-1635.
- 30) Pike M.C., Henderson B.H. Casagrande J.T. *The epidemiology of Breast Cancer as it relates to Menarche, Pregnancy and Menopause.* Banbury Report 8. (1981) Cold Spring Harbour Laboratory. esp pp3,4.
- 31) Laitman Orenburg C. *DES: The Complete Story* St Martins Press New York (1981) ;
 Epstein S *op cit* Female Sex hormones pp 214-240
Hormone Replacement Therapy & Breast Cancer The Lancet 12-8-89 p368
- 32) Weitzman S. et al *op cit* p11.
 Pike M.C. et al *op cit*

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Jayant K. *Cancers of the Cervix Uteri and Breast: Changes in incidence rates in Bombay over the last two decades.* WHO 64(3) 431-435 (1986)

33) Kelsey J.L. & Berkowitz G.S. *Breast Cancer Epidemiology* Cancer Research 48. 15-10-1988 pp5615-5623
Pike M.C. et al *op cit*

34) Kelsey J.L. & Berkowitz G.S. *op cit* The increase is "probably because of the greater rate of conversion of androstenedione to estrone in the adipose tissue of obese women and the lower levels of sex hormone binding globulin in obese women" p5615

Skegg D.C.G. *Alcohol, Coffee, Fat & Breast Cancer.* BMJ 24-10-1987 Casts doubt on the fat hypothesis and points to the hazard of alcohol consumption.

Kushner R., *Why Me? The Saunders Press, Philadelphia, London, Toronto.* (1982) pp100-1.

34 a) Seely S. & Harrobin D.F. *Diet & Breast Cancer : the possible connection with sugar consumption* Medical Hypotheses Vol 11 (1983) p326

34 b) *ibid* p325

35) Epstein S. *op cit* p179

36) *ibid* pp180-190

Gillie Oliver *Food dyes linked to cancer may be blamed* summarises:-

Professor Curtis F. *Review of the Colouring Matter in Food Regulations* and the London Food Commission note that in Britain in 1987 :
58 different colours can legally be used in food. Six of these are not permitted in other EEC countries.

Amaranth, caramel, sunset yellow and brown HT are among the most suspect additives. Amaranth is banned in the USA, USSR, Austria Greece, Norway and Malaya. But it is used in large quantities in Britain to imitate the colour of blackcurrant in ice cream and sweets. It causes mutations and possibly birth defects and cancer in animals. (The Independent 1987)

37) Howe G.R. et al *Artificial sweeteners and human bladder cancer* Lancet 2 (1977) pp 578-81.

In this survey, by a team of government and university scientists and the Canadian National Cancer Institute, it was found that men who used saccharin had a 65% greater risk of developing bladder cancer than those who did not. Epidemiological problems exist not least because of the link between smoking and bladder cancer and the fact that diabetics are 'more likely to die at a relatively young age from complications of their disease rather than cancer.' Epstein .p 198.

38) Epstein S *op cit* pp248-280;

National Union of Agricultural & Allied Workers *The 245-T Dossier: Not One Minute Longer!* Russell Press Nottingham July 1980.

Le Serve, Vose Wigley and Bennett *Chemicals, Work and Cancer* Nelson (1980).

39) Laitman Orenberg , *op cit* pp134,136 DES as a growth stimulant for cattle.
Epstein S. *Losing the war against cancer* *op cit* (1990) p71

40) Cox T & Mackay C. *Psychological Factors & Psychophysiological Mechanisms in the Aetiology and Development of Cancers* Sci Med Vol 16 (1982) pp381,396

Investigations suggest that two main groups of factors are related to an increased risk of cancer. First the loss or lack of closeness or attachment to an important relation in early life, and second, the inability to express hostile feelings or more generally the abnormal release of emotion. Growing evidence implicates the role of the immune system as a link between the central nervous system and cancer.

For a discussion of the negative image this gives to cancer patients see Sontag Susan *Images of Illness* N.Y Review of Books (9th Feb 1978) pp22-29.

And for a victim's tale of battle with this image and the fear of cancer see Lorde Audre *The Cancer Journals* Spinsters, Ink. New York (1980).

Kelsey J.L. et al on the other hand state "Available evidence does not suggest that exposure to emotional stress increases the risk of breast cancer." p5616

41) For an interesting historic discussion of this conflict and women's role in the Med see:-Tillion G. *The Republic of Cousins: Womens oppression in Mediterranean Society* Al Saqi Books London (1983).

42) Kushner R *op cit* p 99.

43) Exceptions are Bertell Rosalie *op cit*, Friends of the Earth and Socialist Worker publications

44) Martin D., Ecker M.D., & Norton J.B. *Radiation* Vintage Books New York (1981) Ch 6 Mutation and Cancer: the major effects of ionizing radiation. pp 103-122.

Bertell Rosalie *op cit* Reviews the important work of Dr Alice Stewart on the effects of maternal X rays on children -to- be and the higher incidence of childhood malignancies pp245-246

Reviews the pioneering work done by Dr E.R. Sternglass, among others, a physicist at Westinghouse estimated in 1969 that 400,000 infants had died because of nuclear weapons testing in USA. pp231n

45) Yoshimoto Dr et al *Risk of Cancer among children exposed in utero to A Bomb radiations 1950-1984*. The Lancet (17-9-1988)

46) Fuller J.G. *The Day We Bombed Utah: America's Most Lethal Secret* New American Library (1984)

47) Dr Gould J., Dr Sternglass E., articles in New England Journal of Medicine &/or Lancet Jan Feb 1988, reported in City Limits Jan 7-14 1988.

A fundamental design fault in Britain's advanced gas-cooled reactors means that up to 80 tons of mildly radioactive carbon dioxide gas escapes several times a year from Dungeness B in Kent, Hartlepool, Cleveland and Heysham A&B in Lancashire. The Guardian Weekly May 15 1988 p6.

48) Gall R.P. Dr. & Hauser T. *Chernobyl- The Final Warning* London, Hamish Hamilton (1988) is a logical and passionate appeal for global co-operation to prevent further radiation calamities whether from power plants or weaponry. The Lancet 17 May (1989) shows how radiation from the ultra-violet end of the sun's emission leads to distortions of the duplex structure of DNA and is

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potentially mutagenic. Increased ultra-violet radiation is a result of deterioration of the ozone layer caused by chemical pollution.

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Cancer in Malta

Introduction

At the turn of this century more than ten times as many people were dying of enteritis and more than twice as many people were dying of tuberculosis than they were of cancer. Diagnosed cancer deaths accounted for only two per cent of all deaths. By the end of the second world war, cancer deaths were being specified by site and accounted for nearly eight per cent of all deaths. In 1986, eighteen per cent of deaths in the Maltese Islands were caused by neoplasms, nearly one in five and close to the rate in highly industrialised countries. (1)

Cancer, by 1986, was the second leading cause of death after heart disease. It is now the only major killer whose incidence is on the increase.(2) This increase in cancer mortality reflects the increased longevity which has occurred in the Maltese population shown in Part 1 of Chapter 7. 'Living longer increases the chances of developing cancer'(3). However, as in most industrialised countries, in the Maltese Islands there is now a greater cancer risk in each age group (4). Thus, a four year old girl or a forty year old man today is more likely to die of cancer than were a four year old girl or forty year old man in 1950. Standardised cancer death rate data, adjusted for changes of number of people in each age group, also shows a rise in the 1960-80 period that I discuss below. While most people die of cancer in later life, many victims are in their forties or fifties.

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The disproportionate number of years of life lost from cancer is highlighted in each Demographic Review. Take 1987 as an example(5). Out of 1,156 male fatalities in 1986, one quarter were caused by cancer and eighty per cent by heart disease but if we compare the years of life lost by these deaths, we find about thirty per cent of the loss was due to cancer and only seventy per cent due to heart disease. Out of 1,126 female fatalities in 1986, one fifth were caused by cancer and eighty per cent by heart diseases but one third of years of life lost were due to cancer and only seventy per cent due to heart diseases. Clearly, the age distribution of deaths from cancer is younger than from heart disease. What these figures do not show is the chronic morbidity - the long years of worry, pain and superhuman courage - that precedes death.

Methodology & Data

In an attempt to analyse the trends in cancer incidence and mortality in the Maltese Islands the usual epidemiological problems were met. The validity and completeness of data depend on availability of both doctors' and statisticians' service. It depends on diagnostic fashion and skill. It changes with alterations in disease classification. Contrary to expectations, the recent computerisation of data has not improved the quality and depth of analysis. I was unable to obtain cancer morbidity data or cancer data by occupation for the 1980s. A manual search was made through the register of deaths for deaths ascribed to lung and breast cancer for the years 1960 to 1989. Registration of cancer was introduced in 1957 but reliable records of cancer cases were only kept from 1968 and notification has not been consistent. Mesothelioma, cancer of the lining of the lung, that has been so

clearly associated with exposure to asbestos dust, has not been recorded separately in Malta.

Mortality rates from malignant neoplasms are obtained from death certificates, the accuracy of which depends on the doctors (hospital physicians or general practitioners) responsible at death. Where multiple illness occurs and the neoplasm is not coded as the underlying cause of death, then figures will tend to be underestimates. This tends to be more prevalent in older age groups.

The 1970-80 morbidity and mortality data was classified by age, sex, locality and occupation. Standardised mortality ratios were calculated using standard rates taken from the Maltese population. Only the Maltese population, and not the total population, is broken down by age and locality of residence, so an unavoidable error (tending to overestimates in ^{mortality} and incidence rates) may have crept in. The discrepancy has tended to widen and then to narrow over the period in question, with nearly all of the total population being Maltese in 1973 and nearly ninety per cent being Maltese in 1980; the 1985 Census recorded nearly all of the total as Maltese. (6)

Recorded morbidity rates of breast and lung cancer depend on whether the cases are brought to the notice of a doctor, the skill of the doctor's diagnosis and her/his willingness to contribute to official records. Over the period 1968-80, there may have been an increase in the number of people, with cancerous symptoms confiding in a doctor. The trend may also have been exaggerated by the change-over in 1977 to a more comprehensive government-run free health service. Less cases were dealt with privately and likely to be

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unregistered. In 1983, a local cancer surgeon, Dr Swain, estimated that there were about five per cent of cancer cases seen to privately, whereas one third were dealt with privately some six years previously. Meanwhile an unspecified number of people, usually in the upper classes, go abroad for diagnosis and treatment.

Political animosity may also have affected data compilation. The doctors' protest action, of 1975-77, against hospital in-service, appears to have significantly reduced the notification of cancer incidence.

Trend analysis is also impoverished by changes in the classification of cause of death, especially with reference to breast and skin cancer in later years. These then are the local inconsistencies, inaccuracies and biases that I found and the aetiology of cancer is also confounded by the long latent period between exposure to carcinogens and appearance of cancer.

Trends

Cancer and circulatory diseases were responsible for 18 per cent of all deaths in the decade 1921-31, 48 per cent, 1957-67 (7) and for 75 per cent, 1980-1986. In the 1921-31 period an increased frequency of cancer was observed, but 'our mortality compares favourably with that of other countries and rates are at below one half of that recorded in England and Wales', commented the 1929 Report on Health Conditions.(8) An analysis of the post war period from 1948 to 1970, shows how the incidence and severity of cancer and heart disease remained much higher in the British Isles than the Maltese islands. However, it is far too blithe to then conclude, as does Milne, that the 'unfavourable

factors found in Britain were absent in Malta.'(9) Taking a superficial look at the mortality rate from cancers per thousand civilian population, it is possible to conclude, as Milne does, that there has been little change in cancer incidence (as Table 36 below shows). But this is to cloud the fact that the standardised ratio, number and proportion of cancer deaths have risen significantly while there has also been an important change in location of most malignant neoplasms. Also, a lower mortality rate in Malta compared to Britain could be expected because, as shown in Chapter 7, Malta has a lower percentage of old age people. In making international comparisons of trends in cancer mortality rates one clearly has to standardise for age.

In 1960, cancer killed 114 per thousand of those who died, and in 1979, 142.6 per thousand, being second only to ischaemic heart disease as a major killer. The absolute number of deaths from cancer rose by a half, while total population increased by only ten per cent over this period. Figure 9, based on data from Table ^{32 and} 34, shows that cancer deaths per thousand of the population have risen from a rate of 0.98 in 1960, to 1.22 in 1970 and 1.34 in 1980 and 1.55 in 1987. This is a rise of over one third in the cancer death rate in only two decades. Although the cancer mortality rate for men is still higher than that for women, in 1987, for instance the male cancer mortality rate was 1.82 per 1000 males and the female cancer mortality rate was 1.29 per thousand females, the number of deaths has risen faster among women than men (Table 33), largely due to the high rise in breast cancer incidence over the period. Indeed a recent WHO report observes that Malta now has the highest female breast cancer mortality rate in the world, at 35 per 100,000 per year and roughly, for instance, double the rate in Greece.(10)

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Cancer by site

Figure 9 also gives details of the fluctuating rise in lung and breast cancer death rates. Female breast cancer deaths per thousand of the female population increased by nearly one and a half times over the period, 1960-80, while the number of reported female breast cancer cases per thousand of the female population over the shorter period of 1968-80 more than doubled in just over ten years (Table 34). The male lung cancer incidence rate did not rise over this latter period but the lung cancer death rate rose by two-thirds in the twenty years, 1960-80, and by nearly forty per cent between 1980 and 1987 alone. The bulk of the lung cancer death rate increase occurred in the 1960s and 1980s. In contrast, breast cancer death rates steadily increased from 1975-80, and showed an overall rise of seventy per cent from 1968 to 1980, and by nearly a third between 1980 and 1988.

Site changes

Cancer of the digestive organs and peritoneum accounted for nearly half cancer deaths in 1946 and death from cancer of the uterus was nearly double that of breast cancer. But by 1986, only five per cent of cancer deaths were due to neoplasms of the digestive organs and peritoneum and just over five per cent due to cancers of the uterus and cervix. Lung and breast cancer deaths accounted for one third of all cancer deaths, being far more important both in incidence and mortality than other cancers. The irony is that no local studies have been done on lung or breast cancer since 1970 (11).

Cancer affects men and women very differently. The lungs and bronchial passages are the main sites for fatal cancers in men, killing nearly three

victims out of ten (Table 37). The breast is the principal site for women, again killing about three out of ten female cancer victims. Interestingly, a higher percentage of all female cancer deaths are now of breast cancer in the Maltese Republic than in England & Wales when, for instance, in 1977 only one fifth of all female cancer victims died of breast cancer.(12) However the average mortality rate in Malta has been lower than in England & Wales over the period analysed.

In both men and women, the second most important fatal site is the stomach, killing about one victim in ten (Table 37). Mortality rates from stomach cancer 1969-1981 were lower than in some European countries such as England and Wales, Italy and Sweden but there was a slow downward trend in mortality in these countries whereas in Malta there was a slow upward trend. Here, as in the case of lung cancer, the lining of the organ will have developed carcinomas. For both lung and stomach cancer, incidence tends to be higher the more exposed you are to pollutants.

A phenomenal increase in skin cancer deaths occurred in the 1960s (Table 35). Some of this increase could be due to improved diagnostics, but increased environmental and industrial exposure to carcinogens such as soot and mineral oil is definitely a contributory factor.(13) The trend in skin cancer mortality rates shows a slow increase, though it remains lower than in England & Wales. As with other cancers, there are signs of under-reporting in the 1974-77 period.

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Table 35 SITE-SPECIFIC CANCER MORTALITY, Malta: 1952-76

Period/diagnosis	Trachea bronchus, lung,	Female breast	Stomach	Skin
Average Annual Number of deaths				
1952-56	33.0	25.8	59.4	2.6
1957-61	36.0	36.4	55.0	4.6
1962-66(a)	53.6	40	36.2	27.4
1967-71	65.2	44.2	44.0	47.2
1972-76	60.2	46.2	39.8	31.6
1977-81(b)	73.4	58.2	45.4	n.a.
1982-86	94.2	64.8	56.4	n.a.

Note (a) From 1962-1986, the data for male and female trachea, bronchus and lung cancer deaths and for female breast cancer deaths is taken from death certificates at the Health Information Services Unit, previously the Health Statistics Department.

(b) Note there was a change in the classification of breast and skin cancer in 1979 agglomerating 'malignant neoplasms of bone, connective tissues, skin and breast.

Sources: as noted and Demographic Reviews of the Maltese Islands

Table 36 Incidence of deaths attributed to cancer per thousand civilian population, Malta: 1957-1986.

Age	1957	1967	1970	1986
15-44 years	0.23	0.25	0.18	0.17
45-64 years	2.53	2.60	2.41	2.54

Sources: Demographic Review of the Maltese Islands 1986 pp 3 & 27 ; Milne, R.G. The Contribution of Public Expenditure to Social Development ; A case study of Malta, 1945-1967, p.67.

Table 37 Deaths from Cancer in Malta & Gozo by Sex and Site in 1979.

Type	Male		Female		
	Number	cancer deaths %	Number	cancer deaths %	
Lung, bronchus, trachea	68	28.1	Breast	59	30.3
Stomach	26	10.8	Stomach	14	7.2
Prostate	18	7.4	Colon	14	7.2
Bladder	13	5.3	Ovary etc.	13	6.7
Other	115	47	Other	94	48.5
Total	242	100	Total	195	100

Sources: Report on the Health Conditions of the Maltese Islands 1980

Breast and lung cancer trends

While the total number of deaths from malignant neoplasms has increased by one half over the period 1960-1980, female deaths from malignant breast cancer have risen by over one and a half times (a). Male deaths from lung cancer also doubled, from 1960 to 1980.

After taking population growth into account, we find that all cancer deaths per thousand of the population increased by forty per cent, female breast cancer per thousand of the female population increased by nearly one and a half times and male lung cancer per thousand of the male population increased by two thirds from 1960 to 1980 (b).

Figure 9 gives a graphic account of these events, showing the yearly fluctuations in mortality rates, but also highlighting the upward trend especially in female deaths from breast cancer in recent years. Comparing deaths from breast cancer per thousand of the female population in England & Wales, we find the increase over 1971-77 was just over four per cent (14), while in Malta, over the same period, the increase was at more than double this rate, at eleven per cent over the same period.

Standardised Ratios

Standardised incidence and mortality ratios (15) were then calculated for the 1960-70 period. (c) Standardised mortality ratios for male lung cancer

- (a) Table 33 & Table 34 in the appendix
- (b) Table 34 in the appendix
- (c) Figures 10, 11, 12 and 13 in the appendix.

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increased by 41 per cent and of female breast cancer increased by 47 per cent between 1970 and 1980. Figure 10 clearly shows the rising trend in the weighted average of the age-sex specific female breast cancer mortality rates from 1975-1980. The female cancer incidence rates were also standardised for changes in number of women in each age group and a large fall in the standardised morbidity rate in the period 1974-77 is the most dramatic feature of this graph. (Figure 11) The question of whether or not this fall in reported cases was real or a consequence of doctor's non-registration (the doctors association and Labour Government clash culminated in 1977 (16)), may be settled by analysing breast cancer death rates twenty to twenty-five years later. If a similar dramatic decline is evident in the years spanning 1994-2000, then the former explanation would be more convincing.

Standardised morbidity and mortality ratios were calculated for male lung cancer over the period 1970-80 and are shown in Figures 12 & 13. And again, large fluctuations were found in the recorded morbidity rates. Fluctuations also occurred in the standardised male lung cancer mortality ratio but remained consistently above average from 1974 to 1980. It is obvious that extrapolation of the data for the decade 1980-90 would be useful here. The standardised lung cancer mortality rates, shown in Figure 9, indicate a continuing rise above average in the 1980s.

Age Incidence

Data on the age incidence of breast and lung cancer was collected from 1970 to 1980. The same qualifications on the soundness of data must be made as for all cancer data detailed above. In addition, although ten year averages were

calculated, one must bear in mind that the small size of the sample means that changes and differences maybe the result of random error.

Breast cancer

No cases of female breast cancer were diagnosed before the 20-24 age group in the years 1970-1980. The incidence rate gradually rises from this age group to a peak of 11.6 cases per thousand in the 45-49 year olds (Figure 14). It then drops off slightly for women aged 50-54 but rises more steeply than ever to a peak of 23.24 cases per thousand females in the 60-64 age group. It again drops off slightly only to rise to another peak of 24.56 cases per thousand females aged between 70 and 74. The highest incidence rate occurs in women over 85 years old where on average 38.2 per thousand women were affected. The usual figure is a bimodal incidence rate, peaking at 45-49 years and 60-64 years and Malta appears to be at variance to the international average in having more than two peaks in the incidence of female breast cancer.

The mortality rate is lower than the morbidity rate for every age group, reflecting perhaps the medical successes in delaying death from breast cancer. There is not the same degree of fluctuation in mortality rate by age as in morbidity rate and no tri-modal curve is exhibited in this period - just a gradual increase from no deaths before 20-24 years of age to nearly 35 deaths per thousand females in the 85 plus age group (Figure 14).

On further analysis of trends in female breast cancer cases by age-group over time (Figure 15) we find the age specific incidence rate increases in all age groups, especially in the 35-44 years old women.

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Interpretation

Ageing involves a cumulative exposure to carcinogens and cannot be separated from environmental effects. For women it also involves particular changes in hormonal balance that are affected particularly by fertility rates, drug taking and the menopause.

The tri-modal incidence rates suggest that three distinct ancillary experiences should be taken into account in interpreting this data. The particularly high number of cases in the 70-74 age group indicates that these women may have been particularly vulnerable about twenty-five years earlier at ages 45-49 years in the 1945-55 period. It also suggests an association, discussed in Chapter 8, with unhealthy diets of high fat and sugar intakes.

Lung cancer

The recorded morbidity and mortality rates of male lung cancer begin later than breast cancer although there was one case that led to the death of a boy aged between 10 and 14 years in the decade. There were none then until the 30-34 age group when again one person died of lung cancer. The incidence and mortality really begin to bite after men reach 35 years of age, confirming the trend seen in Table 36.

Mortality rates are always above recorded incidence rates (Figure 16). Multiple reasons for this would include : failure to bring lung cancer to the notice of doctors; failure of doctors in diagnosis; failure in curing or delaying death.

Mortality rates rose steeply from 54 years to a peak of 29.1 deaths per thousand males aged 64-69 and a further peak of 37.2 deaths per thousand males aged 75-79. Death from lung cancer per thousand of the male population then declined. there is therefore a clear bi-modal curve in the male lung cancer mortality rate (Figure 16).

Likewise, morbidity rates rose steeply from the age of 54 to 69 and continued to rise to the highest morbidity rate in the 70-74 age group, just before the highest mortality rates. As with mortality, the morbidity rates decline after the age of 79. The interpretation of rates in the 85 plus age group has additional problems of multiple diagnoses and relative inaccuracy of population data.

Lung cancer and industrialisation have been clearly linked in the previous chapter both through increased exposure to factors of production such as asbestos, nickel and chromium; and through factors of consumption such as tobacco. The bi-modal curve in the male lung cancer rates in each age group (Figure 16) maybe related to cohort differences in smoking or to cohort differences in exposure to carcinogens. An occupational study, for instance of shipyard workers and quarry workers, is necessary to ascertain whether work conditions are significant in causing lung cancer mortality in Malta. The following study of locality and class incidence indicate that a relationship does exist, as shown in other countries(a), between work and lung cancer.

(a) see Chapter Eight.

LOCALITY INCIDENCE OF LUNG & BREAST CANCER

Locality morbidity rates of breast and lung cancer were available for the period 1970-1980 but mortality rates were not. For the later period 1981-88 the opposite held: I was informed that locality-morbidity data was totally unreliable but mortality by village of residence was collated, (Table 38). A similar attempt has been made by a team in the United States to pin point the high risk communities and possible socio-economic conditions that are causing the epidemic in cancer. (17)

To identify high risk communities, I examined the incidence of the specific cancer per thousand of the specific sex in that locality. Before 1973, data on sex-specific population by locality is not available. Therefore, the total number of female breast and male lung cancer cases identified, 1970-80, in each village was divided by the average number of women and men in each village, 1973-1980. As with the previous figures, we are always using a denominator of the Maltese population whereas the numerator includes cases of cancers diagnosed in foreigners living in Malta. This would tend to make incidence rates slight over-estimates in some localities like Sliema, where there are a relatively large number of foreigners.

There were 868 reported cases of female breast cancer and 488 reported cases of lung cancer between 1970-80. The only places where the incidence of lung cancer equalled or exceeded that of breast cancer were the three dock towns of Senglea, Cospicua and Vittoriosa; the quarry area of Qrendi; and also in the outer towns of Mosta, Qarghur and San Gwann. A high proportion of male employees living in Qrendi and Mqabba work in the nearby quarries, and the

data contained in Tables 39 and 40 is a clear indication that the high levels of dust inhaled during this work is a health hazard. Respiratory problems are also caused by the proximity of the main rubbish dump. Contrast the high male lung cancer mortality rate in Mqabba to the low female breast cancer rate there : 7.08 compared to 0.9; and similarly the figures for Qrendi are 8.2 compared to 1.8.

Taking a closer look at the highly urbanised and working-class Inner Harbour Region, we find, according to the Table 38 below, that one half of all male lung cancer cases occurred in this region while less than forty per cent of the Maltese male population was concentrated in the area. A severe drawback was that I was not able to standardise by age as data on population by age and locality was not available. Access to such data is vital to future epidemiological research. The incidence of breast cancer was also high in this, the densest region. Over this period, 44 per cent of all female breast cancer patients were reported to be living in the Inner Harbour Region whilst less than 38 per cent of the total female Maltese population lived here. The high mortality and morbidity rates of breast and lung cancer recorded in Floriana may be exaggerated by patients of Sir Boffa Hospital, where there is a terminal cancer ward. However, the hazards of living in the inner harbour region cannot be thus explained. Seven out of the ten highest lung cancer mortality rates occurred in the inner harbour region : Valletta, Sliema, Floriana, Cospicua, Marsa, Msida/Pieta/G'Mangia and Hamrun. And high rates also occurred in adjacent outer harbour towns like Birkirkara and St Julians. In contrast none of the lowest lung cancer mortality rates occurred over the

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period 1981-88 in the Inner Harbour Region and only two in the Outer Harbour Region, at Sta Venera and San Gwann (Table 42).

Taking the Inner and Outer Harbour(a) Regions together, we find that 68 per cent of all male lung cancers and 67 per cent of all female breast cancers were concentrated in these towns over the 1970-80 period. Meanwhile, less than two-thirds of the population was concentrated here. Although the ageing population of the three cities, Sliema, Floriana and Valletta may have some upward bias, the overall picture is that industrial and traffic pollution must be taken very seriously in the aetiology of cancer in the Maltese Islands

(a) Includes:- St Julians, San Gwann, Sta Venera, B'Kara, Qormi, Luqa, Tarxien, Fgura, Zabbar.

Table 38

CANCER INCIDENCE, 1970-1980; CANCER MORTALITY, 1981-1988

<u>1981-88</u>	<u>Cancer Incidence 1970-80</u>		<u>Cancer Mortality</u>	
	<u>Female Breast</u>	<u>Male Lung</u>	<u>Female Breast</u>	<u>Male Lung</u>
<u>Inner Harbour Region</u>				
Valletta	65	31	24	30
Floriana	13	12	11	12
Sliema	86	34	44	43
Gzira	25	12	16	15
Msida	33	31	26	23
Hamrun	53	24	26	30
Marsa	24	19	12	20
Paula	44	24	23	19
Cospicua	13	18	12	21
Senglea	9	13	12	8
Vittoriosa	12	12	5	7
Kalkara	3	2	5	4
Total	390	232	216	232
Per cent of specific cancer	44	37.5	41	38

Table 39
The Ten Highest Cancer Morbidity Rates by Locality, Malta, 1970-80

<u>Ca Breast per 1000 females</u>		<u>Ca Lung per 1000 males</u>	
Marsascala	11.1	Gharghur	9.1
Attard	10.4	Marsascala	8.85
Gharghur	9.3	Qrendi	6.2
Dingli	9.0	Vittoriosa	6.0
Valetta	8.8	Attard	5.7
Sliema	8.1	Senglea	5.6
Rabat	7.7	Ghaxaq	5.5
Balzan	7.7	Msida	5.4
Mdina	7.5	Paula	5.3
Hamrun	7.5	Floriana	5.1

Table 40
The Ten Highest Cancer Mortality Rates By Locality, 1981-88

<u>Ca Breast per 1000 females</u>		<u>Ca Lung per 1000 males</u>	
Floriana	6.6	Qrendi	8.23
Sliema	6.1	Floriana	7.22
Senglea	5.8	Mqabba	7.08
Mgarr	5.6	Valetta	6.8
Valetta	4.9	Sliema	6.59
Msida etc.	4.9	Cospicua	5.5
Kalkara	4.85	Marsa	5.05
Dingli	4.0	Mellieha	4.56
Paola	3.8	Hamrun	4.54
Hamrun	3.7	Msida etc.	4.51

Table 41 **The Ten Lowest Morbidity Rates 1970-1980**

<u>Ca Breast per 1000 females</u>		<u>Ca Lung per 1000 males</u>	
Safi	0	Safi	0
Mgarr	0.98	Gudja	0
Cospicua	2.8	Mgarr	0
San Gwann	2.9	Fgura	0.5
Kalkara	3.1	Mellieha	1.06
Zurrieq	3.2	M'Xlokk	1.3
Kirkop	3.2	Balzan	1.9
Fgura	3.5	Sta Venera	2.0
Gudja	3.55	Mqabba	2.04
Mellieha	3.8	Zurrieq	2.2
Senglea	3.8	Kalkara	2.2

Table 42 **The Ten Lowest Mortality Rates 1981-1988**

<u>Ca Breast per 1000 females</u>		<u>Ca Lung per 1000 males</u>	
Kirkop	0	Safi	0
Mdina	0	Mdina	0
St Pauls Bay	0.7	Siggiewi	1.04
Fgura	0.74	Sta Venera	1.07
M'Xlokk	0.8	San Gwann	1.22
Mqabba	0.9	M'Xlokk	1.7
Qormi	1.1	Gharghur	1.73
Zabbar	1.26	Mgarr	1.8
Luqa	1.41	Attard	1.83
B'Buga	1.43	Ghaxaq	2.22

Sources: Malta Department of Health Statisticians

Breast cancer locality incidence rates

The incidence rate averaged nearly 6 breast cancer cases per thousand women living in the Inner Harbour Region. The highest rates occurred in Valletta, 8.9 per thousand and Sliema 8.1 per thousand. (Table 39) Note too, the high mortality to incidence ratios of breast cancer in working class areas of Cospicua, Senglea and Kalkara, shown in Table 38. It was, however, the Western Region that had the highest overall average at 7.5 cases of breast cancer per thousand of the female population. This region includes Attard, Rabat, Dingli, Mdina and Balzan - five villages which feature in the top ten villages with the highest incidence rates of female breast cancer 1970-1980. But it was Marsascala on the South-Eastern coast that topped the league, while Gharghur in the Northern Region came third. It may be useful to look at specific conditions and population characteristics in these villages which may have nothing to do with the region in which they are geographically situated.

No cases were identified in Safi over the decade but over eleven women fell victim in Marsascala. Comparing Tables 39 and 41, we find a wide locality

deviation in breast cancer incidence rates. It may be fruitful for future research to take two nearby villages such as Zejtun and Zabbar of similar population size and similar male lung cancer incidence rates, indicating similar class compositions, but with markedly dissimilar female breast cancer incidence rates : Zejtun 7.34 per thousand and Zabbar 4.00 per thousand (38 female cases being diagnosed in Zejtun and only 20 in Zabbar). One could look at the per centage of nuns in each village, variations in general environmental conditions (air or water pollution), and individual case histories and dietary habits of those affected. Again Gudja and Ghaxaq are two nearby villages which show marked differences in incidence rates of both female breast cancer and male lung cancer; the people of Gudja being relatively fortunate on both counts. A longer period and age-specific data would vastly improve the quality of analysis.

Lung cancer locality incidence rates

The incidence rates of male lung cancer had their highest regional average, as expected, in the Inner Harbour Region, where there were 4.3 recorded cases per thousand male inhabitants. Some of the the highest rates occurred in towns situated right by the docks : Vittoriosa 6.0 cases per thousand male inhabitants ; Senglea 5.6 cases. (Table 39)

The highest village specific incidence rates occurred in Gharghur and Marsascala (Table 39), the two villages that also had peak female breast cancer incidence rates. The lowest incidence rates of male cancer occurred in many villages, such as Safi, Mgarr, Gudja, Fgura, Mellieha and Kalkara, where the lowest rates of female cancer were also found , most of these being country villages. (Table 41)

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Again it would be useful to proceed by examining the differences in general environmental conditions between the villages with the lowest and highest lung cancer incidence rates and then analyse individual case histories of those affected, especially occupational profiles. The occupational and environmental hazards experienced by workers and residents of the inner harbour area are clearly a major cause of the rising lung cancer mortality rate.

Class incidence of specific cancers

I attempted to analyse the occupational incidence of breast, lung and cervix-uteri cancer. It is abundantly clear that class analysis of female cancer victims is impossible because the vast majority of cases and deaths of breast and cervix uteri cancer are of women placed in Category X1 'Others including those of no gainful occupations'.(18)

Lung cancer incidence is particularly high among skilled workers: over one in five lung cancer cases occurred in skilled workers over this decade. Unskilled workers and shopkeepers, shop assistants, clerical workers were runner up risk groups. But, similar to the female occupational data, a disproportionate number of victims were classified in Category X1 which includes the unemployed, housewives and people retired from many different walks of life. The need for more specific data, standardised mortality ratios over a 20 year period, and/or a retrospective cohort study is apparant.

However, one can conclude both from locality and class data that people belonging to the working class, here defined as occupations VII to XI including skilled workers, unskilled workers, farmers, fishermen and agricultural

workers, and others in the Maltese Islands are more likely to die from lung cancer than their counterparts in upper class of occupations I to VI.

Table 43.

Occupational Analysis lung cancer in 1970-80 Period

	<u>Cases</u>	<u>Deaths</u>
XI. Others, including those of no gainful occn.	127	526
VII. Skilled workers	118	53
IX. Unskilled workers	69	34
III. Shopkeepers, shop assistants, clerical wkrs.	67	22
II. Intermediate Adm, Professional & Managerial	56	35
X. Farmers, fishermen & agricultural workers	48	12
V. Personal service workers (manual)	11	9
I. Higher Adm., Professional & Managerial	9	15
IV. Foremen, supervisors & Overlookers	6	4
Total	557	729

Source: Health Statistician, Department of Health, Malta.

Summary

The above exercises in the epidemiology of cancer in Malta over the last thirty years provide raw material and suggestive correlations. Cancer has become a major cause of illness and death in every age group, but in particular the over sixties. A significant increase in lung cancer mortality and in particular breast cancer morbidity and mortality is apparent. Locational studies show a higher incidence in particular of lung cancer in the Inner Harbour Region where the docks, shipbuilding, many textile and other industries, and the coal-fired power station, are located and where the working class is concentrated. The lack of government controls on known carcinogens such as asbestos, together with clear results of occupational cancer studies done in say USA or Britain, indicate that there is an urgent need to control and eliminate local carcinogenic hazards.

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Data on smoking collected for the first time in the 1985 Census, if broken down by sex, age and locality and correlated to lung cancer rates, might strengthen the anti-smoking lobby and lead to stricter controls on cigarette smoking.

The high rise in breast cancer incidence and mortality has been discussed in detail. As outlined in the previous chapter, many factors such as changes in diet and increased hormonal medicine, changes in reproductive activity, and pollution have been linked to the rise in breast cancer incidence in industrialised countries. Dietary and reproductive factors may well have had multiplicative effects. Maltese women in the 1950's went through a revolutionary change in reproductive practises.(19) In the 1960's and 1970's their environment, if not their work, became increasingly industrialised (a). Meanwhile the intake of hormones both in medicine and food increased as did consumption of sugar, meat, cholesterol and food additives.(20)

There is also recent evidence that carcinogens are more potent in certain climatic conditions such as bright sunlight and heavy rain, which characteristics are common to Malta.(21)

The role of radiation exposure in causing this rise in breast and lung cancer mortality is probably the most difficult to pin point but the most persistent. Recent studies show that radiation is more dangerous than had been thought. The British National Radiological Protection Board broke international

(a) see Chapter Seven

ranks in 1987 recommending that dose limits for the public and for workers be tightened by a factor of three. The International Commission on Radiological Protection is to publish in 1990 and is expected to reflect growing recognition that cancer risks from radiation doses are higher than previously assumed.

Many people react to cancer with a shrug. Prevention seems absolutely impossible. There are so many carcinogens polluting the air, food and water. There are so many hazards to which a shipyard worker must expose himself to get his job done and keep the yards going. There are so many doctors prescribing hormonal tablets to women without a word of warning. There are so many people addicted to smoking and fatty diets. But consider the revolution that was needed in our grandparents' lifestyles to eliminate cholera. Who would have ever dreamt, during the last century, that s/he would see running water into and drainage systems out of every home. The contradictions inherent in that transition : the long term interests of the working class seemingly opposed to those of the imperialists and local conservatives: recur today when the long-term interests of the Maltese working class in improved health conditions seem opposed to capitalist interests in minimising expenditure and maximising profits. I specify long-term here because in the short-term workers prioritise securing a job over the health hazards that it may entail. And indeed this was the Labour Government's priority during the 1970's transition period.

The challenge to prevent cancer may be greater than that to prevent cholera because we are not dealing with a clearly identifiable bacteria and immediate

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symptoms but several types of neoplastic growths that can be traced to different kinds of occupational hazards and environmental factors. But if the challenge is greater, then there is no doubt that we are better equipped to meet it.

Notes

1) *Annual Report on the working of the Public Health Department for the financial year 1908-9*, Government Printing Office (1909) Appendix C. p J13.; Report on the Health Conditions of the Maltese Islands and work of the Maltese Health Department including the Emergency Medical Services for the year 1946. Government Printing Office (1948) Appendix HA p xxxviii; Demographic Review of the Maltese Islands 1986. Central Office of Statistics Malta (1987) Table 22 p 24.

2) The death rate from diseases of the circulatory system are now in decline. The death rate from diseases of the respiratory system is the only other one that shows a rise between 1968-1986. See The Demographic Review of the Maltese Islands for 1986 and 1968. For comparison of similar trends in the USA see Epstein S. *The Politics of Cancer* Anchor Books (1979) pp11-13.

3) Epstein S. *op cit*, for similar observations with reference to USA. p 12
And more recently, Epstein S. *Losing the War against Cancer: Who's to Blame and What to Do about It* I.J.H.S. v.20 no.1. (1990) pp53-72.

4) Milne Robert Gordon *The contribution of public expenditure to social development: a case study of Malta 1945-1967*. unpublished thesis for M. Phil in Economics, University of London (1972). Shows how cancer has increased at all ages.

5) Demographic Review of the Maltese Islands 1987 Table 28/29.

6) *Census '85* Central Office of Statistics. Malta (1986) p45
Relevant Demographic Reviews of the Maltese Islands.

7) Demographic Review of the Maltese Islands 1968 p xxviii

8) Report of the Health Conditions of the Maltese Islands 1929

9) Milne R.G. *op cit* p73

10) CA- A Cancer Journal for Clinicians vol 39 no 1 Jan/Feb (1989) pp16,17.

11) On relatively scarce cancers see for instance:- Ali Safraz & Ronie Borg *Malignant Lymphomas* Mediscope no. 6 (1984) pp18-22; Bugeja Mark, *Malignant melanoma of the gastro-intestinal tract*. Mediscope no.11 (Nov 1987) pp8-10. Sultana H.M. *Incidence & treatment of Cancer of the Lip in Malta* SLHG Vol 5 no 1 (June 1970) pp49-54.

On breast and lung cancer, much is lacking in the following two studies:- Pisani S., Sammut V., Galea R., *Cancer of the Breast - a local study* Chestpiece March 1968. In this, 107 patients' histories were studied from records at the Surgical Outpatient's department and Radiotherapy Dept 1963-1968. A unimodal age incidence was found with maximum incidence 'in the age around the menopause' - the 6th decade.

Lanfranco A. *Smoking and Disease* St lukes Hospital Gazette Vol 5 no 2 Dec 1970 pp 181-186. He compares the number of men reported with lung cancer in 1969 and 1952 (when all forms of cancer first became notifiable). He assumes that

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the male smoking rate has increased, without evidence. He points to benzo-pyrene as also being a cancer initiator.

12) *Mortality Statistics Office of Population Census Survey*. HMSO. Britain (1978)

13) *BSSRS Oil: a workers' guide to the health hazards and how to fight them*. British Society for Social Responsibility in Science London (1975).
Le Serve, Vase, Wigley, Bennet *Chemicals, Work and Cancer* Thomas Nelson & Sons Ltd, Surrey, Britain. (1980)

Of interest for future research is the association between rising traffic exhaust fumes their reaction in sunlight (producing for instance ozone) and diseases of the respiratory system such as lung cancer.

14) Doyal L. & Epstein S. *Cancer in Britain*, Pluto Press. London (1983) pp8-13.

15) The Standardised Mortality Ratio (SMR) is the percentage ratio of the number of deaths observed in a specific group studied to the number that would be expected from the age-specific death rates for the total population of the Maltese Islands. For further reference see Benjamin B & Pollard J.H. *The analysis of Mortality and Other Actuarial Statistics* Heinemann: London. (1980) pp 10-13.

16) For details of non-cooperation between doctors in the Medical Association of Malta and the Labour Government see : Ministry of Health & Environment: *Memorandum on the dispute with the Medical Association of Malta* DOI August (1977); and *Addenda* December (1977) and *Volume 3* December (1978).

17) Mason et al *Atlas of Cancer Mortality for US Counties, 1950-1969* DHEW Publication no NIH USA (1970) pp75-78.

Gardner M.J. Winter P.D. et al *Variations in Cancer Mortality among local authority areas in England and wales. Relations with environmental factors and searches for causes*. British Medical Journal Vol 284 13 March (1982) pp784-87.

18) 'Others including those of no gainful occupations' includes housewives, houseworkers, students, those seeking work and retired persons. The latter raises the older age structure of this group and bias the cancer data.

19) See Chapter Seven Part 1 for Maltese changes in reproductive practices and Chapter Eight for a discussion of higher breast cancer incidence among single women.

Korenman S. *Oestrogen Window Hypothesis of the aetiology of breast cancer* The Lancet. 29 March (1980)

20) Fenech F. et al *Changes in the Epidemiological Pattern of Disease in the Maltese Islands* Journal of Faculty of Arts V1, 4 (1977)
Chronic Diseases and Obesity The Lancet 26-8-89.

21) These findings follow research in the aftermath of the Chernobyl Disaster, The Lancet 26 March 1988 and The Lancet 17 May 1989 pp1362-3

Appendix

Table 32
Total Cases and Deaths from Malignant Neoplasms, Malta:1960-1987

Year	Cases	Deaths	Rate per 1000 population	
			Case	Death
1960		321		0.98
1961		356		1.08
1962		333		1.01
1963		345		1.05
1964		348		1.08
1965		369		1.16
1966		372		1.17
1967		380		1.19
1968	421	361	1.32	1.13
1969	458	368	1.42	1.14
1970	534	398	1.64	1.22
1971	518	403	1.59	1.24
1972	516	362	1.62	1.13
1973	508	347	1.62	1.11
1974	392	382	1.21	1.18
1975	368	387	1.12	1.18
1976	366	407	1.11	1.24
1977	300	379	0.90	1.14
1978	462	461	0.74	1.36
1979	512	437	1.48	1.26
1980	523	488	1.44	1.34
1981		495		1.51
1982		548		1.65
1983		511		1.53
1984		528		1.56
1985		521		1.53
1986		506		1.47
1987		536		1.55

Sources: 1960-1980 data from the Health Department Statistician
1981-1987 data from Demographic Reviews of the Maltese Islands
Tables 22 & Tables 25.

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Table 33
Total Cases & Deaths from malignant neoplasms by sex, Malta 1960-1987

Year	Cases		Deaths	
	Male	Female	Male	Female
1960			184	137
1961			175	181
1962			170	163
1963			185	160
1964			198	150
1965			212	168
1966			201	171
1967			212	168
1968	229	192	200	161
1969	232	226	185	183
1970	288	246	226	172
1971	289	229	225	178
1972	276	240	200	162
1973	226	242	191	156
1974	199	193	204	178
1975	202	166	229	158
1976	197	169	231	176
1977	154	146	209	170
1978	216	246	248	213
1979	226	279	239	191
1980	262	255	268	218
1981			287	208
1982			274	274
1983			286	225
1984			270	258
1985			293	228
1986			280	226
1987			310	226

Sources: 1960-1980 data from the Health Department Statistician.
 1981-1987 data from Demographic Reviews of the Maltese Islands.

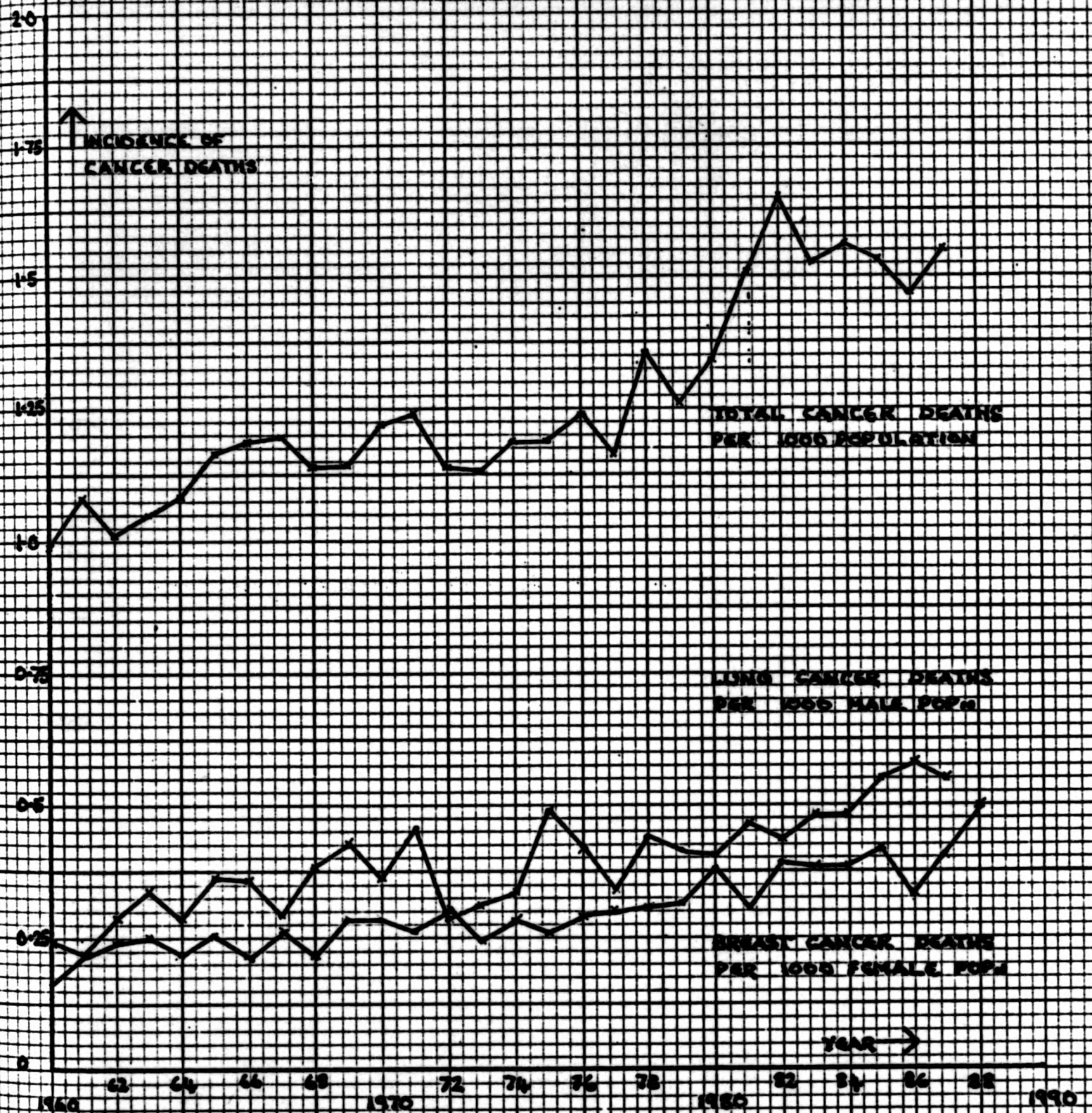
Table 34
Cases of and Deaths from Carcinoma of Breast/Lung by Sex 1960-1987
Rate per 1000 of the sex specific population

Year	Female Breast		Male Lung		Breast Cancer Rate		Lung Cancer Rate	
	C	D	C	D	C	D	C	D (a)
1960		27		38		0.16		0.24
1961		38		35		0.22		0.22
1962		42		45		0.24		0.29
1963		42		54		0.25		0.34
1964		38		43		0.22		0.28
1965		41		57		0.25		0.37
1966		37		54		0.22		0.36
1967		43		45		0.26		0.29
1968	49	37	40	58	0.3	0.22	0.26	0.38
1969	54	47	56	66	0.32	0.28	0.36	0.43
1970	82	48	58	56	0.48	0.28	0.37	0.36
1971	86	46	61	70	0.51	0.27	0.39	0.45
1972	91	50	54	42	0.55	0.30	0.35	0.27
1973	97	41	40	47	0.58	0.24	0.26	0.31
1974	77	47	37	52	0.45	0.28	0.24	0.34
1975	59	44	60	76	0.34	0.26	0.38	0.49
1976	64	49	52	66	0.37	0.29	0.33	0.42
1977	46	52	29	53	0.26	0.30	0.18	0.33
1978	96	57	44	71	0.54	0.32	0.27	0.44
1979	113	59	33	68	0.62	0.33	0.20	0.41
1980	116	70	46	72	0.63	0.38	0.26	0.40
1981		53		74		0.32		0.46
1982		65		71		0.39		0.44
1983		64		77		0.38		0.47
1984		65		79		0.38		0.48
1985		73		93		0.42		0.55
1986		57		97		0.33		0.57
1987		70		93		0.40		0.55
1988		89				0.50		

Note: (a) C - cases per thousand D - deaths per thousand.

Sources: Health Department Statistician and Demographic Reviews of the Maltese Islands.

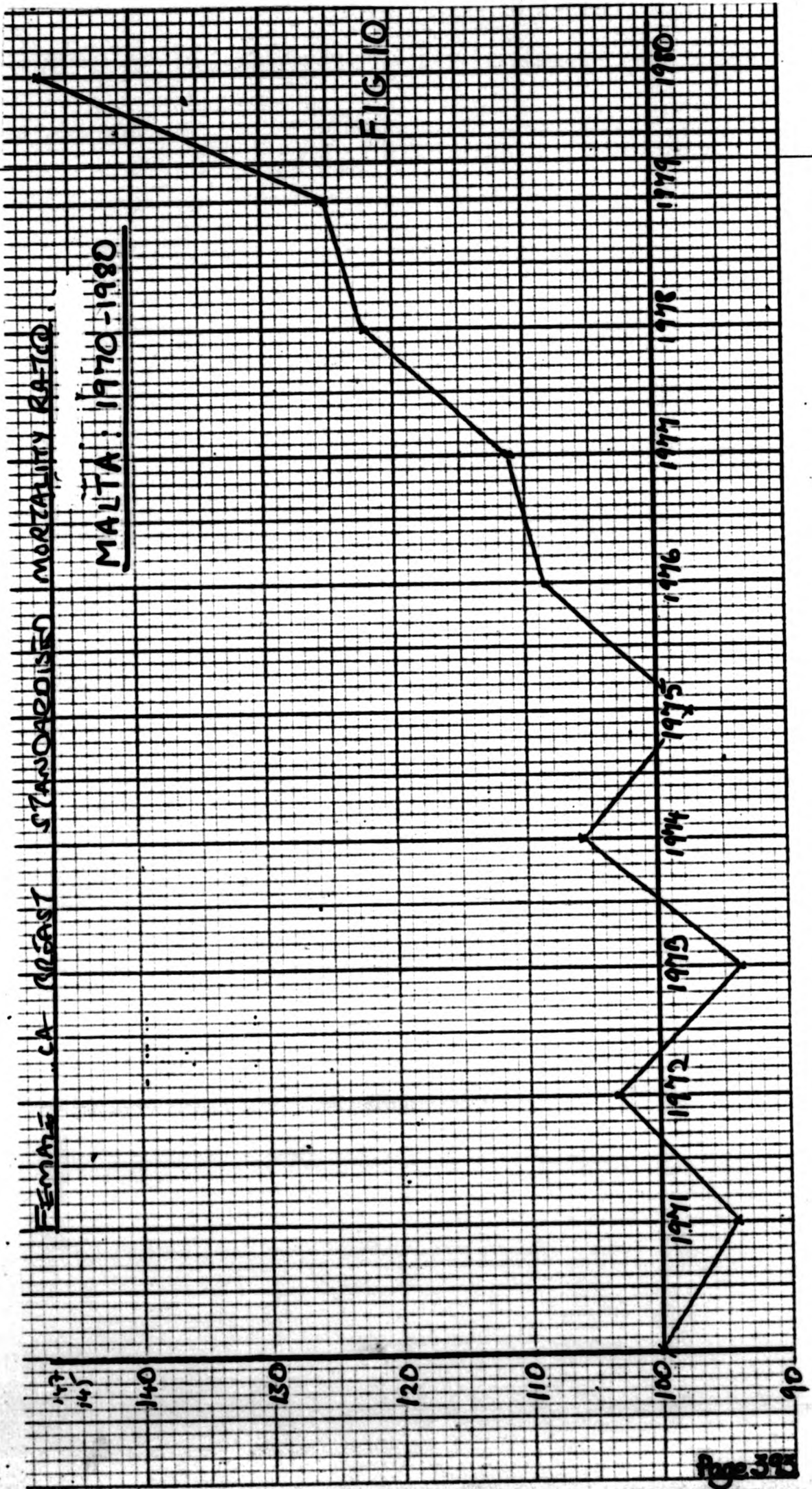
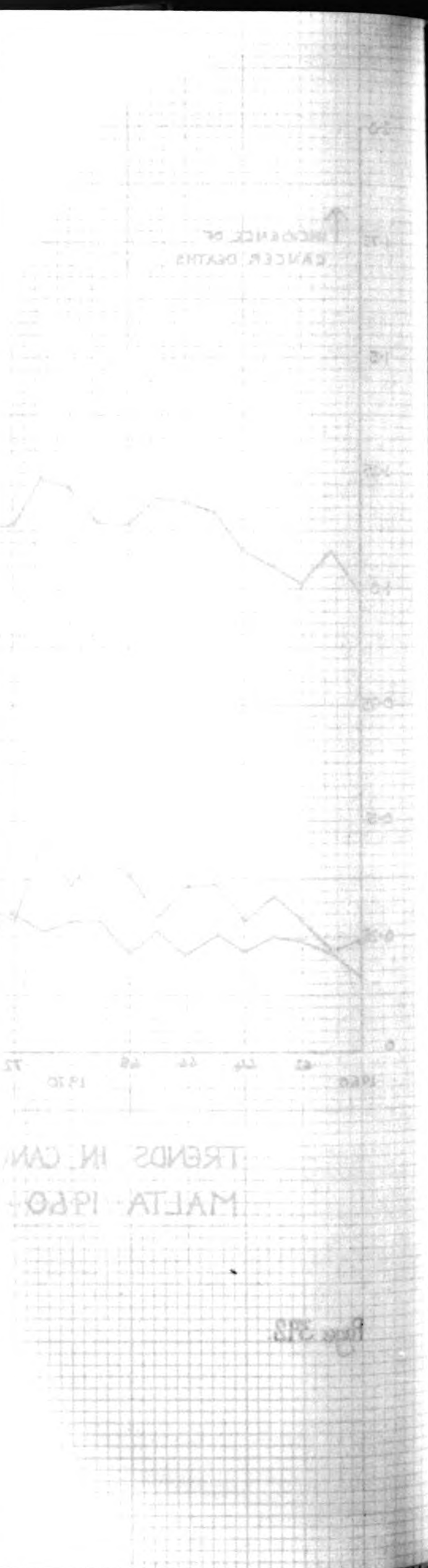
FIG 9



TRENDS IN CANCER MORTALITY RATES
MALTA 1960-1988

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Age at onset and death in dia...

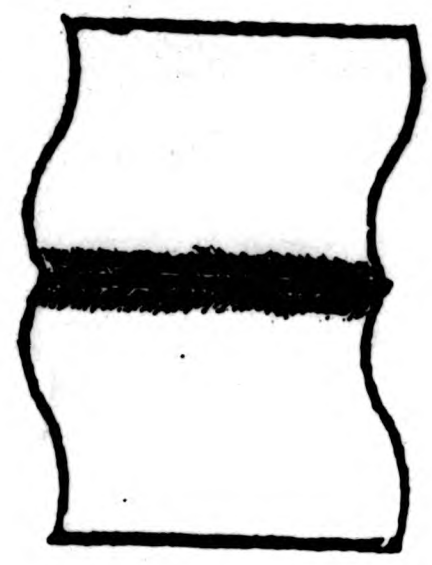


Age at onset and death in cancer



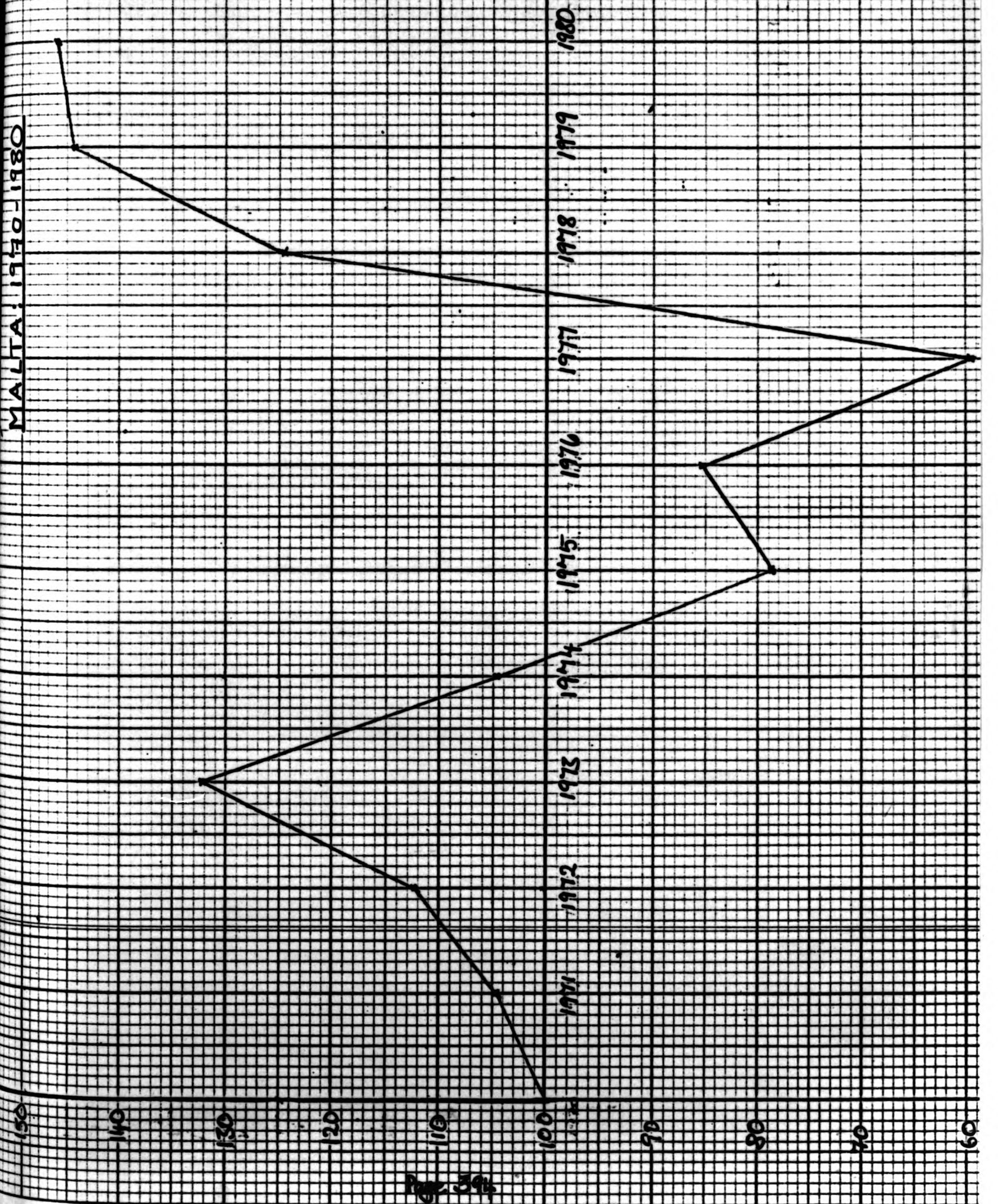
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FEMALE BREAST CANCER STANDARDISED INCIDENCE RATIOS (BY AGE-SEX)

MALTA: 1971-1980



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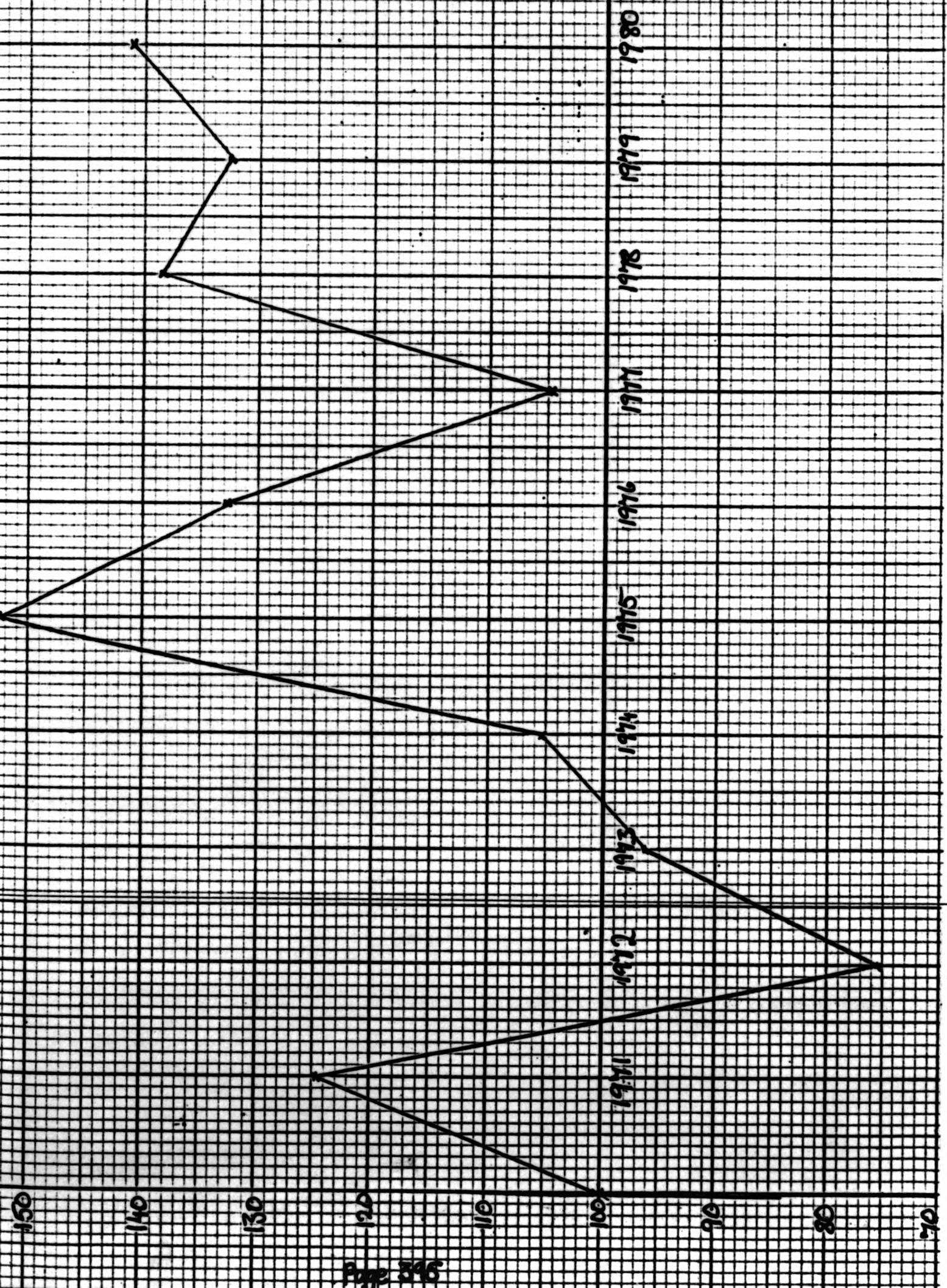
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MALE LUNG CANCER STANDARDISED MORTALITY RATIOS (BY AGE & SEX)

MALTA: 1970-1980

FIG 12

MALE LUNG CANCER STANDARDISED MORTALITY RATIOS (BY AGE & SEX)



MALE LUNG CANCER

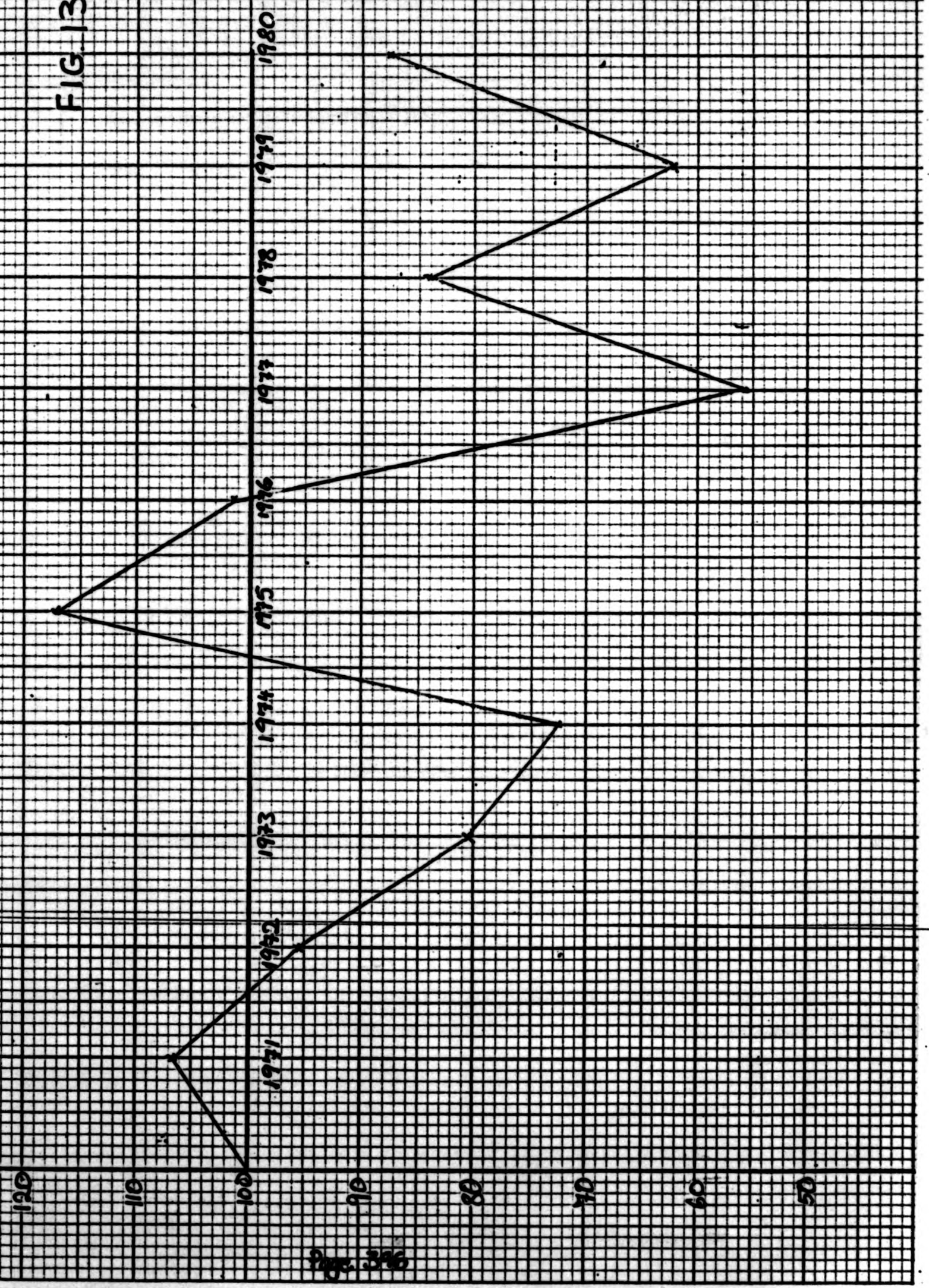
FIG. 13

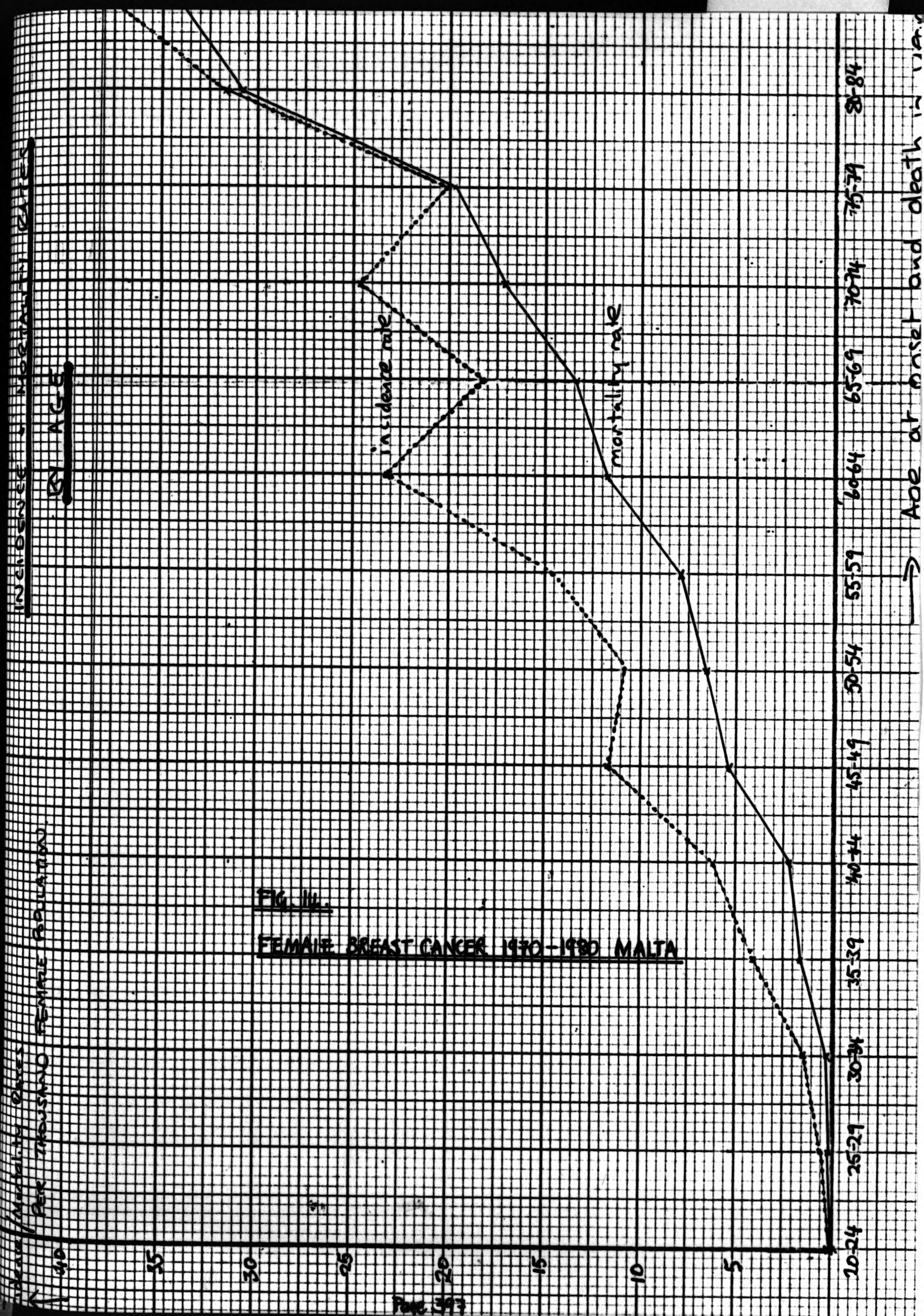
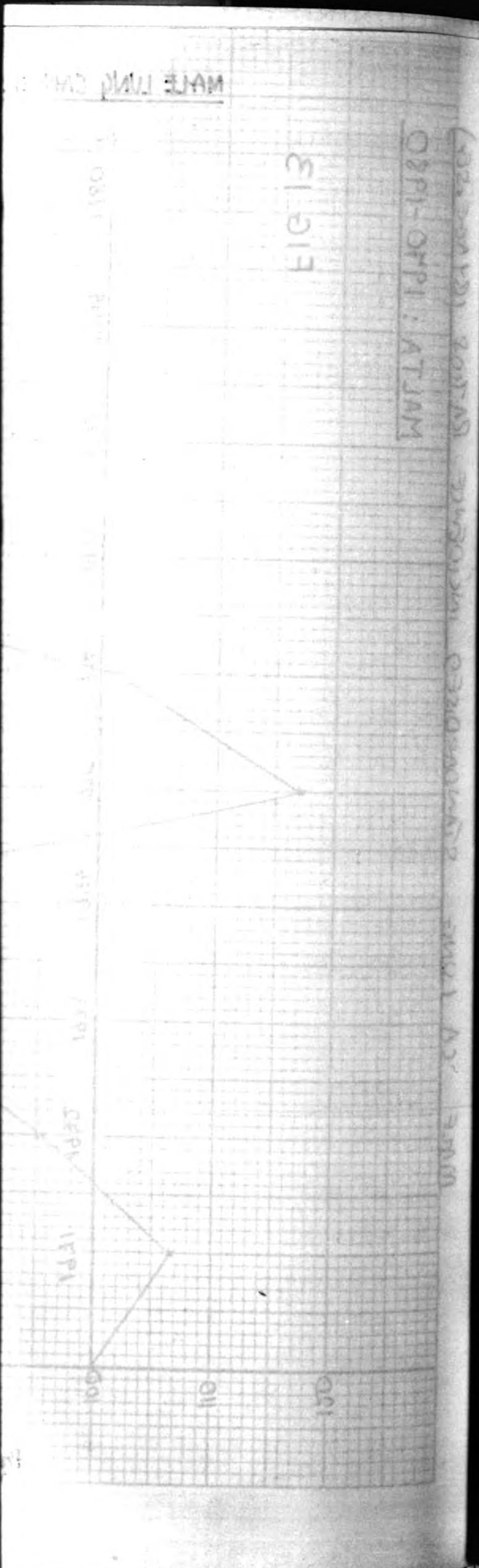
OPPILOMPLIATION

MALE LUNG CANCER STANDARDISED INCIDENCE RATIOS (BY AGE-SEX)
MALTA: 1970-1980

FIG. 13

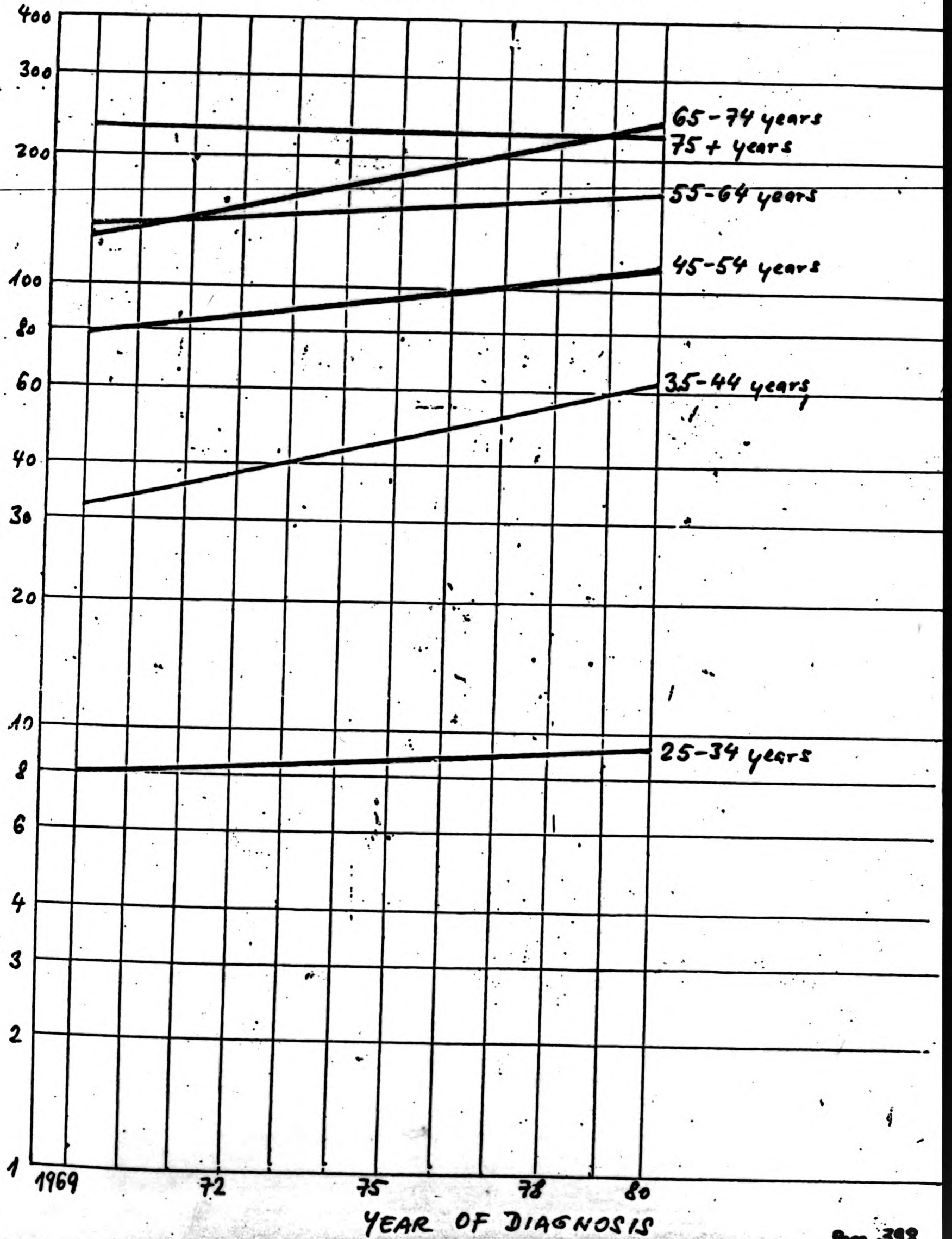
MALE LUNG CANCER STANDARDISED INCIDENCE RATIOS (BY AGE-SEX)





Annual rate per
100 000 females
in individual
age groups

Fig. 45 Trends of the incidence of
Cancer of female breast.
/Malta 1969 - 1980 /



INCIDENCE & MORTALITY RATES

BY AGE

INCIDENCE / MORTALITY RATES
PER THOUSAND MALE POPULATION

40

35

30

25

20

15

10

5

0

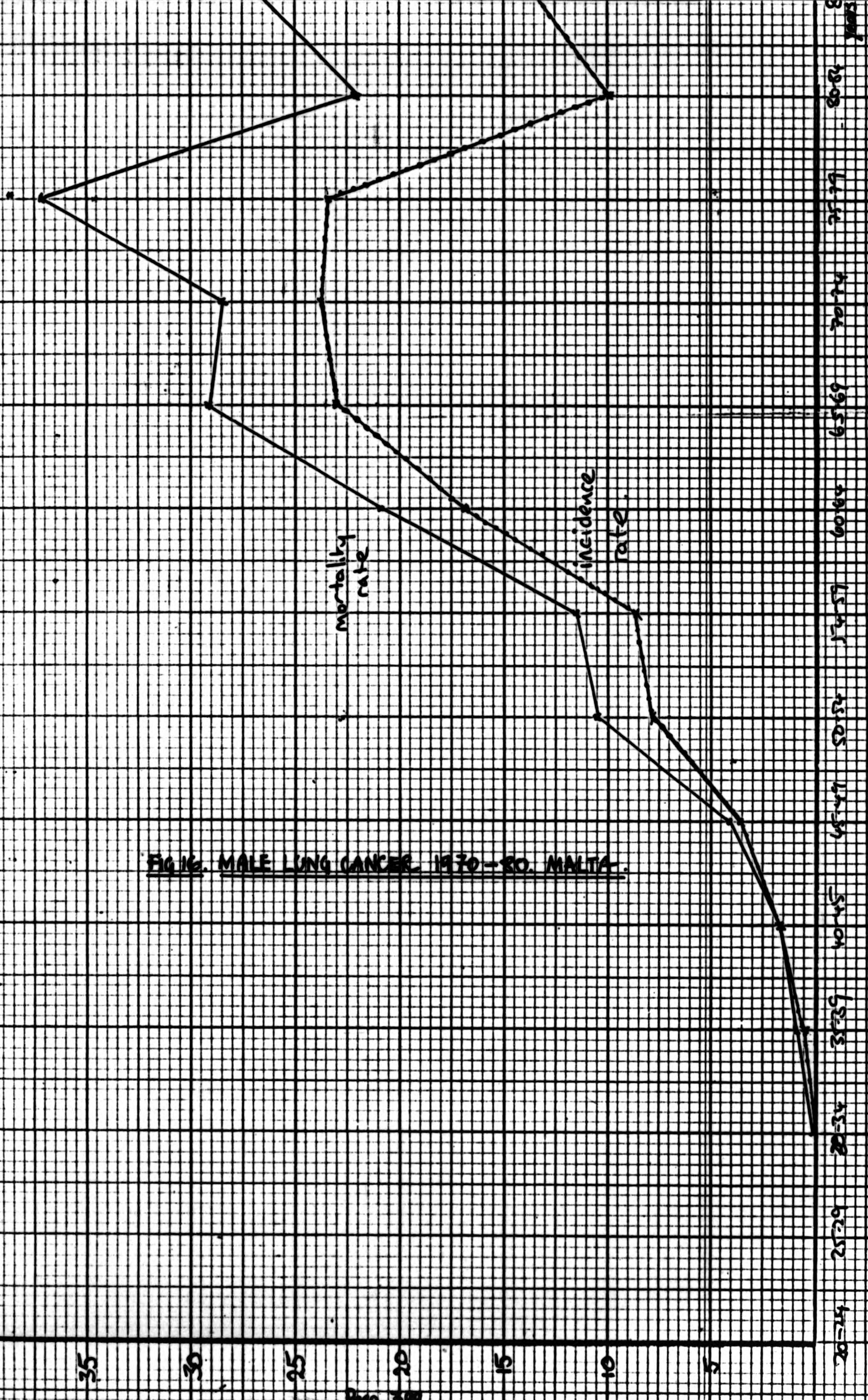
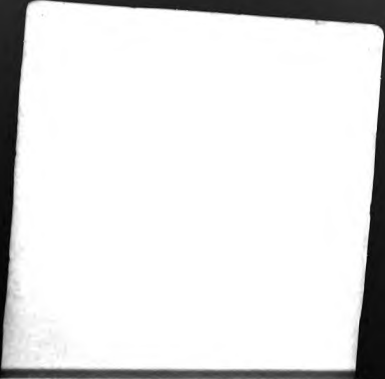


FIG. 16. MALE LUNG CANCER 1930-80. MALTA.

Source: Annual Report of the Registrar General, Malta.



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CHAPTER TEN

THE DIALECTIC OF HEALTH AND DEVELOPMENT

More and more, younger and younger people will develop cancer. In vain do we hope that our friends and children may be saved from this way of dying. The body metabolism and the eco-system cannot cope with increasing amounts of industrial pollution pumped into them every day. Inter-parliamentary world conferences on the global environment are being called with increasing frequency.(a) Attempts are being made to advance alternative technologies based on renewable energy and the recycling of waste. People are becoming more aware of the dangers of nuclear radiation, lead, carbon monoxide, nitrogen oxide and benzene emissions, asbestos, pesticides and chemical pollution of the air, sea, land, water and food. Economists are calling for an extension of the price system to include the earth's resources so that the cost of contamination and depletion is realised. But, at the end of the day, such indicators will do as much for the contaminated as social indicators have done for the world's huge and expanding under-class. Unless the central contradictory unity of capital and labour is addressed, we will all remain cogs in the wheel of destructive capital accumulation.

In the dialectic of health and development, the central question is how commodities and what commodities are produced. This thesis has therefore focused on the historic development of the relations and forces of production. Within the analysis of the relations and forces of production, the relative power of the country in question and the relative power of women are fundamental aspects of how people live and die and what they can do about it.

(a) For instance at Washington April 29th to May 2nd 1990.

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Disease is a reflection of socio-economic conditions, especially of what is produced, and how and where it is produced. In the particular history of Malta, epidemics of malaria recurred as peasants sought to reclaim swampy land and disturbed mosquito nests. People were engulfed by nature. The fever spread. The plague epidemics ravished Malta for over seven hundred years from the thirteenth to the twentieth century. They came with increased trade with the East and found natural breeding grounds in impoverished port areas. During this long time span, the forces of production changed very slowly and relations of production in Malta and most underdeveloped countries remained servile.

Cholera, in the nineteenth century, spread with increased imperialist activities and trade. It recurred where the poor were concentrated and where quarantine controls, clean water and sewage systems did not exist. Conflicts between opposing interests of imperial military strategists, imperial and local merchants, the clergy and the workers and peasants were highlighted in the reactions to each epidemic. Contradictions, in Malta, were not resolved and cholera recurred.

Undulant fever was the blight of early twentieth century Malta. Transmitted through unpasteurized goats' milk, its protracted incidence highlights the state's indifference to the way this basic commodity, milk, was being produced and the inequalities between the garrison and the mass of people. The emerging workers' movement could make little headway, sandwiched as it was between a pro-Italian bourgeoisie and clergy, professionals and their clients, and a British commercial and administrative elite.

With rapid post-war industrialisation, the character of the predominant diseases has changed from being infectious to chronic. The increasing incidence of cancer is resulting from increased production and use of carcinogens. From man being engulfed by nature, nature is now being engulfed by man, and is in danger of irreversible destruction. How cancer can be controlled is part of the question of how the earth can be saved. Caught in the nexus of capitalist relations, in the production of commodities for short-term private gain, Malta's capacity to control disease is limited. It is restricted, as this thesis underlines, by the world dialectic of labour and capital. The condition of alienated labour is restricting the realisation of health and development in workers and in society as a whole.(a)

In the Maltese Islands, faced by awesome world inequalities and global eco-destruction, both advantages and disadvantages exist. The working class has a high level of political consciousness, manifested in incomparably high polls. It has a history of unity and success in struggles for freedom from oppression. It has an advanced nucleus in the shipyards where workers' control of production and the environment is alive and increasing.(b) High standards of health, hygiene and sanitary services exist. It is, however, in danger of losing the Labour principles of equality and freedom, for the myth of a free market paradise. It has turned away from socialism and the development of one and all, to capitalism and the survival of the richest. It will become increasingly vulnerable to changes in international capital.

(a) Chapter One, Figures 3 and 4.

(b) The MDD Workers Council has implemented controls on asbestos that the Government has still not introduced.

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In Malta, as in most underdeveloped countries, development requires an expansion of productive activities. But the balance, here as elsewhere, must be redressed from increased quantity of commodities for short-term private gain to increased quality for long-term public gain. Unless this challenge is met, the quality of our lives and of the earth's resources will continue to deteriorate. It requires, above all, increased workers' control of production and increased international workers' unity; public participation in and control of planning; the planned use of alternative, non-destructive technologies such as solar power and natural fertilisers; regional unity to reduce nuclear radiation hazards; and a programme of social reforms aimed at improving the quality of life for all and especially the freedom and ability of women.

The dialectics of health and development are inextricably linked to the dialectics of labour and capital, of imperialism and of chauvinism. Only when the relative power of workers, women and the nonaligned nations of this world increases, will the destructive grip of monopoly capital be broken; the arms race and the proliferation of nuclear power be halted; and the children of this world be healthy, able and free.

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Abbreviations: BMJ British Medical Journal
BSSRS British Society for Social Responsibility in Science
IJHS International Journal of Health Services
RRPE Radical Review of Political Economy

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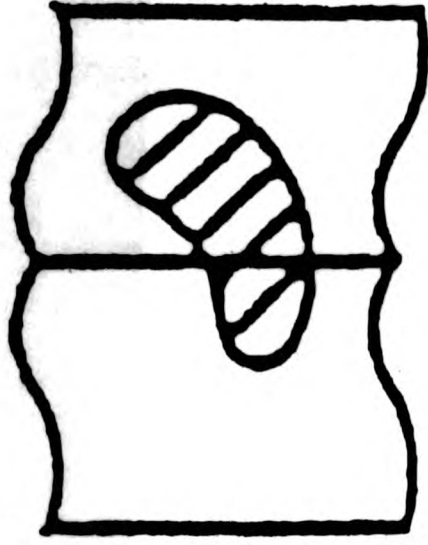
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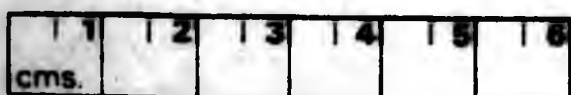
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