

PART 1

The Illegal Distribution of Western Medicines in Developing Countries: Pharmacists, Drug Pedlars, Injection Doctors and Others. A Bibliographic Exploration

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I have taken so many drugs that if I take medicine it tastes like sugar. . . .

Ghanaian Highlife song

1. INTRODUCTION

In January 1978, at the Central Lorrystation of Kumasi, Ghana, I met a young boy who was selling capsules from a plastic bag. I asked him what they were for and he first answered "Piles," but later, confronted with other customers, he indicated that the medicines would treat sexual impotence. I bought one capsule for the price of two and one-half shillings and took it home. It was analyzed and proved to be Penbritin 250 mg, a broad spectrum antibiotic, which is used neither against piles nor against impotence. This is only one of numerous examples of illegal sale of Western medicines which have been noticed by observers in developing countries.

In this article I will explore the literature which has been published up to now on this

phenomenon. It appears to me that this literature is scanty, although the phenomenon is believed to be widespread and is causing great concern. Some of the literature which will be referred to in this review does not contain more than a few lines about the problem.

In this review of literature the following subjects will be dealt with: self-medication, drug trading, "injection doctors," induced abortion, and the role of multinational pharmaceutical firms. In the discussion attention will be paid to three questions which arise from the literature: 1) Why is the published material so scanty? 2) Why is there frequently a preference for bypassing medical doctors when obtaining medicines? and 3) What are the medical consequences of the illegal distribution of medicines?

This article has a number of biases, two of them being the preponderance of literature on subsaharan Africa and the almost complete absence of non-English publications. I very much welcome comments, corrections, and additions to this exploratory essay.

2. REVIEW OF LITERATURE

2.1. Self-medication

The use of Western medicine outside the official medical organizations often implies a certain degree of self-medication by the patient or the one accompanying the patient. We therefore first look at some publications dealing with self-medication in developing countries.

In 1977 the World Federation of Proprietary Medicine Manufacturers held a conference about "The contribution of responsible self-medication to world health." The report (W.F.P.M.M. 1977) of that conference shows that the participants, mainly representatives from the pharmaceutical industry and government institutions, were optimistic about the positive results of self-medication by means of nonprescription, or so-called "Over The Counter" (OTC) medicines. Self-medication relieves the burden on professional health workers. One contributor pointed out that in England, for example, it is practised with good results by three quarters of people reporting any kind of disease or injury. Surprisingly, the conference report remains silent about the problems of self-medication in developing countries. The fact that prescription medicines are also widely sold without medical supervision is not mentioned. One of the speakers even goes to the extent of saying that "When you consider the availability of self-medication products throughout the world, the absence of widespread abuse is astonishing" (W.F.P.M.M. 1977:13). A very naive statement indeed. There are indications that it is rather the ongoing abuse which is astonishing.

The Federation held another conference in 1979 (W.F.P.M.M. 1979). On that occasion more critical sounds were heard. The misuse and abuse of OTC medicines in developing countries were recognized and suggestions were proffered as to how such negative effects could be prevented. These suggestions included: selection of appropriate drugs, an adequate distribution system, training of

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storekeepers, controlling of prices, and community participation. The opinion voiced by three speakers was that the risks of self-medication should be preferred to no medical help at all: "Self-medication might be described as a symbol of self-defense against disease when organised health care does not exist or is not available" (W.F.P.M.M. 1979:58).

One speaker, from the Philippines, referred to Western campaigns to keep medicines out of the reach of children. He was doing exactly the opposite, he said: making sure that medicines reach children. The same speaker reported that he taught people to inject streptomycin, although this was illegal. The reason was that nobody else would do it.

Less optimistic were a number of participants in a medical conference in Nairobi in 1973. The proceedings of that conference were published under the title "The use and abuse of drugs and chemicals in Tropical Africa" (Bagshawe et al. 1974). Arya and Bennett (1974) examined self-medication in relation to sexually transmitted diseases by university students in Uganda. They found that about 10 percent of 371 students used antibiotics without a doctor's prescription. Sources of supply mentioned by the authors are manifold. The capsules may have been saved by the person himself or a friend from a previous doctor's consult, they may have been bought in a shop (although such a sale without a prescription is illegal), they may have been obtained from (befriended) nurses, junior hospital staff, fellow medical students and "quacks" (the authors probably refer to what we have termed "injection doctors" below). Finally they may have been obtained through subterfuge. Other papers dealing with self-medication at this conference will also be discussed in this review.

A paper by Parker and others (1979) reports findings about the incidence of self-care (which is not necessarily self-medication) among 48,000 people in three Indian states and

three Nepalese districts. Out of 14,000 people who said they had been ill in the two weeks preceding the interview, 25 to 42 percent reported having practised self-care. The actual percentage may, however, be considerably higher, if we take into account the argument by Schulpen and Swinkels (1980) (see further below). Among those practising self-care there were no significant differences in the percentages using modern and traditional treatment. The authors present, however, no information on the type of modern medicines—prescription or nonprescription—being used. In another study (1978), Kleinman reports that no less than 93 percent of ill Taiwanese practise self-care. He speaks of "the family as practitioner." The author made use of a one month recall period. Kielman and McCord (1977) report positive results of a medical project stimulating home treatment by mothers of their children suffering from childhood diarrhea, in Punjab villages.

Although we often lack information about the question whether we are dealing with legal or illegal medical practices, it is certain that self-treatment with Western medicines has become very common in many third world countries. Examples come from the Ivory Coast (Lasker 1981), El Salvador (Ferguson 1981), Guatemala (Woods 1977) and the Philippines (Nurge 1958). Ledogar (1975) reports that in one South American country 75 percent of all medicines sold were purchased by consumers for self-medication.

A specific example is reported from Dakar, Senegal, by Strobel et al. (1979). They write that self-treatment with Western medicines such as penicillin and sulphonamides is popular. They also describe another category of medicines which are very generally used for self-medication. They are pharmaceutical products which were originally made in Anglophone West-African countries and, for that reason, called "pommades anglaises." Their constituents are frequently not known but the authors found

that they often contain menthol, camphor, and organic acids (e.g., salicylic and chrysophanic acids).

One particular type of "self-medication," induced abortion, will be discussed separately.

2.2. Drug Pedlars and Pharmacists

Sellers of Western medicines who are involved in illegal activities vary from illiterate drug peddlars to licensed pharmacists. In this section we shall review the literature on this wide category of medical agents. Some of these sellers may also engage in giving injections or inducing abortions. In this case we refer to the sections 2.3. and 2.4. respectively.

The most complete picture of drugstores in a developing country is by Nordberg (1974) who studied the functioning of twenty-five rural drug shops in Ethiopia. Most of the shopkeepers were advanced dressers who were permitted to sell only relatively harmless drugs. Nordberg found that attendance was higher in those places which had additional health institutions in town. Another noteworthy outcome of his study was that the shopkeepers reported the selling of large amounts of antibiotics and sulphonamides. Nordberg is of the opinion that the Ethiopian legislation, which forbids the sale of antibiotics and sulphonamides by store keepers, is not realistic, particularly not in remote rural areas. Indeed it is likely that the true sale of antibiotics and other prescription medicines is much higher than has been reported, since the shopkeepers were asked to report illegal activities. The fact that the percentage of clients suffering from gonorrhoea was much higher in drug shops than in hospitals and health centres, suggests that shop medicines may be particularly attractive to people suffering from "shameful" diseases.

Another study from Ethiopia, by Kloos (1974), deals with pharmacies, drug shops and rural medicine vendors in Addis Ababa. The author

is primarily interested in the relation between spatial and economic aspects of this trade in modern and traditional medicines. Kloos also mentions the illegal sale of prescription medicines:

Pharmacies, druggist shops and rural vendors in the Merkato area occupy a unique position among drug retailers in Addis Ababa because they serve, in addition to Addis Ababa's population, a continuous stream of merchants and visitors from the provinces. Most of them are wholesalers, retailers and traders who come daily from various provinces of Ethiopia to sell and buy a wide range of agricultural and manufactured goods. A small proportion of them are drug pedlars, who buy their drugs in bulk in the pharmacies and druggist shops of the Merkato, often at reduced prices. Although it was impossible within the frame of this study to determine what proportion of the rural clients were drug pedlars (due to the inherent suspicion of many people toward strangers who ask personal questions), it was observed that 19 out of the 43 out-of-town clients bought unusually large quantities of drugs. These were mostly well-known drugs such as penicillin, "afenol," penicillin eye ointment, tetracycline, and especially commercial forms of "kosso." It is suggested here that most of these persons were either rural medicine vendors or illegal drug vendors. Purchasing drugs cheaply in the Merkato means a guaranteed profit for persons selling them in the provinces where official drug retailers are scarce. (Kloos 1974:91-92)

A third study, located in Ethiopia, has been made by Buschkens and Slikerveer (in press) who interviewed around 434 sick people among the Moslem Oromo in East Ethiopia. The majority of these (59 percent) used traditional home medicine, 25 percent went to traditional healers, 10 percent visited a modern health centre and 6 percent went to drug vendors, traders who sell both traditional and modern medicines. The authors consider these vendors as representatives of a *transitional medical system*.

Some time ago a similar view was expressed by Simmons (1960) who studied popular and modern medicine in Mestizo communities of Peru and Chile:

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Apparently more effective as an innovator of modern medicine is the druggist, whose role as a practitioner of medicine epitomizes whatever rapprochement has occurred between popular and modern medicine. In both Peru and Chile, many druggists have built up substantial practices as covers of a wide variety of popular medicine.... The druggists utilize both popular and modern medicines in curing, and their prestige is enhanced by their professional status as representatives of modern medicine. (p. 84)

Another country where a number of studies have been carried out which touch on "shop medicine" is Kenya. A few papers have been published in the proceedings of a conference on "The use and abuse of drugs and chemicals in tropical Africa." Wasunna and Wasunna (1974) investigated what medicines are being sold in the streets and open-air markets of Nairobi and a few other towns. They found that every place where large crowds passed, people, invariably men, were selling drugs:

The majority of these people either had temporary open-air stalls at which they sold clothes, . . . blankets, crockery, soap, sweets, stationery, etc., or they carried some of these articles and sold them as they moved in the crowd. With remarkable regularity, they announced in low but clear voices their drugs in order, "M.B., suta, capsules." The drugs were often kept in plastic bags, in jacket pockets or on the roof of the stall. . . . We found out that we could purchase as little as even a single tablet or capsule. There were several types of capsules evidenced by the different colours but the choice was left to the buyer. No word of dosage or even the type of illness that could be treated with these drugs was forthcoming, except one was told on direct questioning that M.B. was for minor illness, suta for moderate illness, and capsules for severe diseases. Each tablet was 20 cents and a capsule 40 cents, irrespective of type. The suta and M.B. 760 tablet we found to be authentic obvious drugs. We were able to buy seven different types of capsules which we later identified as containing ampicillin, tetracycline, chloramphenicol, and one gelatine capsule which was sold to us as a penicillin capsule but which we found to contain multivitamin syrup. (Wasunna and Wasunna 1974:161-62)

The fact that most medicines were of brands not usually obtainable in government hospitals

suggests that they originate from the private sector. The authors list five factors which may promote buying drugs from hawkers and shopkeepers.

1. Some people do not wish their illness to be known by others (for example venereal disease).
2. Resistance to overcrowded hospitals and long queues.
3. Experience with particular drugs from previous doctor's visits.
4. Weakness of drug control.
5. The low prices of these drugs. (p. 162)

This last factor needs clarification. It is well known that drug companies make enormous profits in developing countries. So how can the prices of the medicines be so low, less than half of their retail value? The authors think that the medicines are probably not bought in the first instance. They seem to suggest that the medicines are stolen from health institutions, but such an explanation runs counter to their observation that the medicines originate from the private sector. Are they perhaps old medicines dumped by drug companies? The authors do not provide a satisfactory explanation.

Another Kenyan study, by Thomas (1970), is located in lowland Machakos and compares health care in two Kamba communities, one with a health centre and one with only a dispensary. One remarkable outcome of the research was that in both communities "shop medicine" proved to be very popular for short illness as well as for illness lasting up to one year. The percentages of people using shop medicines varied from 35 to 43 percent. The informants reported three advantages of shop medicine:

1. It is obtainable near their homestead, never further away than two and one-half km.
2. The service is quick.
3. The transactions are not stressful, because the shops are usually run by acquaintances.

Disadvantages that were reported are:

1. Contrary to medicines distributed through hospitals and clinics, shop medicines are not free.
2. Shop medicines are regarded as less powerful than hospital or clinic medicines.

In view of the importance of shop medicine it is disappointing that the author does not provide information about the types of medicine being sold, the legal and illegal aspects of the trade, the social identity and qualifications of the shopkeepers, and other qualitative data about the distribution of shop medicine.

A similar critique fits an unpublished thesis by Maina (1977) about medical care utilization with respect to measles and acute diarrhea by Akamba mothers. Shop medicine is reported to be the first medicine used for acute diarrhea. The author also makes mention of a "semi-doctor," "an illegal private practitioner who offers injections which have usually been smuggled from modern health institutions." However, this category of health agent is excluded from the study, "because of the very few cases of mothers admitting the use of a semi-doctor." A summary of this thesis has been published in the form of an article (Maina 1979).

In a paper by Sculpen and Swinkels (1980), who also worked in the Machakos area of Kenya, the frequent use of shop medicine is again mentioned. The authors analysed a total of 6,826 health activities. In the two weeks preceding the interview more people (30 percent) had used shop medicine than medical help from hospitals or clinics (20 percent). Moreover, the respondents claimed better results from the former than from the latter. Regrettably, the information by the authors on the medicines bought in shops refers only to the complaints for which they were used, and does not specify the pharmaceutical names.

In a recent study of a town in El Salvador, Ferguson (1981) describes a popular sector of

medical care which she terms "the commercial pharmaceutical sector." The sector depends on Western medicines which are distributed by shopkeepers outside the supervision of medical doctors. Some sellers also function as alternative practitioners. Although medicines in the public health institutions are free of charge, many people prefer to buy medicines from these traders. The reasons they give are the long waits and the rude treatment they receive at the health posts. A similar situation is reported by Van der Geest (1981) in Cameroon and by Buschkins and Slikkeveer (*in press*) in Ethiopia.

Studies by Nchinda (1975, 1976) in rural West Cameroon revealed an overwhelming preference for Western rather than for traditional health care, but self-medication with shop medicines proved to be relatively rare (6 percent). There are, however, reasons to suspect that self-medication was grossly under-reported. Schulpen and Swinkels (1980) found an under-reporting rate of 60 percent when they compared a recall period of two weeks with one of one day. Since Nchinda used a recall period of one month, under-reporting in his research is likely to be still higher. More intensive research methods than survey-interviews are needed to collect reliable and valid information on this delicate aspect of health behaviour.

The problems which arise with the distribution, through pharmacies, of Western medicines in developing countries are pointed out by Fendall (1972:142-47). The distribution is usually subject to legal regulation, but in practice control over it proves to be extremely difficult to enforce. Dangerous medicines are often sold by unqualified druggists without any doctor's prescription. Some druggists even function as physicians. Fendall derives most of his data from Guatemala and Thailand, but similar situations exist in other third world countries. Dewalt (1977) reports similar practices in a rural Mexican community.

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It is not only unqualified people who play a role in the illegal sale of medicines. In Cameroon, where the licensed pharmacists are highly qualified, it was found that they were involved in two types of illegal activity: they provided almost any kind of medicine to clients without a prescription, and they functioned as wholesalers to drug vendors (Van der Geest 1981). It was first assumed that licensed pharmacists and illegal drug vendors were involved in a competitive relationship, but during the research it became clear that they were partners. Pharmacists, who want to sell their products only in whole packages, have the drug vendors retail them in the small quantities demanded by poor clients. As one pharmacist analysed the situation: "They [the vendors] work for us." There are two chief explanations for this illegal practice within the legal sector. In the first place, in view of the inefficiency of the medical service it would be unrealistic to require a prescription for every medicine. Doctors are often not available to write prescriptions. In the second place, pharmacists should be regarded primarily as commercial entrepreneurs. Selling has a higher priority for them than curing (Van der Geest 1981:122-27.) The selling of patent medicines by pharmacists without a doctor's prescription was also common in Mozambique before independence (Watts 1977).

The use of patent medicines in Nigeria is reported by Maclean (1974), Messenger (1959), and Mabadeje (1974). Messenger (1959) writes that traders sell patent medicines which are used for "wrong" purposes. Mabadeje (1974) who did a survey among 1018 people in Lagos, reports that 11 percent of his respondents said that a pharmacist recommended a given drug first. The use of pharmacies is said to be common.

In an unpublished thesis about patients in a mission hospital in Ghana, Bollen-Tijssen (1978) devotes an appendix to the selling of medicines in "drugstores." She mentions about the

same factors as Wasunna and Wasunna (1974) (see above) to explain the popularity of shop medicines. An interesting detail is her description of a legal loophole to obtain a pharmacy license in Ghana. For that purpose owners of drugstores sometimes hire pensioned colonial pharmacists, who have valid certificates although they never had a real training. The author lists all the medicines which the interviewed patients had bought prior to the hospital visit. Among these are various prescription medicines.

In a few cases it is reported that indigenous practitioners distribute western medicines, for example in India (Bhatia et al. 1975; Taylor 1976), Guatemala (Woods 1977), Columbia (Press 1971) and Mexico (Brown 1963). More common is that health workers in modern institutions sell medicines privately which have usually been taken from their work. Publications reporting this phenomenon refer to Zaire (Janzen 1978:92), Kenya (Thomas 1975:272), Ivory Coast (Lasker 1981:161) and Cameroon (Van der Geest 1981:136). In most cases these sellers also treat their clients.

2.3. "Injection doctors"

The term "injection doctor" stems from Cunningham's (1970) well-known article, based on research in a village in Thailand. Injection doctors are formally unqualified persons who administer injections, usually containing antibiotics. In Thailand most of them have no connection with traditional medicine. In Cunningham's sample of 113 people only six cases of traditional treatment were reported. Cases of treatment by government health agents and injection doctors were 102 and 101 respectively. The author ascribes the popularity of injection doctors to the gap between the population and the modern professional health agents. Injection doctors, therefore, play a transitional role:

They transmit aspects of a great tradition (modern medicine) by bringing them closer to the majority of the population both by simplifying them conceptually and—due to their intermediate position—by bridging the status gap (1970:20)

The fact that the injection doctors are not hampered in their illegal practice by authorities is well illustrated by Cunningham's remark that he met a policeman who had just been treated by an injection doctor. Another interesting detail mentioned by the author is that one of the two injection doctors, who are described extensively, worked first as a "doctor's assistant" in a government health station, where he learned to give injections. One injection doctor reported more than 300 injections per month (Cunningham 1970:12).

Injection doctors in Laos are briefly mentioned by Halpern (1963). Halpern writes that in Laos villages the use of injections is being adopted by traditional healers. Injections, he says, "are believed to have almost magical powers" (Halpern 1963:197).

In her case study of Ibadan, MacLean (1974) also describes the phenomenon of injection doctors. She is very critical of their activities:

Modern medicine is often identified in the mind of the ordinary Ibadan citizen with the magical power of injections, a therapy which has proved dramatically effective for many acute infectious conditions. Consequently it is easy for unscrupulous operators to offer this desirable treatment, in private, for several pounds a time. Penicillin and streptomycin often find their way to the open market and, used in single doses by these self-styled "doctors," cause the development of resistant strains of bacteria. This, however, is only one of the risks which are involved. The individuals who use syringes have neither the means nor the intention of sterilizing their instruments; being unaware of anatomy, they may inject direct into a main artery or vein; they may even use antiseptic fluids, such as lysol, for injecting. The result can be serious illness, mutilation, or sudden death, and instances of people collapsing after "injection" are not infrequently reported by the press. (Maclean 1974:107-8).

With regard to Maclean's last remark, an analysis of African press clippings about medical services, compiled by Van Amelsvoort (1976), does not mention any such case. Such cases are, however, mentioned by some anthropologists. Warren (1974), for example, who carried out extensive medical-anthropological research in a Ghanaian town, also emphasizes the disastrous consequences of unsterile injections by so-called "dispensers." Van Binsbergen (1979), in an extended case history among the Zambian Nkoya, describes the death of a child due to a large overdose injection by an illiterate village elder. Similar incidents are reported by Logan (1973) in an Indian community in Guatemala and by Ferguson (1981) in El Salvador.

During my own research in a Ghanaian country town I have witnessed the giving of one injection by an unqualified person and I have seen the results of several other such injections. Bleek (1976), who studied birth control practices in a Ghanaian town mentions the same phenomenon in a case history. Bollen-Tijssen (1978) in her study of a Ghanaian hospital, found that injections were the second most frequent type of medical help which patients had obtained before coming to the hospital.

In a large-scale research project on health planning in Turkey, Taylor et al. (1968) discuss the role of "needlemen." They estimate that there are about 30,000 needlemen in Turkey. After the traditional midwives, they are the most numerous "traditional" specialists. They describe a needleman as follows:

His health knowledge may have been derived from military service as a trained medical corpsman, from working in a doctor's office, or from being a janitor in a hospital. Needlemen frequently diagnose, prescribe drugs and give medical advice in addition to giving injections. They are usually male, over twenty-five years of age, and are often given the title of "doctor" in the village where they practise. (Taylor et al. 1968:179).

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Needlemen are both substitutes and precursors of doctors. In each village one finds one needleman. Interestingly enough, "where literacy rates are higher, more needlemen are to be found" (Taylor et al. 1968:186) which implies that the number of needlemen increases with urbanization. A comparable trend has been reported by Nordberg (1974) (see above) for drugstore attendance in Ethiopia. The authors report that needlemen "inject penicillin and other chemotherapeutic agents promiscuously" (1974:277).

This list does not exhaust the publications which mention the use of hypodermic syringes by lay people. The same phenomenon is also reported from Zaire (Janzen 1978), Ethiopia (Buschkins and Slikkeveer n.d.), Guatemala (Woods 1977), Columbia (Press 1971), El Salvador (Ferguson 1981; Asfaw 1971), and India (Gould 1965; Taylor 1973; and Bhatia et al. 1975). The practice is not always paid for. In Cameroon I found that every village had some people who gave injections to relatives and neighbours free of charge (Van der Geest 1981).

2.4. Induced abortion

Clandestinely induced abortion sometimes includes the use of Western medicines. However, although the literature on illegal abortion in developing countries is quite extensive and growing rapidly, only a few studies contain information about the use of Western-made abortifacients. In this section I shall mention some studies which are most explicit on this aspect of illegally induced abortions.

Before that, I must make a general methodological remark about abortion studies. Most of the literature mentioning induced abortion belongs to one of the following two categories: quantitative surveys, or impressionistic rumours. The former, usually demographic-oriented surveys, fail to bring out the delicate

intricacies of induced abortion and moreover, suffer from gross under-reporting. The quality of data in the latter category is even lower. Rumours which have never been verified are often lifted out of context of touristic impressions and assume scientific importance. An anthology of many such data can be found in Devereux's (1955) collection which has been severely criticized by Snow (1976), but defended by the author (Devereux 1980).

A remarkably informative article on abortion in rural Thailand has been written by Nar-kavonnakit (1979). The author has collected data from eighty-one practitioners of illegal abortion in forty-eight out of seventy-two provinces in Thailand. Information is provided about the practitioners themselves, their clients, their procedures, and the incidence of abortion. Most abortion research until now has been carried out among clients, often in a clinical context. This study suggests that, even in the illegal sphere, practitioners may also be a possible starting point. It should, however, be taken into account that this approach excludes self-treatment of abortion. The most common methods of inducing abortion reported by the Thai practitioners are massage (46 percent) and the injection of solutions directly into the uterus (23 percent). Most of the practitioners who use the latter method prescribe an antibiotic for the client or administer intravenous saline. The study does not give information about the rate of success nor about medical complications.

Studies based on research in hospitals where women with complications of induced abortion are admitted tend to collect only those instances which were not successful and/or developed medical problems. These cases are likely to constitute a selection of the most dangerous techniques. One such a study, by Okojie (1976), deals with fifty-nine patients in Benin (Nigeria) who reported an illegal abortion. Out of these, eighteen reported having been treated by a 'chemist,' nineteen by a

nurse, and seven by another untrained person. Information about the methods used by these practitioners is not given. The most frequent complications were sepsis, pelvic peritonitis, generalized peritonitis, and uterine perforation. More than half of the patients were secondary school students.

In Ghana similar findings are reported by Ampofo (1971), who interviewed eighty-three female hospital patients who admitted having induced an abortion. The majority (sixty-five) of them reported intrauterine instrumentation (mostly a particular twig), six had used a herbal pessary, and twelve reported that they had taken an oral—often Western-produced—abortifacient. The three commonest of these were 1) Apiol and Steel (const. Apiol and Ferrous sulphate), 2) Dr. Bongeans Pills (Ergot, Apiol and Ferrous sulphate), and 3) Mensicol Capsules (Apiol, Ergotin and Pennyroyal). The author doubts whether these medicines can cause an abortion. He rather believes that the abortion was induced by instrumentation, but that the patients did not want to admit this. The medical complications (sepsis, haemorrhage, tetanus, perforation of uterus) also suggest instrumentation. The most common reason for procuring an abortion is the desire to complete education.

In another study of abortion in Ghana, Bleek (1976, 1978) also emphasizes the important role of education in people's decisions to have an abortion. Bleek lists twelve Western medicines which are reported to be used for inducing abortions. Most of them are oral medicines, some are given through injections:

1. Menstrogen (pills and injection)
2. Mensicol (capsules; see above)
3. Alophen (pills: Aloin, Phenolphthalein, Ipecacuanha, Strychnine, Belladonna Green)
4. "Stone cracker" (pills) (not identified)
5. Apiol and Steel (pills; see above)
6. Dr. Bongeans pills (see above)
7. Quinine (injection)

8. Ergometrine
9. Primodos Forte (injection/pills; Progesterone, Oestradiol)
10. APC (pills; taken in large quantity)
11. Dr. Monroe Iodised Blood Purifier (not identified)
12. Gynavion (pills)

Bleek also doubts the effectiveness of these "abortifacients" and suggests that a number of reported abortions may have been merely delayed menstruations. Anato-Dumelo (1979) writes that Ghanaian women are believed to take large doses of chloroquine to terminate pregnancies. Ferguson (1981:131) reports that abortionists in El Salvador used diethylstilbestrol (DES), paramethadione and piperazine.

2.5. The Pharmaceutical Industry

There is evidence that the illegal distribution of Western medicines in developing countries is possible through the cooperation of pharmaceutical firms. Onoge (1975) succinctly puts it as follows:

The unregulated sale of drugs in African markets dramatizes the capitalist profit ethic as well as the neo-colonial status of African nations. There is evidence that foreign capitalist drug manufacturers consider African societies a dumping ground for dangerous drugs which have been banned from the market in their own countries. (p. 230)

During the past ten years there has been a growing interest in the role played by these usually multinational firms. This has resulted in a number of critical studies which probably show only the tip of the iceberg. One of the most outspoken and critical is a publication by Heller (1977) who regards the policy of pharmaceutical firms as a logical consequence of their primary aim, profit-making. Some of the most criticized features of their policy, which directly derive from their profit-making aim, are (a) their emphasis on curative medicines rather than on prevention, (b) their biased

orientation towards the needs of Western countries, (c) their dumping of medicines in developing countries, (d) their methods of advertising, (e) their testing of medicines on third world populations, (f) their production of superfluous medicines, and (g) the high prices of their medicines.

The features (c) and (d), which usually are closely linked, are particularly relevant to the subject of this essay. Reports about dumped Western medicines are numerous. A notorious case in point is an antibiotic, chloramphenicol. Heller (1977) supplies the following information:

It is now generally accepted in the West that the systematic use of this drug (chloramphenicol) should be restricted to the treatment of typhoid fever and haemophilus influenzae meningitis; with very occasional advantage it can be used as a second-choice antibiotic for other serious conditions. Responding to statutory controls, the manufacturers restrict its advocacy to these few conditions in their literature in the U.K. but were found to be advertising the same medicine for a whole variety of inappropriate conditions in their literature aimed at the Third World. . . . The survey also looked into the warnings that were included with the same antibiotic, chloramphenicol. There are eight main categories which may be considered absolute or relative contra-indications to the use of this drug. None was mentioned in the literature supplied by the manufacturers for the doctor's use in Egypt or Sri Lanka and only one contra-indication was mentioned in Jamaica. Similarly there are definite side-effects that occasionally follow the use of this antibiotic, the most important of which is the potential aplastic anaemia (a fatal condition) that can, albeit rarely, follow its administration, especially in children. None of the literature studied for use in the Third World mentioned all the potential side effects. (Heller 1977:48-49)

Heller writes that over 10 million capsules of chloramphenicol, produced by Parke-Davis, were sold to clinics of South Vietnam, shortly after it had been banned from use in the United States.

He explains:

When medicine is banned from use in a developed country because of new evidence of toxicity, or lack of efficacy, it becomes an expensive prospect for the

company that has produced it. Because of the international variability of control procedures, it is usually possible to continue to sell the banned product abroad. (Heller 1977:54)

The same applies to medicines which are not banned but for some reason have become unsaleable in Western countries. Heller also mentions sale techniques (1977:55-56) by pharmaceutical firms, a field about which we still know very little with certainty. It is, however, generally known that gifts or bribes, however one wants to call them, are frequently given, not only to medical agents but also to government officials who supply import licences or themselves buy medicines for public health institutions.

Information about the systematic testing of new medicines on people in developing countries refers mainly to contraceptives. One recent example given by Heller (1977:53-54) is an injectable steroid, Depomedroxyprogesterone (DMPA) which needs to be given only twice to four times a year. This contraceptive, which is not yet approved in the United States or in the United Kingdom, has been tested in Brazil, Egypt, Honduras, Peru, Mexico and Pakistan. To make it worse, it is likely that in a number of countries testing of new medicines implied no "illegal" (in the strict sense of the word) distribution of medicines.

The issues brought up by Heller are confirmed and expanded by a large number of authors. Turshen (1976), who assesses the structure of the pharmaceutical industry, draws attention to the fact that small producers of medicines cannot compete with the multinational firms. Through their pricing system multinationals largely determine how much health care governments of developing countries can provide. Similar general observations are made by Gish and Feller (1979). One of their recommendations is the application of the WHO directives concerning the selection of essential medicines (WHO 1977). The adoption of the WHO document is, however, not a tech-

nical but a political decision which will have to counter the very essence of the pharmaceutical industry (profit maximalization) if it is to succeed. The obstacles which have been encountered in attempts to curtail the activities of the multinationals have been documented for a number of countries. Yudkin (1978; 1980) describes the failure of the socialist government of Tanzania to bring the medicine supply under its control. Barnett and others (1980) estimate that in Ghana, due to the influence of the multinationals, up to 75-80 percent of the running costs of primary health centres is made up by pharmaceuticals. They noticed large scale waste through overprescribing.

An extremely enlightening paper by Lall and Bibile (1978) describes the struggle to reform the system of drug provision in Sri Lanka. The authors carefully analyse the roles of advocates and opponents within the country and the issues at stake. A postscript suggests that the 1977 change of government will probably undo the little progress that has been made.

In particularly well documented studies Silverman (1976; 1977) reveals striking differences in the promotion of drugs in Latin American countries on the one hand and the United States in the other:

In the United States, the listed indications were usually few in number, while the contra-indications, warnings, and potential adverse reactions were given in extensive detail. In Latin America, the listed indications were far more numerous, while the hazards were usually minimized, glossed over, or totally ignored. (1977:57)

Ironically, many of the reported activities are not even illegal, although they do facilitate the illegal retailing of medicines. Silverman, however, has been able to point to some clear violations of the law by pharmaceutical firms.

In a recent study Silverman et al. (1982) analyse the marketing of six classes of commonly used medicines in a number of Latin American, African and Asian countries. The authors

expose again double standards in promotion policies but emphasize that the big multinational companies are by no means the sole offenders: "equally responsible are small generic name houses, domestic companies, and companies based in communist-bloc countries."

A special problem with the macro level of medicine distribution in developing countries is that of quality control. As a result, inferior medicines, which may have been manufactured abroad or locally, are sometimes introduced and enlarge the hazards of medicine distribution by unqualified agents even more. This point is mentioned by Lall (1977) who describes the abolition of patent medicines and the introduction of a programme for basically needed drugs in Pakistan. The result of this decision was that small firms were able to introduce cheap medicines of an inferior quality, without the responsible institutions noticing this activity.

Another publication, by Stolley (1976), shows that the vulnerability of developing countries to pharmaceutical invasions is caused by multiple factors: lack of adequate drug transportation, distribution and storage facilities; general failure to establish national priorities for drugs due to their inability to assess their health needs accurately; lack of pharmacologically qualified personnel; inadequate public education which would help to ensure compliance with efficacious therapies. Further assessments of the practices of the pharmaceutical industry are to be found by The Haslemere Group (n.d.), Lall (1974), Lall (1975), Medawar (1979, 1982), Mother Jones (1979), Muller (1982), and O'Brien (1977). All these examples reveal a medical hegemony which Marxist author Elling (1981) regards as one of several interwoven facets involved in the functioning of a capitalist world system of "non-health," serving the capital accumulation goals of Western capitalism instead of the health needs of poor countries.

3. Discussion

In this section I want to discuss three different questions: 1) Why do we have so few publications dealing with a problem which seems to be very widespread indeed and, moreover, is regarded by many as very grave? 2) What explanations can be applied to this widespread phenomenon of illegal medicine use? 3) What are the medical consequences of this practice?

3.1. Paucity of Literature

Many articles in the popular press dealing with health problems in developing countries mention the widespread use by nonmedical people of medicines which in Western countries are subject to strict controls. Serious studies of this problem have, however, hardly been made. Most socio-medical studies touch upon it only in a cursory manner, as has been shown in this explorative article. It is in this sense that I speak of a "paucity" of literature. Why this paucity?

The most obvious explanation is exactly the illegal character of the practice. Illegal practices are by their nature the most hidden ones and are likely to be the most resistant to socio-logical interrogations. Maina (1977), for example, explicitly states that she excluded the activities of a "semi-doctor" from her analysis because her respondents were not willing to talk about it. Respondents in large-scale surveys are probably nearly always successful in hiding illegal activities since the research technique provides very few tools to check information which has been given.

In addition, the participant observation approach will encounter serious obstacles if it is applied to the problem of illegal administration of medicines. It is true that anthropologists frequently have felt attracted to those areas of social life which were most hidden, and therefore most exciting to them. This preference was part of their more general exoticist bias. However, it is understandable

that they were more successful in gathering information about those hidden topics in which they were believed to have no vested interests (for example witchcraft beliefs) than in topics where their presence was likely to be seen as threatening, such as the illegal sale of Western medicines. The status of "relative outsider," in the sense of having no vested interests, has always been a prerequisite for anthropological research. It is quite obvious that Western observers are likely to be identified with Western medicines, for medicines, together with modern education, are generally recognized as the most tangible results of Western presence in what are now "developing countries." Clandestine distribution of Western medicines therefore does not only imply violation of local laws, it also implies competition with commercial institutions of which the researcher is usually an unwitting representative.

But the paucity of research is probably also the result of lack of interest on the part of the anthropologists. It seems reasonable to argue that anthropologists in fact tended to be more interested in typically indigenous phenomena than in phenomena which—to a large extent—were derived from their own culture. The former category always contained more of the "exotic" than the latter. Thus there developed a tradition in which "sociologists" in developing countries, applying survey techniques, investigated modern medical institutions such as hospitals and clinics whereas anthropologists, applying participant observation, devoted their attention to traditional medicine. Both approaches left untouched a third—somewhat intermediate—field of medical behaviour: modern self-medication, shop medicine, injection doctors and all the rest. This neglect is a serious shortcoming if we consider the fact that social scientists could have derived from their own experience that self-medication is likely to be preferred as the first step in search of cure.

That unqualified providers of Western medicines have ample reason to hide their activities from curious observers may be illustrated by the following quotation from the opening address to the Nairobi Conference on the use and abuse of drugs and chemicals in Tropical Africa by the now Kenyan president, D.T. Arap Moi (1974):

No effort will be spared in bringing to justice all those... engaged in drug trafficking, including those drug peddlars who sell dangerous drugs without a doctor's prescription. . . . I would like to appeal to the public to report anyone suspected of drug peddling or trafficking to the police immediately. (Moi 1974:16-17)

It should at the same time be stressed, however, that in nearly all developing countries, disciplinary measures against illegal distributors of medicine are extremely rare.

I finally want to draw attention to the fact that the illegal character of this phenomenon, which resists social research, often involves more than the administration of medicines by a person who legally is not entitled to do so. Cursory reading and informal discussions with numerous people who have had some experience with health care in developing countries have taught me that there may be many more illegal aspects to it. It must however be emphasized that many of the allegations which I have come across have never been proven and should therefore be taken as suggestions which demand research.

In a discussion during the above-mentioned conference in Nairobi, Maina (1974) made the interesting remark that "there are certain unscrupulous people who having obtained an antibiotic (from a clinic, SvdG)—say tetracycline—will then sell these drugs and the following day will attend a different clinic and obtain more. In this way an individual may make a living" (1974:485-86).

In unpublished letters from a medical doctor working in Tanzania I read that medicines were stolen from the store in the hospital and

probably sold to drug traders. Once a nurse was caught red-handed while stealing. Similar incidents have been reported by numerous—mostly foreign—doctors and nurses working in hospitals of developing countries. Another common story is that medical personnel in government institutions which are supposed to supply free medicines, sell these medicines to nearby drugstores and then tell the patients that they are short of medicines but that the particular drugstore may still have some of the medicines in stock. The patients are advised to buy the medicines there.

Another illegal aspect of the distribution of medicines which has been mentioned a few times is smuggling. It has been suggested that medicines are smuggled from countries where there is little effective control over the import and distribution of pharmaceutical goods to countries where such control is more strict. A case in point is drug smuggling from anglophone to francophone countries in Africa. Heller (1977:55) writes that a pharmaceutical firm in Chile was accused of smuggling drugs across the border to Bolivia and Peru. All these illegal practices were observed during my research in Cameroon (Van der Geest 1981).

Again other illegal activities are the dilution of medicines which often can only be checked by laboratory tests and the selling of fake medicines which, among others, has been reported by Wasunna and Wasunna (1974) and has also been experienced by myself in Cameroon (Van der Geest 1981) and Ghana (see introduction).

Yet another illegal practice which is probably the most difficult to discover, takes place at the level of granting import licences and of large-scale sale techniques. Heller (1977) mentions this point briefly. Yudkin (1978:811) cites a newspaper from 1973 saying that in one third world country two ministry officials were jailed for accepting bribes from drug companies. They had bought a ten years' supply of certain medicines which would be outdated long

before that time. These corrupt practices, which take place at ministerial levels, are usually only exposed when one government is replaced by another. These activities, involving pharmaceutical firms, are probably the most crucial ones in maintaining existing systems of illegal medical distribution. Finally, and ironically, medical development aid often encourages illegal practices as well. An open letter to Ghana's president (Union of Ghana Students in West Germany 1981) illustrates the common problem of mismanagement of aid to developing countries.

Summarizing, it is obvious that informants engaged in this kind of medicine distribution are unlikely to freely disclose information about their practices.

3.2. Explaining the Phenomenon

Two sets of questions present themselves if we want to explain the phenomenon of illegal medicine distribution. In the first place, what makes the clandestine circulation of medicines possible and secondly, why people use them. The first question refers mainly to the producers and providers of medicines, the second to the consumers.

It is almost a truism to state that profit making is the driving force behind the illegal medicine trade, as indeed, it is also behind most of the legal health care. The profit-making incentive is present at all levels of the distribution apparatus, from industrial firm and importer to petty trader. The interests of pharmaceutical companies in selling medicines to developing countries have already been discussed. Whether the medicines are supplied through legal or illegal channels is apparently often of little concern to them. Generally the importance of the illegal market will increase with the inefficiency of the legal delivery of health care. Drug vendors, pharmacists and middlemen gratefully use the gaps in the official structure of medicine and the pushing for

markets by the pharmaceutical companies to set up a (usually very lucrative) business. The profit-making basis of the phenomenon is a sufficient indication that curing is only a secondary goal. The resulting risks are likely to be even more serious than in the official medical practice, because of the lack of medical knowledge and the absence of a professional medical ethic.

The question suggests itself whether the same problems would occur, to as great a degree, in socialist countries such as Cuba and The People's Republic of China and in other countries more independent of the capitalist world system. It seems probable that excesses of commercial medicine distribution are less likely to happen in countries where the government controls health care, but it would be naive indeed to assume that profit making and capital accumulation have disappeared from these societies. Moreover, the concentration of bureaucratic power increases the likelihood of corruption. It should further be taken into account that independent critical studies of health care in such countries are rare and that substantial evidence for firm conclusions is still lacking.

The second, much more puzzling question to be answered is: Why do sick people resort to risky self-medication or to unqualified practitioners of Western medicine when they know the possible outcome of such an act and have access to qualified medical doctors? This is, in brief, the question I want to discuss on the basis of the literature which I have scanned. The fact that people rely on illegal medicines *in the absence* of qualified doctors does not need to occupy us here; it is the use of illegal medicines *in the presence* of qualified doctors which looks puzzling.

At first sight there seem to be largely two theoretical perspectives in the literature which may be useful in explaining the phenomenon. One has an economic and the other has a

more or less cognitive character, but when studied more closely it proves impossible to separate them neatly in two different domains. The "economic" perspective is primarily based on a cost-benefit analysis. Foster (1976) applies this perspective to the question of why people in a given situation prefer traditional to modern medicines or vice versa. The terms cost and benefit should not only be taken in their strictly financial sense. Costs and benefits can also be of another nature, for example social, psychological, medical, etc. If people perceive one particular system or agent as more advantageous than another, they are likely to choose the former. Of course, one can raise many objections to this view. The most fundamental is probably that it is tautological and does not explain anything. Another objection is that the predictive power of this view is absorbed in the perceptions of the patients: they will act according to what they perceive as most beneficial. In this way the cognitive view, against which the economic view was partially launched, is again let in through the back door. I am however inclined to judge this "relapse" as progress in theorizing. Simplistic versions of either economic or cognitive perspectives will not do. Refining the perspectives will show that calculation plays a role in the cognitive explanation and that cognition is basic to economic behaviour. Once we have reached this, admittedly somewhat syncretic view, it is no longer possible to speak of "economic" or "cognitive" perspectives. We can only discern different variations or emphases within an overall economic-cognitive perspective. In this discussion I can do no more than highlight some of these variations.

One variation places emphasis on accessibility of medical help in terms of place and time and could be regarded as most pragmatic. Thomas (1970), as we have seen, points out that shop medicine is always obtainable nearby and that the service is quick, both factors

contrasting with hospital medicine. The same considerations are given by Wasunna and Wasunna (1974) and a number of other authors.

A second variation adds social distance between patients and medical doctors to the geographic and time barriers just mentioned. Suppliers of illegal medicines are usually social equals or even acquaintances (Thomas 1970) and contacts with them are relaxed. Communication with professional health workers, on the other hand, is full of anxiety.

A third variation, which also appears in combination with the previous ones, is the emphasis on socio-psychological values such as prestige, honour and shame. Various authors have suggested that reliance on shop medicine allows patients to keep certain shameful or embarrassing complaints concealed—particularly complaints concerning the genital and defecatory organs—such as impotence, venereal diseases and hemorrhoids. There are indeed indications that people with these problems are overrepresented among users of shop medicine. This view can also be applied to the buying of contraceptives and to the practice of induced abortion where feelings of shame and honour are at stake as well.

A fourth variation is relatively new and particularly suited to account for the use of Western medicines outside the legal channels. This view was for the first time extensively discussed by Alland (1970), who developed his view on the basis of his research among the Abron in Ivory Coast:

... confidence in Western drugs seems greater than confidence in doctors. This is reinforced by many factors. The majority of patients in the clinic and hospital are examined only casually by African nurses, and only the most serious cases are referred to the overworked doctors. Most clinics are staffed exclusively by nurses and even lesser technicians, who often prescribe medication when they ought to refer the patient to the hospital with a doctor in residence. There is little ritual associated with Western medical treatment. The paraphernalia of the examination room is seldom seen, and medical examinations are usually cursory; thus the

doctor often appears to be an unnecessary adjunct to the distribution of medicine. (Alland 1970:170; my emphasis).

Although one may disagree with the statement that the paraphernalia are not seen, Alland's main point is well taken. The perception of the role of the medical doctor as secondary to his medicines may well apply very widely in developing countries, where the doctor-patient ratio does not allow for more intensive contacts between the two. Moreover, it is worthwhile to view some of the paraphernalia, which patients undoubtedly notice, as another kind of "medicine" which can be used independently of the doctor. The syringe and stethoscope are examples which support this suggestion. If Alland's view applies, it is understandable that patients will take to Western medicines when these become available outside the professional medical channels. This is what in fact has happened among the Abron in Ivory Coast and in many other developing countries. Antibiotics and other prescription medicines are distributed in large quantities on the free markets; doctors may now become superfluous. The question remains of course whether this will happen.

Two authors who have reported supportive evidence for Alland's perspective are Gonzalez and Bleek. Gonzalez (1966) writes that Guatemalan villagers readily accepted Western medicines but preferred their own medical practices. For them also the medicines could apparently be taken apart from the medical practitioner, the Western doctor. In an association test among Ghanaian school pupils Bleek (1979) found that the pupils had almost unending confidence in Western medicines, but had their doubts occasionally with respect to Western doctors. An interesting detail, given by Maclean (1974) is that herbalists in Ibadan try to boost their business by bottling their medicines to make them look like patent medicines.

A last variation to be considered is Gramsci's notion of a cultural hegemony dynamically developing along with a dominant political economic system. Elling (1981) and a few others have used Gramsci's concept in explaining the relation between traditional and modern medical systems and the dominance of the latter. Elling calls in question Foster's (1976) conviction that the adoption of modern medical practices and beliefs in developing countries results from decisions taken by consumers on the basis of proven efficacy of modern medicine. Elling distrusts the independent explanatory power of medical quality and stresses that "power complexes determine what is defined as efficacious and acceptable" (1981:93).

At first sight Gramsci's notion does not seem very helpful in explaining the high rate of dubious self-medication with Western pharmaceuticals where experts in modern medicine are available. In the process of cultural hegemony one would rather expect a growing utilization of persons and services which represent the hegemonic medical culture. Non-utilization of doctors and hospitals therefore seems to contradict Gramsci's explanation.

Taking a closer look, Gramsci's insights may prove useful after all. It is not unlikely that authors have exaggerated the availability of modern medical facilities in developing countries and coloured their functioning too brightly. Much of the statistical presence of doctors, hospitals, health centers, etc. may prove token presence in actual practice. As has been set forth in the four previous variations of explanatory emphasis, medical services and their agents are often much less accessible than they appear to be on paper. Their accessibility is greatly diminished by geographic, social, psychological, cultural, financial, and time barriers. Self-medication with Western pharmaceutical products may thus prove a first phase in the continuing process of establishment of medical hegemony. The view of authors defining

this self-medication as a transitional phenomenon lends support to this explanation.

3.3. Medical Consequences

The majority of the authors are pessimistic about the health consequences of illegal medicine use. This is hardly surprising. If we realise that medicine taking supervised by qualified doctors has come under severe criticism because of what has been called its iatrogenic effects (Illich 1977), how much more will such criticism be levelled against the unsupervised use of medicine? I shall list a few instances which must be regarded as detrimental to health and which have been mentioned in the literature.

Perhaps the most common complaint about illegal medicine distribution refers to the taking of antibiotics. A number of authors have pointed out that the haphazard use of antibiotics leads to unnecessary resistance against antibiotics. This point has, among others, been stressed by Ohene-Manu (1975), Nnochiri (1974), and Ayim and Wamola (1974). The unregulated sale of antibiotics often leads to the purchase of very small quantities. Wasunna and Wasunna (1974: 162) report that even single tablets and capsules could be bought and I observed the same in Cameroon (Van der Geest 1981). Obviously a few antibiotics cannot provide a "full course" of antibiotic treatment and thus encourage resistance of bacterial strains. Such developments pose serious dangers to a local, and possibly even to the world population. A dramatic case in point, chloramphenicol, is given by Muller (1982:30-33) and Mintz (Mother Jones 1979:31). The latter describes the consequences of the haphazard use of chloramphenicol which was considered a "wonder drug" against typhoid fever:

No one knew how serious a problem (bacterial resistance) this would be until a 1972-1973 epidemic of typhoid fever in Mexico. Believed to be the most catastrophic outbreak of typhoid in history, it afflicted

about 100,000 people. Up until that point, most doctors had assumed that chloramphenicol would prove as effective against typhoid as it had in the past. To their dismay, they were wrong. The particular typhoid bacteria they were dealing with had, through long exposure, built up resistance to chloramphenicol. Doctors were largely helpless; 20,000 of the typhoid victims died.

Another negative outcome may derive from the fact that wrong doses of particular medicines are used. It may lead to a greater risk of side effects and even to serious complications and death. Bentsi-Enchill (1977), for example, has pointed out that in a society where malaria is endemic people may "ascribe every slight malaise to malaria... and so indulge in uncontrolled self-medication of chloroquine," which can cause an eye disease (retinopathy). Strobel et al. (1979) found that self-treatment with certain medicines caused skin irritations and skin diseases. Three cases, reported by Van Binsbergen (1979), Logan (1973), and Ferguson (1981), which have been cited above, show that the giving of wrong doses may be fatal.

Another problem mentioned by some authors is that patients may use, or be given, the wrong medicines. This can happen because the person choosing the medicines is ignorant, or because the content of the medicines has been altered on purpose. The latter situation is, for example, mentioned by Maclean (1974) and by Wasunna and Wasunna (1974). A further problem which is frequently mentioned is that injections are given with unsterile syringes which can lead to infections and even more serious consequences. Warren (1974) and Bleek (1976) mention this fact.

A last example of negative health consequences is the giving of useless, in themselves harmless, medicines. Because these "medicines" are, however, given in lieu of effective medicines, this may also have grave consequences. Maclean (1974), for example, points out that harmless tonics are given to children in Ibadan who need real medicine. The use of ineffectual medicines and its consequences

is also discussed by Muller (1982:50-58) and Medawar and Freese (1982). The latter describe in detail the commercial "diplomacy" of a British pharmaceutical firm promoting its product Lomotil as a remedy against diarrhoea in children in the third world. The authors argue convincingly that Lomotil is dangerous for children because of its side effects, but that it is even more dangerous because it is ineffective. The use of Lomotil, which is freely sold in the third world, *in lieu* of effective treatment of diarrhoea is bound to have disastrous consequences for the lives of patients. A special problem is the use of fake contraceptives, as is reported by Bleek (1976, 1978) in Ghana. The fact that the users of these "contraceptives" sometimes do become pregnant may impel them to inducing an abortion with very dangerous means.

There are, however, also authors who have an eye for the positive—or potentially positive—effects of illegal medicine distribution. Their main argument is that pharmacists, drug peddlars, injection doctors, etc. provide—or can provide—valuable medical services in the absence of formal primary health workers. Nordberg (1974), for example, suggests that Ethiopian drugstore keepers be legally permitted to sell antibiotics, particularly in remote areas where other services do not exist. Similar remarks are made by Buschkens (1977), Schuppen and Swinkels (1980) and myself (Van der Geest 1981:172-80).

Ferguson (1981) tends to favor the same opinion. She views the commercial pharmaceutical sectors as "a personal service system for the delivery of modern medication, especially to the poor," but she wonders whether these medications do not "keep greater numbers of people alive as the quality of health deteriorates" (1981:129). Her remark points indeed to a problem which is even more distressing than the unequal distribution of medicines: the deterioration of general health conditions because of malnutrition and other consequences of poverty.

4. SUMMARY AND CONCLUSIONS

In this review of the literature we have focussed on the illegal distribution and use of Western medicines in developing countries. Although the literature is scarce, the phenomenon is probably widespread. We looked subsequently at self-medication, drug trading, injection doctors, clandestine abortions and the role of pharmaceutical industries. The paucity of literature is most probably due to the illegal character of the phenomenon which renders research difficult. Lack of interest by social scientists may be an additional factor.

The widespread occurrence of illegal distribution can only be understood when it is viewed as the logical outcome of profit-making policy. It is the pharmaceutical firms which play a leading role, followed by local middlemen, shopkeepers and petty traders. The fact that patients resort to illegal and unqualified medicine sellers, even in the presence of qualified health workers, is explained in various ways by the authors surveyed. Some emphasize the greater accessibility of extra-mural medicines, others emphasize the social distance between doctors and patients or the factor of shame with regard to exposing certain diseases to medical personnel. A particularly interesting view, by Alland, suggests that patients in developing countries may have more confidence in Western medicines than in Western doctors. Gramsci's idea of a changing cultural hegemony related to a new dominant political economy may be clarifying. The free-floating use of modern pharmaceutics could be viewed as a first phase, a transitional phenomenon, in this process of a growing hegemony of modern medicine in developing countries.

Most of the authors are very critical of the medical consequences of the illegal use of medicines, but some also mention positive effects by pointing out that drugstore keepers and others play a *de facto* role in primary health care which would otherwise remain unfilled.

Two practical conclusions may be derived from this exploratory review. In the first place, much research needs to be carried out before anything more definitive can be said about the role of illegal drug sellers and buyers. It is obvious that such research has to be done in a both cautious and intensive way. Survey techniques will be of little use here. The fact that quantitative data are indispensable poses a special challenge to researchers.

A second conclusion is that the existence of an "illegal" infrastructure of medicine distribution cannot be simply ignored if developing countries, following WHO proposals, are going to set up a better primary health care system. Should the present illegal providers of medicines be trained for this purpose, as for example is suggested by Taylor et al. (1968), Nordberg (1974), Schulpen and Swinkels (1980), and Maina (1977)? Or should self-medication and home treatment be enhanced, as has been initiated in the experiment by Kielman and McCord (1977)? Answers to these questions depend, however, on sound information about the practices and practitioners now involved in the illegal distribution of medicines.

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REFERENCES

- Alland, A. Jr.
1970 *Adaptation in Cultural Evolution: An Approach to Medical Anthropology*. New York: Columbia University Press.
- Amelsvoort, V. Van
... 1976 *Medical Anthropology in African Newspapers*. Oosterhout: Anthropological Publications.

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- Ampofo, D.A.
 1971 Abortion in Accra: the social, demographic and medical perspectives. In *Symposium on implications of population trends for policy measures in West Africa*. N.O. Addo et al., eds. Legon: University of Ghana, pp. 79-105.
- Anato-Dumelo, E.E.
 1979 The Effect of chloroquine on the binding of cestradiol-17 in the uterine cystosol of rabbit. *Ghana Medical Journal* 18 (1): 18-22.
- Arya, O. P. and F. J. Bennett
 1974 The use and misuse of medicines in relation to some sexually transmitted diseases in Uganda. In *The Use and Abuse of Drugs and Chemicals in Tropical Africa*. Bagshawe et al. Nairobi: East African Literature Bureau.
- Asfaw, Desta
 1971 National health planning in Ethiopia. Doctoral dissertation. Baltimore: Johns Hopkins University.
- Ayim, E. N. and I. A. Wamola
 1974 Problems of cross-infection and patterns of antibiotic sensitivity in tracheotomized patients. In Bagshawe et al., pp. 59-67.
- Bagshawe, A. F., G. Maina and E. N. Mnogola, eds.
 1974 The Use and Abuse of Drugs and Chemicals in Tropical Africa. Nairobi: East Africa Literature Bureau.
- Barnett, A. et al.
 1980 The economics of pharmaceutical policy in Ghana. *International Journal of Health Services* 10 (3): 479-99.
- Bentsi-Enchill, K. O.
 1977 Ocular chloroquine toxicity in Ghana: a preliminary report. *Journal of the Ghana Medical Association* 16 (2): 119-31.
- Bhatia, J. C. et al.
 1975 Traditional healers and modern medicine. *Social Science and Medicine* 9: 15-22.
- Binsbergen, W. M. J. van
 1979 The infancy of Edward Shelonga: an extended case from the Zambian Nkoya. In *In Search of Health: Essays in Medical Anthropology*. Amsterdam's Anthropological-Sociological Centre. Van der Geest and Van der Veen, eds.
- Bleek, W.
 1976 Sexual Relationships and Birth Control in Ghana: A Case Study of a Rural Town. Amsterdam: Anthropological-Sociological Centre.
 1978 Induced abortion in a Ghanaian family. *African Studies Review* 21: 103-20.
 1979 The doctor and the herbalist: views by Ghanaian school pupils. In Van der Geest and Van der Veen, eds.
- Bollen-Tijssen, I.
 1978 Patiënten in een Ghanees missieziekenhuis. Amsterdam: M.A. Thesis (mimeo).
- Brown, J.
 1963 Some changes in Mexican village curing practices induced by Western medicine. *America Indiana* 13: 93-120.
- Buschkins, W. F. L.
 1977 De houding van de bevolking van de derde wereld tegenover verschillende geneeswijzen. In *Geneesmiddelenvoorziening in ontwikkelingslanden*. Rijksuniversiteit Leiden, p. 24-29.
- Buschkins, W. F. L. and L. J. Slikkeveer
 n.d. Illness behaviour of the Eastern Oromo in Hararghe, Ethiopia. In press.
- Cunningham, C. E.
 1970 Thai "injection doctors": antibiotic mediators. *Social Science and Medicine* 4: 1-24.
- Devereux, G.
 1955 A study of abortion in primitive societies. New York: Julian Press.
 1980 Author's rejoinder to a book review. *Social Science and Medicine* 14 B (2): 125.
- Dewalt, K. M.
 1977 The illnesses no longer understand; changing concepts of health and curing in a rural Mexican community. *Medical Anthropological Newsletter* 8 (2): 5-11.
- Elling, R. H.
 1981 The capitalist world-system and international health. *International Journal of Health Services* 11 (1): 21-51.
 1981 Political economy, cultural hegemony, and mixes of traditional and modern medicine. *Social Science and Medicine* 15 A (2): 89-99.
- Fendall, N. R. E.
 1972 Auxiliaries in health care: programme in developing countries. Baltimore: Johns Hopkins.
- Ferguson, A. E.
 1981 Commercial pharmaceutical medicine and medicalization: a case study from El Salvador. *Culture, Medicine and Psychiatry* 5 (2): 105-34.
- Foster, G. M.
 1976 Medical anthropology and international health planning. *Medical Anthropology Newsletter* 7 (3): 12-18.
- Gish, O. and L. L. Feller
 1979 Planning Pharmaceuticals for Primary Care: The Supply and Utilization of Drugs in the Third World. Washington D.C.: American Public Health Association, International Health Programs. Monograph Series No. 2.
- Gonzalez, N. S.
 1966 Health behavior in a cross-cultural perspec-

- tive: a Guatemalan example. *Human Organization* 25: 122-25.
- Gould, H.A.
 1965 Modern medicine and folk cognition in rural India. *Human Organization* 24: 201-8.
- Halpern, J.M.
 1963 Traditional medicine and the role of the Phi in Laos. *Eastern Anthropologist* 16: 191-200.
- Haslemere Group
 n.d. Who needs the drug companies? London: War on Want.
- Heller, T.
 1977 Poor health, rich profits: multinational drug companies and the third world. Nottingham: Spokesman Books.
- Illich, I.
 1977 Limits to medicine. Medical nemesis: the expropriation of health. Harmondsworth: Penguin.
- Ingman, S. R. and A. E. Thomas, eds.
 1975 Topias and utopias in health. The Hague, Paris: Mouton.
- Janzen, J. M.
 1978 The quest for therapy in Lower Zaire. Berkeley: University of California Press.
- Kielman, A. A. and C. McCord
 1977 Home treatment of childhood diarrhoea in Punjab villages. *Journal of Tropical Pediatrics and Environmental Health* 23: 197-201.
- Kleinman, A.
 1978 Patients and healers in the context of culture. Berkeley: University of California Press.
- Kloos, H.
 1974 The geography of pharmacies, druggist shops and rural medicine vendors and the origin of customers of such facilities in Addis Ababa. *Journal of Ethiopian Studies* 12: 77-94.
- Lall, S.
 1974 The international pharmaceutical industry and less developed countries, with special references to India. *Oxford Bulletin of Economics and Statistics* 36 (3): 143-72.
 1975 Major issues in transfer of technology to developing countries: a case study of the pharmaceutical industry (TD/B/C. 6/4). Geneva: UNCTAD.
 1977 De internationale farmaceutische industrie. In *Geneesmiddelenvoorziening in ontwikkelingslanden*. Rijksuniversiteit Leiden, pp. 64-89.
 1978 Price competition and the international pharmaceutical industry. *Oxford Bulletin of Economics and Statistics* 40: 9-22.
- Lall, S. and S. Bibile
 1978 The political economy of controlling transnationals: the pharmaceutical industry in Sri Lanka, 1972-1976. *International Journal of Health Services* 8 (2): 299-328.
- Lasker, J.N.
 1981 Choosing among therapies: illness behavior in the Ivory Coast. *Social Science and Medicine* 15 A: 157-68.
- Ledogar, R. J.
 1975 Hungry for profits: U.S. Food and Drug Multinationals in Latin America. New York: International Documentation (IDOC), North America.
- Logan, M. H.
 1973 Humoral medicine in Guatemala and peasant acceptance of modern medicine. *Human Organization* 32: 385-95.
- Mabadeje, A. F. B.
 1974 The epidemiology of drug usage in Metropolitan Lagos. In Bagshawe et al., eds. pp. 149-55.
- Maclean, U.
 1974 Magical medicine: a Nigerian case study. Harmondsworth: Penguin.
- Maina, B.
 1974 Discussion. In Bagshawe et al., eds. pp. 485-86.
 1977 A socio-medical inquiry: modern and indigenous medical care utilization patterns with respect to measles and acute diarrhoea among the Akamba. Unpublished M.A. thesis, University of Nairobi.
 1979 Beliefs and practices concerning treatment of measles and acute diarrhoea among the Akamba. *Tropical and Geographical Medicine* 31: 139-48.
- Medawar, C.
 1979 Insult or injury? An enquiry into the marketing and advertising of British food and drug products in the third world. London: Social Audit.
- Medawar, C. and B. Freese
 1982 Drug diplomacy: decoding the conduct of a multinational pharmaceutical company and the failure of a western remedy for the third world. London: Social Audit.
- Messenger, J. C.
 1959 Religious acculturation among the Anang Ibibio. In *Continuity and change in African cultures*, W. R. Bascom and M. J. Herskovits, eds. Chicago: Chicago University Press, pp. 279-99.
- Moi, D. T. Arap
 1974 Opening address. In Bagshawe et al., eds. pp. 5-7.
- Mother Jones
 1979 The corporate crime of the century. Special issue of Mother Jones (November).
- Muller, M.
 1982 The health of the nations: a north-south investigation. London: Faber & Faber.
- Narkavonnakit, T.
 1979 Abortion in rural Thailand: a survey of practitioners. *Studies in Family Planning* 10: 223-29.

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- Nchinda, T. C.
- 1975 A study of the types of health care services used by the people of the Mezam Division in Cameroon. M.D. thesis, University of London.
 - 1976 A study of where the people of a rural district of Cameroon seek their health care. Nairobi: conference paper.
- Nchochiri, F.
- 1974 The changing patterns of antibiotic resistance and pathogenic bacterial isolates as indicators of drug abuse in Middle Africa. In Bagshawe et al., eds.
- Nordberg, E.
- 1974 Self-portrait of the average rural drug shop in Wollega province, Ethiopia. Ethiopian Medical Journal 12 (1): 25-32.
- Nurge, E.
- 1958 Etiology of illness in Guinhangdan. American Anthropologist 60: 1158-72.
- O'Brien, P.
- 1977 Trademarks, the international pharmaceutical industry and the developing countries. The Hague: ISS Occasional Papers, No. 68.
- Ohene-Manu, K. A.
- 1975 The dangers associated with the misuse of antibiotics and now best to educate the general public as pharmacists. Ghana Pharmaceutical Journal August 1975: 70-72.
- Okojie, S. E.
- 1976 Induced illegal abortions in Benin City, Nigeria. International Journal of Gynaecology and Obstetrics 14: 517-21.
- Onoge, O. F.
- 1975 Capitalism and public health: a neglected theme in the medical anthropology of Africa. In Topias and Utopias in Health. The Hague, Paris: Mouton, Ingman and Thomas, eds. pp. 219-32.
- Parker, R. L. et al.
- 1979 Self-care in rural areas in India and Nepal. Culture, Medicine and Psychiatry 3: 3-28.
- Press, I.
- 1971 The urban curandero. American Anthropologist 73: 741-56.
- Schulpen, T. W. J. and W. J. A. M. Swinkels
- 1980 The utilization of health services in a rural area of Kenya. Tropical and Geographical Medicine 32: 340-49.
- Segall, M.
- 1975 Pharmaceutical and health planning in developing countries. Brighton, Sussex: Institute of Development Studies. Communication no. 119.
- Silverman, M.
- 1976 The drugging of the Americas. Berkeley: University of California Press.
 - 1977 The epidemiology of drug promotion. International Journal of Health Services 7 (2): 157-66.
- Silverman, M., Ph. R. Lee and M. Lydecker
- 1982 Prescriptions for Death: The Drugging of the Third World. Berkeley: University of California Press.
- Simmons, O. G.
- 1960 Popular and modern medicine in Mestizo communities of coastal Peru and Chile. In Sociological studies of health and sickness. D. Apple, ed. New York: McGraw-Hill, pp. 69-87.
- Snow, L. F.
- 1976 Book review. Social Science and Medicine 10: 511-12.
- Stolley, P. D.
- 1976 Evaluating drugs and determining the drug needs of developed and developing countries. Journal of Community Health 2: 113-20.
- Strobel, M. et al.
- 1979 Observations sur la phytotherapie: les remèdes populaires et l'auto-traitement des affections dermatologiques à Dakar. Dakar Medical 24: 220-26.
- Taylor, C. E.
- 1976 The place of indigenous medical practitioners in the modernization of health services. In Asian medical systems. Leslie, C., ed. Berkeley: University of California Press. pp. 285-99.
- Taylor, C. E. et al.
- 1968 Health manpower planning in Turkey: an international research case study. Baltimore: Johns Hopkins. Thomas, A. E.
- 1970 Adaptation to modern medicine of two Kamba communities. Unpublished Ph.D. thesis, Stanford University.
- 1975 Health care in Ukambani, Kenya: a socialist critique. In Ingman and Thomas, eds. pp. 267-81.
- Turshen, M.
- 1976 An analysis of the medical supply industries. International Journal of Health Services 6 (2): 271-94.
- Van der Geest, S.
- 1981 La pathologie de services médicaux: la distribution de médicaments au Sud-Cameroun. Problèmes et suggestions. Amsterdam: Anthropological-Sociological Centre.
 - n.d. The efficiency of inefficiency: medicine distribution in South-Cameroun. Forthcoming in Social Science & Medicine.
- Van der Geest, S. and K. W. van der Veen, eds.
- 1979 In search of health: essays in medical anthropology. Amsterdam: Anthropological-Sociological Centre.
- Union of Ghana Students in West Germany.
- 1981 Doubts about drugs sent to Ghana. An open letter to President Limann. West Africa 11 May 1981. pp. 1024-25.
- Warren, D. M.
- 1974 Disease, medicine and religion among the Techiman-Bono of Ghana. Ph.D. thesis, Indiana University.

Wasunna, A. E. O. and M. Wasunna

1974 Drugs in wrong hands: the trafficking of non-addictive drugs through unqualified and unauthorized persons in Kenya. In Bagshaw et al., eds. pp. 161-63.

Watts, G.

1977 Mozambique: medicine with polities. Colonial remnants hamper move from cure to prevention. New Scientist 74 (1047): pp. 70-72.

W. F. P. M. M.

1977 The contribution of responsible self-medication to world health. Cologne: World Federation of Proprietary Medicine Manufacturers.

WHO

1977 The selection of essential drugs. WHO Technical Report Series 615. Geneva: WHO.

Woods, C. M.

1977 Alternative curing strategies in a changing medical situation. Medical Anthropology 1 (3): pp. 25-54.

Yudkin, J. S.

1978 The provision of medicines in a developing country. Lancet 15 April 1978. pp. 810-12.

1980 The economics of pharmaceutical supply in Tanzania. International Journal of Health Services 10 (3): pp. 455-77.

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