Pergamon

PII: S0277-9536(97)10147-2

Soc. Sci. Med. Vol. 46, No. 11, pp. 1487–1494, 1998

Printed in Great Britain
0277-9536/98 $19.00 + 0.00

"BREAKING THE BUREAUCRACY": DRUG REGISTRATION AND NEOCOLONIAL RELATIONS IN EGYPT

ROBERT A. RUBINSTEIN

Department of Anthropology and Program on the Analysis and Resolution of Conflicts, 410 Maxwell Hall, Syracuse University, Syracuse, NY 13244, U.S.A.

Abstract—According to the Egyptian Ministry of Health, the per capita use of prescription drugs in Egypt is amongst the highest in the world. Multinational pharmaceutical companies license their proprietary products for manufacture and sale in Egypt through their Egyptian subsidiaries. A Ministry of Health Committee reviews and approves for sale all drugs marketed in the country. Aside from being an extremely lucrative market itself, approval of a drug for sale and manufacture in Egypt also opens to the pharmaceutical companies other markets in the Arab world. The Egyptian drug approval process is thus both important for assuring the health of Egyptian nationals and a high-stakes activity for the pharmaceutical companies. This paper examines the social relations and interactions of multinational pharmaceutical representatives in Egypt with Egyptian researchers in relation to the Ministry of Health's drug approval process. From time-to-time events focus attention on the huge financial rewards reaped by multinational pharmaceutical companies from their activities in lesser developed countries. This attention not infrequently has revealed the "drugging of the Third World" as a result of actions by expatriate multinational pharmaceutical officials. Indigenous review procedures such as those established by the Egyptian Ministry of Health might guard against such external exploitation. This paper shows how in place of external exploitation, indigenous pharmaceutical company officials have manipulated local patterns of social interaction to construct a system of reciprocal obligations which may frustrate intended safeguards, and by reconstructing colonial institutional structures, creates a pattern of neocolonialism in Egypt. © 1998 Elsevier Science Ltd. All rights reserved

Key words—pharmaceutical companies, drug policy, neocolonialism, Egypt

Following the Second World War, the pharmaceutical industry experienced a period of tremendous growth. The creation of a variety of new medicines — especially antibiotics, which seemed to hold the promise of better health for all — brought with it expanding markets and revenues at home. Abroad the decolonizing nations represented lucrative business opportunities. In many places in the Third World drug companies conducted themselves with little restraint, especially as regulatory control in the West tightened and the pace of the discovery of new pharmaceuticals slowed (Reekie and Weber, 1979).

Beginning in the mid-1970s a number of writers called attention to the unscrupulous practices of multinational drug companies operating in developing countries. Detailed and specific attention has focused on the unethical and misleading marketing strategies employed in the Third World and on the practice of distributing drugs there that have been removed from Western markets because they carry unacceptably high risks (Silverman, 1976; Silverman *et al.*, 1982). During the last twenty years, considerable efforts have been made to document, monitor and curb the worst of these abuses (Silverman *et al.*, 1986, 1992).

This literature also discusses the egregiously self-interested practices of expatriate drug company representatives embracing the "bribery" and "corruption" of developing countries. However, much less progress has been made in documenting and curbing these practices than has been made in the areas of unscrupulous marketing and distribution. In part this is because the comparative analysis of social practice is a less straightforward task than the comparative analysis of the consensual truths of biomedicine. Also, it is because Western concepts of "bribery" and "corruption" do not map directly onto the social and cultural practices of the heterogeneous Third World. Moreover, as the staffs of multinational drug companies diversify, employing in the place of expatriates local professionals with native knowledge of their own societies, the processes by which business is conducted become more difficult to track.

I have two purposes in this paper. First, I examine the practice of indigenous multinational drug company officials in Egypt in relation to the process of registering a new drug. In so doing, I provide a case study of how this group makes use of four elements of Egyptian social life to circumvent regulatory control. I discuss the manipulation by these

individuals of social practices of allegiance and influence, authority, and indigenous beliefs about biology. Second, I show that these practices result in the replication of social processes that have harmful economic, cultural, and public health consequences for Egypt.

This paper is based on research conducted in Egypt during 1990 and 1991. The data for this paper derive from four sources: (1) interviews at Egyptian subsidiaries and headquarters of multinational pharmaceutical companies with officials responsible for guiding new drugs through the approvals process; (2) interviews with Egyptian researchers; (3) interviews with members of the Ministry of Health drug approvals committee; and (4) a year-long period of participant observation in the preparation of Egyptian trials for a new antibiotic.

REGISTERING DRUGS IN EGYPT IS IMPORTANT FOR DRUG COMPANIES

The registration of new drugs in Egypt is important for multinational drug companies for at least two reasons. First, Egypt represents a large market. Second, registration and marketing of a drug in Egypt provides access to important markets in the rest of the Arab world, a market recently valued at four billion dollars (Kristensen, 1993).

Egypt: a large market for Western medicines

Contemporary beliefs and practices about health and illness in Egypt are a syncretic mix of medical traditions, including Pharonic, Unani, Prophetic, Sufi and Western biomedicine (Lane, 1987, pp. 97–124; Millar and Lane, 1988, pp. 652–654). Self treatment with "traditional" remedies and with Western medicines is common in Egyptian households, and can be related to a complex "hierarchy of resort," the calculus of which balances a number of social characteristics — age, sex, status — with treatment options (Gran, 1979; Lane and Millar, 1987, pp. 173–177). In this mix, biomedicines are widely used as home remedies. It is this widespread use that contributes to making Egypt a large and lucrative market for Western medicines.

Ethnomedical decisions are influenced, at least indirectly, by Islam. What people make of the Islamic holy texts in their daily practice is a matter of considerable diversity and complexity (Loeffler, 1988). While there is no simple direct link between Islamic theological writings and contemporary Egyptian practices, nonetheless the statement of the Prophet in the Hadith, "There is a medicine for every ailment such that if a right medicine hits a corresponding ailment, health is restored by God's permission" (Rahman, 1989, pp. 34), also contributes to some degree to making Egypt an active and lucrative pharmaceutical market.

In Egypt the common distinction between prescription and over-the-counter drugs is largely meaningless. Medicines can be purchased without prescription at any pharmacy, and pharmacists often suggest drugs for their customers (El-Saadain, 1991; Khallaf *et al.*, 1991). Although the Ministry of Health has tried to limit pharmaceutical sales to those by prescription only, it has been unsuccessful in doing so. According to then Minister of Health Dr Ragheb Dwidar, in 1990 Egyptians purchased $1 billion worth of medicines (El-Saadain, 1991, pp. 7). At a time when annual per capita income in Egypt was about E£700, the approximately E£60 per person that this represents amounts to an expenditure on drugs of just over 8.5% of per capita annual income.

Egypt: access to other markets

During the 1980s Egypt's 11 medical schools graduated an average of 5,000 physicians each year (CAPMAS (Central Agency for Public Mobilization and Statistics), (1988, pp. 192). Physicians newly entering the labor force in Egypt face a number of economic obstacles to establishing themselves personally and professionally. The incomes of young physicians in Egypt do not readily afford the means through which they can save the thousands of pounds needed to furnish a household in order to marry and have a family or to open their own private clinic.

In part because of a long tradition of medical training and in part because of the availability of resources and facilities, Egyptian medicine is also highly valued by people in other Arab countries. For example, when they can afford to do so many Arabs come to Egypt for treatment and Arab physicians come to Egyptian Universities for advanced training (Morsy, 1993).

As a result of these two factors, many physicians annually accept temporary assignments elsewhere in the Arab world. In any year, therefore, a substantial number of the physicians practicing in the Arab world are Egyptian. Work outside of Egypt is an opportunity for physicians to get ahead financially, many staying abroad only as long as it takes to meet their savings objectives. Thus, every year Egyptian physicians are entering and leaving employment elsewhere in the Arab world (El Matri, 1990).

The mobility of the physician force in Arab countries has potentially costly implications for firms marketing drugs in these countries. The start-up marketing costs for a new drug are considerably greater than the costs of "maintenance" advertising. For the drug companies the problem is either that in a number of Arab countries they must repeatedly run costly start-up campaigns for their products or they must reach the physicians practicing in those countries in another way. Since many of these physicians are Egyptian, and the marketing officers of the multinational drug companies say that "physicians prescribe what they know," it makes strategic

sense to introduce their products in Egypt. (That physicians' prescribing habits reflect their training and early experience is also the case in the West. As Drake and Uhlman (1993, pp. 28) note about the United States: "Doctors are taught only general principles of pharmacology in medical school classes. Most of their practical knowledge about drugs comes in hospital training with practicing physicians...".) From an economic perspective the estimate told to me by one drug company official that the workforce of Egyptian physicians working elsewhere in the Arab world experiences a complete turn over every three years also creates a strong incentive to reach these physicians before they leave Egypt to practice abroad. To do so saves marketing costs elsewhere and insures that Egyptian physicians going abroad will know of the companies' products.

ECONOMIC POLICY IN EGYPT AND MULTINATIONAL DRUG COMPANIES

The fortunes of multinational drug companies in Egypt during the last fifty years necessarily have been linked to general economic policy trends in the country. The need to transcend the constraints of its agriculturally-based economy resulted in a continuous search for a viable industrial base for Egypt and during this half century, economic policy in Egypt has had three distinct turnings; pre-revolution; Nasser, and Sadat (Ajami, 1982, pp. 502). The different economic policies pursued in Egypt in each of these periods have affected multinational drug companies in different ways.

Throughout the first half of this century, attempts in Egypt to develop local capacities for the production of Western medicines met with stiff competition from foreign drug companies. It was not until the start of World War II that two local drug manufacturing enterprises began. In 1957, 80,000 brand named drugs were on the market in Egypt, nearly all imported (Lauridsen, 1984, pp. 4–6). During this same year the Supreme Organization of Drugs was begun to supervise drug imports and to establish a national drug industry.

Although Nasser and the Free Officers came to power in the July 1952 Revolution, real economic change did not begin until the promulgation of the July Laws of 1961 (Goldschmidt, 1988, pp. 117). In 1962 the drug industry was nationalized, creating a state monopoly on pharmaceuticals importing, producing, pricing, distributing, and planning (Mamdani, 1992, pp. 8). As a result of the protection afforded it under the Nasser policies, the local drug industry claimed an 88.2% share of the market in 1973 and accounted for considerable export revenue (Galal, 1983, pp. 240). (Indeed, the success in exporting Egyptian medicines suggests that during this period it was perceived that an adequate level of quality control had been achieved.)

Consistent with developments in other sectors following the *infitah*, or economic liberalization, begun by Sadat in 1975, the private importation of drugs has been legalized and there has been a general relaxation in the importation terms for them. For the drug industry in Egypt, as for other areas of the economy, one result of the open door policy has been the asymmetrical transfer of capital to wealthier individuals and institutions in the private sector (Aliboni *et al.*, 1984, pp. 1–18). Internal to Egypt, the open door policies have resulted in "an increasing share of the market going to foreign-branded, locally produced drugs with an average price almost double Egyptian brands" (Galal, 1983, pp. 240). This shift in the market has made local regulation of the registry of new drugs for sale in Egypt a great concern for national economic and health policy.

THE PROCESS FOR REGISTERING NEW DRUGS IN EGYPT

The opening in Egyptian economic policy created a large and profitable arena for action for multinational drug companies. In an area where their freedom of action had heretofore been tightly restricted, these companies sought opportunities to exploit more fully the Egyptian and Arab pharmaceutical markets. From manufacture to marketing, indigenous staff familiar with Egyptian traditions and institutions exploit traditional social practices in the service of the multinational drug companies for which they work. One area in which these skills and knowledge are brought to bear is at the interface with government regulatory agencies.

The drug registry process: the official structure

Before any drug company can market a product in Egypt, it must receive the approval of the Ministry of Health. In order to gain this approval, the company must submit each of its products to a regulatory review. The bureaucracy set up to make this review draws on the resources of the Ministry and on the skills of senior non-Ministry Egyptian physicians, usually academics, often with international reputations.

The structure of the regulatory process is straightforward. Ideally it can be described as follows: A company seeking approval from the Ministry of Health submits a dossier, called the *Local Registration File* (LRF) to the Ministry's Registration Department. The LRF is a complex dossier containing a subset of the material found in the drug's international registration dossier. The three major elements of the LRF are: (1) copies of the Free Sales Certificate for the drug from any or all of the following six countries only; United States, Germany, Belgium, United Kingdom, France or Switzerland. (2) A scientific file which contains summary descriptions of studies of the

drug's; (i) pharmacology, (ii) clinical efficacy, (iii) safety. (3) A list of countries where the drug is currently being distributed. The Registration Department is widely regarded by the company officials interviewed to have an essentially clerical role, insuring that the Local Registration File is complete.

The Registration Department forwards the application to the Drug Authority. There the substance of the application is reviewed, and the dossier is vetted to the General Medical Drug Committee for evaluation. The Drug Committee is made up of about 15 physicians, including the chairmen of the Specialized Medical Drug Committees. The General Medical Drug Committee can recommend to the Ministry that the application be; (1) approved; (2) rejected without further review; or (3) referred to a Specialized Medical Drug Committee for further review.

The Specialized Medical Committees are made up of prominent specialists in particular areas. After a review of the dossier, the specialized committee can recommend acceptance or rejection of the application. The specialized medical drug committee can also recommend that additional studies with the drug be undertaken. Egyptian clinical trials are sometimes deemed necessary in order to establish appropriate Egyptian dose schedules.

The decisions of the specialized and general medical drug committees are communicated back to the Drug Authority. The Drug Authority then notifies the Registration Department. If the Drug Authority acts to accept the application, a sample of the drug is sent to the National Organization of Drug Control and Research (NODCAR) which analyses it to certify that the drug is as represented in the Local Registration File (Kandil, 1989, 84–85).

Once these steps are completed, several further approvals are required by the Ministry of Health. Most importantly, the drug company must submit a justification for adding the drug to the list of drugs permitted for sale in the country. It is legally required that no more than four drugs with similar therapeutic value be marketed in the country. Therefore in order for the justification to be accepted the company must show that the drug has a unique therapeutic value. If the justification is successful, such matters as the preparation of Arabic packaging, package inserts and pricing are attended to.

The drug registry process: the actual structure

Egyptian legislation sets out an institutional structure which is intended to control drug consumption and regulate the drug industry. Reviewing this structure some, like Kandil (1989, pp. 85), conclude that with minor adjustment the current system provides adequate controls on the drug industry. In the government's bureaucratic conception of the regulatory process, there is limited contact between the drug company and the regulatory agency. Indeed, the only legitimate, formal contact is between the drug company and the Registration Department. Drug company officials, however, find the regulatory apparatus cumbersome, time consuming and costly. In order to expedite the review of their applications, and to ensure favorable action, multinational drug companies seek to circumvent the regulatory process.

In addition to maintaining contacts with the Ministry's Registration Department, the companies seek out and befriend the members of the Specialized Medical Drug committees. As described to me, the process is a systematic and cynical one. As soon as the company knows that its international affiliate plans eventually to submit a drug for registry in Egypt, links are made to influential members of the appropriate specialized committee. A relationship of reciprocal obligation is established through which the company acquires the trust and allegiance of the physician and the physician receives in turn advance notice of pharmaceutical developments, samples of the company's drugs for use in his or her clinic, financial sponsorship of local meetings and other professional activities, access and travel to international meetings, and other favors of professional value.

"BREAKING THE BUREAUCRACY": AVOIDING REGULATORY REVIEW

The large and elaborate bureaucracy regulating many areas of Egyptian life has often been a subject of comment in the Egyptian media. Some of this notice has been harshly critical, some aimed at reform, and some, like the extremely popular movie *Terrorism and Barbecue*, released early in 1992, or the myriad of political cartoons which comment on it (Ayubi, 1980, pp. 294–300), reflect an Egyptian penchant for wry humor.

The multinational drug company officials I interviewed in Egypt argued, as do their colleagues elsewhere in the world, that the Ministry of Health's cumbersome regulatory structure for the introduction of new drugs works a hardship on the health of the Egyptian people. They assert that the sluggish regulatory bureaucracy prevents Egyptians from benefiting from the fruits of the most up-to-date pharmaceutical research. This "Drug Lag" theory is part of the "official representations" (Bourdieu, 1990, pp. 108) of multinational drug companies in Egypt and elsewhere (Campbell, 1976; Salsburg and Heath, 1981; Silverman *et al.*, 1992, pp. 211–213). Such representations are part of social processes that allow the drug companies to sanction and legitimate actions undertaken in the service of circumventing the obstructing bureaucracy. As Bourdieu (1990, pp. 108) notes, official representations such as this are part of a process of officialization "whereby the group (or those who

dominate it) teaches itself and masks from itself its own truth, binds itself by a public profession which sanctions and imposes what it utters, tacitly defining the limits of the thinkable and the unthinkable and so contribution to the maintenance of the social order from which it derives its power''. It was in the context of this kind of discussion that one of my interviewees explained: ''Because it can take so long for a new drug to be approved, much of what I do involves breaking the bureaucracy''.

The sentiment that breaching the regulatory bureaucracy is an important part of their work was widely shared by the drug company officials I interviewed. Moreover, there was considerable consistency in the descriptions of how this can be accomplished. In nearly every interview, Egyptian drug company officials spoke of their special understanding of the workings of Egyptian society, and generally reflected an appreciation for and manipulation of two pervasive aspects of practice in Egyptian organizations: (1) patterns of affiliation and influence, and (2) the concentration of authority in individuals within organizations. In addition, they often reflected a similar cynical attitude toward widely held folk beliefs that see Egyptians as having uniquely tough biological constitutions and thus needing different doses of drugs than do other peoples.

Patterns of allegiance and influence

In Egypt, several kinds of informal groupings cross-cut formal institutional boundaries and tie people together in networks of pragmatic social relations. These networks provide a means of communication and a set of linkages which can be used to exert influence. Among these, the *shilla*, a quasi-group or clique, is used to mobilize a set of individuals to whom one is linked in order to promote some interest (Ayubi, 1980, pp. 466–470). *Shilla* and other informal groupings are resources which can be used to escape the ''excessive regulation and over-formalization of the bureaucracy'' (Ayubi, 1980, pp. 469). Because of their informal and utilitarian function, an individual can participate in many *shilla*(s). In each case, however, belonging to such a grouping is expressed in the reciprocal exchange of influence and intervention.

Often sought, and widely discussed, *wasta* — the use of influence to facilitate action on one's behalf, and the person who exercises that influence — is a recurring theme in Egyptian social relations. (Although ubiquitous in social life in Egypt and elsewhere in the Middle East, very few publications deal explicitly with *wasta*. The recently published study of intercessionary Wasta by Cunningham and Sarayah (1993) is a rare exception.) For instance, in their study of the Egyptian Bureaucracy, Palmer and his associates (Palmer *et al*., 1988) found that their respondents discussed the role of *wasta* in their professional lives; nearly 11% of their sample of 156 volunteered that they had secured their employment via someone's intervention on their behalf.

The social institution of *wasta* is ubiquitous in Egyptian social life. Nearly everyone has opportunity sometimes in their life to seek out a *wasta* to exercise influence on their behalf. Likewise, at some point nearly everyone has opportunity to be a *waseet*, exercising influence on behalf of others. Persons seeking the assistance of an intermediary are characteristically respectful and deferential. Receipt of the requested assistance creates a reciprocal obligation, often involving continuing respect and allegiance to the person who is a *waseet*, and the granting of reciprocal favors when possible. *Wasta* creates a dynamic set of reciprocal, though asymmetrical, relations which can facilitate or frustrate action.

Representatives of drug companies make use of this pattern by using their influence to help the selected members of the specialty medical committees. The companies fund scientific conferences, invite and send physicians to international conferences, and supply them with up-to-date information about drug developments in their specialty. The companies may also supply drugs — especially the drug which the company plans to submit eventually for registry — otherwise unavailable in Egypt, which can be used legally by these physicians in their private clinics.

Provision of such drugs help to keep these physicians at the forefront of clinical treatment, thus enhancing their clinical reputations, and conferring on them a ''clinical authority''. From the drug companies' perspective, having physicians with personal ''clinical impressions'' of the drug under review speaking authoritatively on their behalf in the medical drug committees facilitates the approval of their requests.

Wasta creates lasting reciprocal allegiances between physicians and drug companies, enhances the authority of a select group of physicians, and advances the interests of the drug companies in arenas to which they would otherwise have no access.

The concentration of authority in individuals

It is a common observation that authority tends to be concentrated in senior individuals in Egyptian organizations. In their work with senior government officials Palmer and his associates (1988) found that 64% of their sample of 156 individuals thought it necessary to centralize authority. Palmer and associates sought to account for the concentration of authority in individuals by asking these 156 ''senior officials'' why this practice exists. Prominent among the responses was the suggestion that the concentration of authority was one means by which a person could maximize the value of their wasta activities.

Regardless of the reasons for it, the concentration of authority in individuals is a normative characteristic of Egyptian professional life, one which extends into the medical professions. In the medical professions, *clinical authority* is an attribute actively sought. In Egypt, as elsewhere, the mantel of clinical authority derives in part from a physician's experience and institutional affiliation. As well, it relates to institutional arrangements where only a few of a group of colleagues rise to the senior ranks of institutional service, as professors, department heads, ministers, and the like. The constitution of clinical authority involves a variety of explicit and intangible attributes which are not fully understood, yet it obviously can benefit from the largess of drug company officials. The recompense to drug companies for the efforts — material and otherwise — which help some individuals develop an aura of clinical authority is that they then have on the medical committees individuals who are known to them and who can speak on their behalf; individuals whose voice is given great weight because of their clinical stature.

Privileging local biology

In my interviews, I was repeatedly told by drug company officials, themselves Egyptian, that in-country clinical experience is important for establishing appropriate Egyptian dose ranges. Echoing lay assertions that Egyptians are a physically robust and biologically strong population, drug company officials told me that particularly for anti-hypertensive, anti-psychotic and antibiotic drugs Egyptians require larger doses than were used in the West. The history of clioquinol in Egypt is illustrative.

Clioquinol, introduced as Enterovioform by Ciba in 1934, and marketed as a treatment for diarrhea was linked convincingly in the 1970s to SMON (subacute-myelo-optico-neuropathy), a condition characterized by irreversible paralysis, blindness and sometimes death. It was removed completely from the U.S. market in 1972 (Silverman *et al*., 1992, pp. 49), after damage suits brought against the company and Japanese government were settled for nearly $900 million.

The Egyptian minister of Health was alarmed by reports of SMON. He convened a committee of experts to advise him on the matter. Despite acknowledging that clioquinol products caused problems *elsewhere* the committee concluded that the Egyptian population differed significantly from others. As a result of this privileging of local biology, the committee concluded that rather than withdrawing clioquinol from the market what was needed for Egypt was a continued, inexpensive supply of such products.

"In December of 1982 a committee of Egyptian experts ... met to pool findings for the minister. Egyptian patients, they reported, were consuming about 70 tons of Enterovioform and other clioquinol-like products each year. No matter the harmful effects these substances might have had in Japan, they had done no harm in Egypt. They were generally recognized as safe and effective — and appreciated as relatively inexpensive. The committee recommended that drugs containing clioquinol should continue to be allowed on the Egyptian market" (Silverman *et al*., 1992, pp. 23).

Enterovioform was still sold in Egypt as recently as 1985 (Lane, 1985). In 1993 I purchased the clioquinol compounds, Enteroquin, Entocid, and Neo-Enterocin in pharmacies in Cairo and Alexandria. None of the package inserts for these products contained warnings about the neurological damage that had been documented elsewhere.

This privileging of local biology is equally important to both drug regulating authorities and to multinational drug companies. For the regulating authorities it indicates the need to scrutinize quite rigorously applications to allow the sale of a new drug in Egypt. Indeed, this scrutiny often leads to requests for local clinical trials which may slow down the approval of a drug. Such a purposefulness is seen as prudent and reasonable.

From the perspective of the multinational drug companies the need to amass additional, local data supporting the safety or documenting the appropriateness of dosage recommendations not only leads to delays in having their new drug approved, but causes them to incur additional development expenses, which future sales would then need to recover. Such delays are seen as unnecessary and costly by the drug companies.

CONCLUSION: NEOCOLONIALISM AND MULTINATIONAL DRUG COMPANIES IN EGYPT

As Urquhart (1989, pp. 22) observes, the achievement of independence by former colonies did not bring to these countries control of their own destinies. Rather, their futures are influenced and shaped by forces outside the country. These external influences on the affairs of these countries function in a manner that may frustrate efforts at self-determination. These influences derive from social relations that transcend questions of formal political control. Indeed, informal coalitions and multinational companies extend their influence over foreign national areas in a way that reconstructs the forms of prior colonial relations (Block and Klausner, 1987, pp. 85). The effects of colonialism and neocolonialism are reflected in four processes: (1) the flow of capital outside the country; (2) a kind of cultural imperialism in which inferior status is conferred upon the colonized; (3) concentration of political power in the capital; and (4) the disruption of the country's management of its own affairs.

(1) *Transfer of Capital Out of Egypt* and (2) *Cultural imperialism*. Following the legalization of private importation of drugs during the *infitah* there

has been a steady rise in the local market share of drugs marketed in Egypt by multinational drug companies. As well, the Egyptian pharmaceutical industry has had a decrease in the amount of its products sold outside of the country. The net result of this dual process has been the transfer of capital, in the form of profits from drug sales, outside of Egypt. These dual processes also reflect a cultural imperialism whereby indigenous products have come to be considered inferior to imported ones. This devaluing of local pharmaceuticals contributes to the flow of capital outside of the country.

(3) *Concentration of power in the capital*. Many of the activities of indigenous multinational drug company representatives are directed towards physicians who are members of the medical review committees, or who are likely to join those committees. Since a considerable amount of clinical authority is necessary for being appointed to these committees, and for assuming leadership, drug company assistance can play a significant role in a physician's access to power. Most of the members of the medical review committees are from Cairo universities. Drug company representatives are straightforward in saying that they concentrate their efforts in Cairo, adding that as far as possible they limit their work outside of the capital because it is not cost effective. One result is that the clinical community in Cairo is advantaged in relation to those elsewhere in Egypt. Thus, drug company activities help to concentrate clinical authority in Cairo. This concentration of clinical authority in Cairo leads to the concentration of political power there as well: Cairo physicians sit on the medical review committees and thus represent urban and elite health needs disproportionately.

This has a distorting effect on health policy as the health needs in the city are different from those of the more remote rural areas. For instance, inflammatory trachoma is almost unknown in Cairo but remains a significant health problem in the Egyptian Delta (Lane, 1987; Courtright *et al*., 1989). It consequently receives little national attention.

(4) *Disruption of Egypt's management of its own affairs*. Among the primary responsibilities of a state are to insure the health and safety of its citizens. To meet these responsibilities states promulgate laws, regulations, and codes of conduct that allow for the management of their internal affairs. They also enter into agreements and treaties with other states and participate in multinational codes and regimes of conduct which regulate and limit the activities of states outside their borders and within other states.

Participation in regional and international codes of conduct for multinational corporations (Sikkink, 1986, pp. 818) are one sort of effort in which Egypt engages in order to facilitate its management of it internal affairs and to meet its responsibilities for the health and safety of its citizens. In a recent interview Dr Ragheb Dwidar, former Egyptian Minister of Health, stressed the importance of the rationalization of drug consumption in Egypt as a way of helping to make certain that local drug production could meet Egyptian health needs (El-Saadain, 1991, pp. 7).

Egyptian government regulation of the pharmaceuticals industry is intended to insure that the activities of multinational drug companies are consistent with the economic, public health, and development goals of the state. The manipulation of intercessionary *wasta* and other local social processes to bend or break bureaucratic rules may achieve results that are consistent with such goals, as when it provides necessary relief from slow, arbitrary institutions. However, the result may not only be inconsistent with these goals, they may be harmful, as when the result of the manipulation of these processes frustrates the regulatory intentions of the Government and produces outcomes that are unfair and threaten public health. As Cunningham and Sarayah (1993, pp. 16–17) note in general, particularistic social processes like *wasta* pit "ascriptive values" against "achievement values" in ways that can both benefit and harm state development.

One of the explicit intentions of drug regulation in Egypt is to limit the number of available drugs that have equivalent clinical roles. (As reflected in the regulation that no more than four therapeutically equivalent drugs be marketed in the country.) Yet drug companies are especially interested in marketing such "me too" drugs because their development costs are low (Drake and Uhlman, 1993). Antibiotics, which are used freely in Egypt, are an area where "me too" products are an important revenue source.

Government efforts to regulate the registry of new drugs for use in Egypt are part of one of its efforts to rationalize drug use within the country, and part of the broader framework in which the national legitimacy of the state is maintained. As Smock and Crocker (1995, pp. 9–12) note, effective state governance includes among its basic functions: (1) oversight and supervision of the nation's resources; (2) effective and rational revenue collection from goods, people, and services; (3) building and maintaining national infrastructure; and (4) the ability to render social services.

Efforts by multinational drug company officials to "break the bureaucracy" by manipulating local patterns of social interaction to construct a system of patron-client relations which may frustrate intended health safeguards. And these efforts create a pattern of neocolonialism in Egypt that undercuts the legitimacy of the national governance structures in general.

Acknowledgements—Earlier versions of this paper were presented in the symposium, "International Technology

Transfer: Anthropological Implications," at the 1993 annual meeting of the American Anthropological Association, Washington, D.C., 18 November, at the Department of Anthropology, University of California, Berkeley, and at the 1992 meetings of the Middle East Studies Association of North America, Portland, Oregon, 30 October. I thank Chandler Dawson, George Foster, Mary LeCron Foster, Anita Fabos, Nancy Scheper-Hughes, Sandra D. Lane, and Nadine Toppazada for helpful comments on this paper.

REFERENCES

Ajami, F. (1982) The open-door economy: its roots and welfare consequences. In *The Political Economy of Income Distribution in Egypt*, eds. G. Abdel-Khalek and R. Tignor, pp. 469–516. Holmes and Meier, New York.

Aliboni, R., Dessouki, A. H., Ibrahim, S. E., Luciani, G. and Padoan, P. (1984) *Egypt's Economic Potential*. Croom Helm, London.

Ayubi, N. N. M. (1980) *Bureaucracy and Politics in Contemporary Egypt*. Ithaca Press, London.

Block, A. and Klausner, P. (1987) Masters of Paradise Island: organized crime, neocolonialism, and the Bahamas. *Dialectical Anthropology* **12**(1), 85–102.

Bourdieu, P. (1990) *The Logic of Practice*. Stanford University Press, Stanford, CA.

Campbell, R. R. (1976) *Drug Lag. Federal Government Decision Making*. Hoover Institution Press, Stanford, CA.

CAPMAS (Central Agency for Public Mobilization and Statistics) (1988) *Statistical Yearbook*. Arab Republic of Egypt. Central Agency for Public Mobilization and Statistics, Cairo, Egypt.

Courtright, P., Sheppard, J., Schachter, J., Said, M. E. and Dawson, C. R. (1989) Trachoma and blindness in the Nile Delta: current patterns and projections for the future in the rural Egyptian population. *British Journal of Ophthalmology* **73,** 536–540.

Cunningham, R. B. and Sarayrah, Y. K. *(1993) Wasta. The Hidden Force in Middle Eastern Society*. Praeger Westport, CN.

Drake, D. and Uhlman, M. (1993) *Making Medicine. Making Money*. Andrews and McMeel, Kansas City, Kansas.

El Matri, A. (1990) Imbalance of distribution of physicians in the Arab world. *Cahier de Sociologie et Demographie Medicales* **30**(4), 543–555.

El-Saadain (1991, 6 June) Public Hearing (interview of Dr Ragheb Dwidar) *Al-Ahram Weekly*, pp. 7.

Galal, E. (1983) National production of drugs: Egypt. *World Development* **11**(3), 237–241.

Goldschmidt, A. (1988) *Modern Egypt. The Formation of a Nation-State*. Westview Press, Boulder, CO.

Gran, P. (1979) Medical pluralism in Arab and Egyptian history: An overview of class structures and philosophies of the main phases. *Social Science and Medicine* **13B,** 339–348.

Kandil, A. (1989) The pharmaceutical industry and legislation in Egypt — historical perspectives and current practice. *Journal of Clinical Pharmacy and Therapeutics* **14,** 83–85.

Khallaf, N., Wahba, S., Herman, E. and Black, R. (1991) Recommendations from Egyptian pharmacies for children with acute respiratory illnesses. *Lancet* **388**(27 July), 248.

Kristensen, M. (1993) Danish Medical Export to the Arab World. Paper presented at the Health Conditions in the Arab Peninsula, Odense University, Denmark, October 27–28.

Lane, S. D. (1985) Health systems assessment, damanhour, Egypt. Unpublished research report. Medical Anthropology Program, University of California, San Francisco.

Lane, S. D. (1987) A biocultural study of trachoma in an Egyptian Hamlet. Unpublished Ph.D. thesis. University of California, San Francisco.

Lane, S. D. and Millar, M. I. (1987) The "Hierarchy of Resort" reexamined: status and class differentials as determinants of therapy for eye disease in the Egyptian Delta. *Urban Anthropology* **16**(2), 151–182.

Lauridsen, E. (1984) The World Health Organization action program on essential drugs. *Danish Medical Bulletin* **31**(1), 1–20.

Loeffler, R. (1988) *Islam in Practice: Religious Beliefs in a Persian Village*. State University of New York Press, Albany, NY.

Mamdani, M. (1992) Early initiatives in essential drug policy. In *Drugs Policy in Developing Countries*, eds. N. Kanji, A. Hardon, J. Harneijer, M. Masuma and G. Walt. Zed Books, London.

Millar, M. I. and Lane, S. D. (1988) Ethno-ophthalmology in the Egyptian Delta: an historical systems approach to ethnomedicine in the Middle East. *Social Science and Medicine* **26**(6), 651–657.

Morsy, S. (1993) Medicine in the Oil Era: the islamization of knowledge and health care. Paper presented at the Health Conditions in the Arab Peninsula, Odense University, Denmark, October 27–28.

Palmer, M., Leila, A. and Yassin, E. S. (1988) *The Egyptian Bureaucracy*. Syracuse University Press, Syracuse, NY.

Rahman, F. (1989) *Health and Medicine in the Islamic Tradition*. Crossroad, New York.

Reekie, W. and Weber, M. (1979) *Profits, Politics, and Drugs*. Holmes and Meier, New York.

Salsburg, D. and Heath, A. (1981) When science progresses and bureaucracies lag: the case of cancer research. *Public Interest* **65**(Fall), 30–39.

Sikkink, K. (1986) Codes of conduct for transnational corporations: the case of the WHO/UNICEF code. *International Organization* **40**(4), 815–840.

Silverman, M. (1976) *The Drugging of the Americas*. University of California Press, Berkeley, CA.

Silverman, M., Lee, P. and Lydecker, M. (1982) *Prescriptions for Death: the Drugging of the Third World*. University of California Press, Berkeley, CA.

Silverman, M., Lee, P. R. and Lydecker, M. (1986) Drug promotion: the Third World revisited. *International Journal of Health Services* **16**(4), 659–667.

Silverman, M., Lydecker, M. and Lee, P. (1992) *Bad Medicine. The Prescription Drug Industry in the Third World*. Stanford University Press, Stanford, CA.

Smock, D. and Crocker, C. (Eds.) (1995) *African Conflict Resolution: The US Role in Peacemaking*. United States Institute of Peace, Washington, D.C.

Urquhart, B. (1989) *Decolonization and World Peace*. University of Texas Press, Austin, TX.