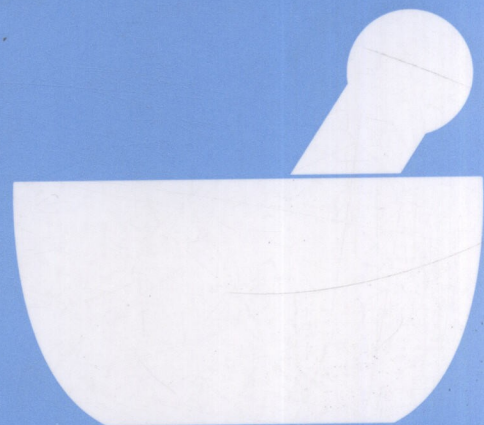


Construction and Design Manual Pharmacies

药店设计手册

(德)多蒂·贝克 菲利普·莫伊泽 编
鄢 格 译



辽宁科学技术出版社

PHARMACIES CONSTRUCTION AND DESIGN MANUAL

药店设计手册

图书在版编目 (C I P) 数据

药店设计手册 / (德) 贝克, (德) 莫伊泽编; 鄢格
译. — 沈阳: 辽宁科学技术出版社, 2009.10
ISBN 978-7-5381-6122-9

I. 药… II. ①贝…②莫…③鄢… III. 药品—专业商店—
建筑设计—手册 IV. TU246.1-62

中国版本图书馆CIP数据核字 (2009) 第166256号

出版发行: 辽宁科学技术出版社

(地址: 沈阳市和平区十一纬路29号 邮编: 110003)

印刷者: 利丰雅高印刷 (深圳) 有限公司

经销者: 各地新华书店

幅面尺寸: 225mm × 285mm

印 张: 14

插 页: 4

字 数: 125 千字

印 数: 1~2500

出版时间: 2009年10月第1版

印刷时间: 2009年10月第1次印刷

责任编辑: 陈慈良

封面设计: 张 迪

版式设计: 张 迪

责任校对: 周 文

书 号: ISBN 978-7-5381-6122-9

定 价: 180.00元

联系电话: 024-23284360

邮购热线: 024-23284502

E-mail: lnkjc@126.com

http://www.lnkj.com.cn

本书网址: www.lnkj.cn/uri.sh/6122

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The colours flow fluidly from a soft blue into orange, and then into red and green. As many glances as the shop window attracts during the day, in the dark it is an absolute eyecatcher, even at a distance. One could almost believe that it is a light installation produced by art students trying to draw attention to grievances at their university.

Not all that long ago, the local pharmacy was still solidly fitted out with wooden furniture. The pharmacy still had the appearance of a workshop for health, where, in keeping with centuries-old tradition, the pharmacist was a craftsman who continued to produce some medicines himself. This practical experience in handling the materia medica produced an in-house manufactured insecticide, which was excellent in every respect. So everything was as it should be: The pharmacy employees were competent and friendly; the atmosphere was simple and pleasant – just like being in the corner shop; trust in the pharmacist's expertise existed on the basis of precisely such alchemical brews as the insecticide. For me, at least, the "apothecary's shop" had proved itself to be more than just a storehouse (Greek: apo = away and tithenai = lay) for a range of goods and a hatch for passing through prescribed drugs. Suddenly, however, the old, familiar pharmacy was closed down. Subsequently this new pharmacy, designed in white and enhanced by warm light colours, was opened, as if out of thin air. There

was no longer a clear physical separation between the pharmacist, as an expert adviser, and the customer on the other side – only a mental division. After all, the pharmacist knows that his position of privilege has been accorded to him step by step under law since the 12th/13th century, and that his practical, craftsmanlike profession has been recognised as an academic discipline since the 19th century. According to representative surveys undertaken by various opinion research institutes, alongside doctors, pharmacists enjoy an undiminished level of trust amongst the German public, with a rate of 84 to 93 percent. "Ask your doctor or pharmacist" is not only a slogan to warn against the side effects of certain medicines, but is also a formula aimed at arousing trust based on specialist expertise. The ladies and gentlemen in white coats as an outpost of the medical practice, who serve as its extended arm, are well aware of the respectful distance which the patients as customers accord them by virtue of their office. This means that the line separating the customer from the pharmacy's specialist, private area, once represented by the sales counter, can now be relaxed in optical and constructional terms. Only the window at the night service counter remains as it was.

Under law, pharmacies are obliged to ensure that in the public interest, the population is adequately supplied with medicines. In order to practice their profession, pharmacists are required to obtain a licence. The ever-present trust in the art

PHILIPP MEUSER

菲利普·莫伊泽

THE HEALTH DESIGNERS PHARMACIES CAUGHT BETWEEN PROFESSIONAL TRADITION AND THE MODERN MARKET

健康设计师

处于专业传统与当代市场背景下的药店

店内的颜色由淡蓝过渡到橙黄，再到红、绿，平缓而流畅。药店在夜晚同样格外引人注目，如同艺术系学生制作的一个大型灯饰。

不久以前，德国当地的药店仍采用木质家具装饰，保持着传统的作坊模式：药剂师亲自配药；员工负责而友好；环境简约而亲切。在我看来，药剂师商店同那些只出售各种药品的药店大有不同。然而，这些传统而又熟悉的药店似乎在瞬间全部被关闭。新建的药店以白色为主，在其他暖色调的修饰下，格外引人注目。药剂师与顾客之间的自然屏障已不复存在。根据调查显示，药剂师及医生在德国公

众中的支持率达到84%~93%。“看医生或找药剂师”不仅仅只是为知道药物的用途及副作用，更体现了人们对其专业技能的信任。

根据法律规定，为确保满足公众的需求，药店应提供足够的药物。同时，药剂师须获得许可，才可从事这一职业，确保他们的利益不受那些街头小贩以及庸医的侵犯。

在当今的现代化市场体系下以及消费环境中，药店行业协会的最后一个特权即是监测机制。从药店的名字中

of the pharmacist has been legally guaranteed under law since the 13th century by controls imposed by the authorities. In this way, the pharmacist was protected from the competition of hawkers, miracle healers, and other charlatans. Has any pharmacist ever gone bust under the described system?

One of the last guild privileges to be preserved in today's modern market and consumer society also entails monitoring. Names such as "Ratsapotheke", "Hofapotheke", "Klosterapotheke", and "Spitalapotheke" (city, court, monastery, and hospital apothecary) demonstrate the prestige of pharmacies for the cities and territorial authorities, be they spiritual or secular. Frequently, outstanding architects were commissioned with the construction and interior decoration of these pharmacies. That many of them possessed luxurious furnishings was simply a matter of good taste. It is therefore nothing new that pharmacies were lent an identity, or a confirmed reputation, through location, furnishings, or quality of craftsmanship. The court doctor and apothecary formed an essential double act which was responsible for the well-being and health of His Grace and his family – precisely because of the already proven professional expertise. One could not train to become a court or city apothecary, one achieved this status by appointment. The pharmacy as a location therefore only reflected the respect which the pharmacist's skills had earned.

The pharmacy as designer shop

The difference to today lies in the egalitarianism of pharmacies. The aristocracy has fallen, the royal households have been abolished, and city councils no longer have their own pharmacist with corresponding premises. Pharmacists and their business premises are part of a great whole beneath the pharmacy sign reserved for guild members, and as such they are already privileged. How, therefore, can an individual member of a free profession amidst a network of 21,500 pharmacists make himself stand out and – above all – in comparison with whom? As made clear by the *Federal Union of German Associations of Pharmacists*, competition and danger threaten not from amongst their own ranks, but rather from outside – and in several respects, as well.

In a sophisticated culture such as ours where, in the public perception, medicine has practically banished illness – thus also its worst case scenario: death – and it is now a question of remaining healthy, that means young and full of vitality, for as long as possible, the pharmacist's role has changed. Nobody goes to the pharmacy anymore because of questions of life and death – or at least if they do, they don't let it show. What people go to the pharmacy for is to register for a yoga course, or holistic healing, or to buy a dietary supplement. The trend which is changing and will continue to change pharmacies is known as "wellness". This is the word,

written in large, clear letters that one sees first in the window of the local pharmacy on the corner. And it is this sense of well-being that determines the fit-out. The trend is towards a health system which spends a fortune on the luxuries of "forever young" and "living forever" and has allowed these to penetrate the system at every level. Even the statutory health insurance funds have erased illness from their self-image, and have exchanged it for the fresh scent of flowers and the happy faces of naturally healthy people. It's a question of health. "Health fund" or "the enterprise of life" are the new advertising slogans. So the change lies in the system.

The other change is the market which results out of this. Thanks to the trend described above, the pharmacies' product ranges are competing on this level with health food stores and drugstores. This is the result and is down to the fact that the classical pharmacies are suddenly competing with health food stores and drugstores, as well as completely new types of pharmacy such as branch outlets of certain companies like *DocMorris*, the international pharmaceutical mail-order company, or online sales with their incredible aggressive pricing policies.

However, it is the citizen himself who decides. Green awareness has not only given many people to understand – at least theoretically – that man is part of a greater natural diversity, but has also led to a new physical awareness. In contrast to orthodox medicine, the so-called alternative



(城市药店、法庭药店、修道院药店等)，不难看出其享有的重要地位。目前，许多知名设计师应邀修建和装修药店，华丽的装饰只能彰显出设计者的品位。然而，通过选址、装饰或者工艺赋予药店个性或者声誉，已不再稀奇。医生和药剂师共同营造了一个双重效应，确保公众健康的同时，保持自身及家人的声望。

药店——设计商店

如今，皇家贵族统治已被彻底废除，政府工作人员也不再享有专属药剂师服务及相应特权，药店已渐趋平等化。即使如此，一个名不见经传的药剂师如何在

215000人的庞大专业队伍中脱颖而出？德国联邦药剂师协会对此曾作出明确解释：“竞争和危机并不来自于行业内部，而是存在外界原因。”

在德国这样复杂的文化背景下，以往的那种观念——药物要么治愈疾病，要么引起死亡，被渐渐摒弃。现在，人们更为关注的是如何保持身体健康。至此，药剂师的作用开始渐渐改变。当地药店的橱窗上都会醒目地写着“保健 (wellness)”的字样。正是这种意识决定了药店的设计，卫生体系不断完善，公众追求“永葆青春，长生不老”的趋势不断渗透。另一个变化便

是市场。鉴于上述的发展趋势，药店的产品开始细化为保健品和药品。同时这也意味着，传统药店的竞争对手也在不断增加，如连锁药店、国际邮购药店、网上药房等，它们的优势在于低廉合理的价格。

无论如何变化，最终起决定作用的依旧是市民自身。绿色意识不仅让人们在理论上认识到自己仅是自然界的一小部分，同时也激起了他们的健康意识。那些所谓的替代传统药品的治疗方法——将人看做“肉体、意识与精神的结合体”彻底贬低了药剂师的作用。

1-3 Leibniz-Apotheke, Berlin

Illuminated display window of a pharmacy.

1-3 位于柏林的莱布尼茨药店，店内橱窗采用灯光照明。

healing methods and practices which treat physical ailments based on the idea of the person as a body-mind-spirit being have discredited the pharmacist as a public supplier of pharmaceuticals, which are prescribed by doctors and produced in the laboratories of chemical companies.

The orthodox medical troika of doctor, pharmaceutical industry, and pharmacist as the pharma vendor no longer functions. The cause lies with the citizen whose awareness has been heightened, thus offering him a choice with regard to the concept he wants to use to become or remain healthy. Surveys notwithstanding, the orthodox school of medicine is tarnished and the pharmacist who is right in the middle has a problem. The visible and undeniable strength of nature, its healing plants, and the substances extracted from them are just as much in demand as is knowledge about the body's powers of self-healing. In the midst of all this, the pharmacist's expertise as an advisor and person of trust, traditionally developed through practical experience and sanctified with academic titles, is asserting itself more than ever before. There is also the cash crisis within the health system. Medicines from the pharmaceutical companies are becoming more expensive and the health funds are nearing financial collapse. The orthodox exploitation chain of pharmaceutical industry, doctor, pharmacist, and customer is also financially creaky, compared with the affordable

competition from mail-order and online purchasing which is aggressive and highly successful. This is why the pharmacy has diversified from being a legally privileged dispensary of prescription medicines, into a store for natural healing remedies and health consultancy. The binding force between all of these elements is expertise, that means training and certification.

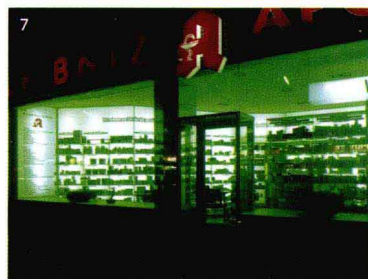
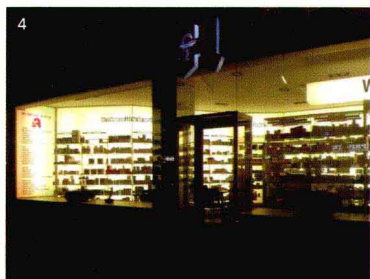
Architecture as a creator of identity

In a market where, on the one hand, borders are blurring and, on the other, its privileges are being removed, just like any other business pharmacies need to demonstrate quality to the outside world and make their own role - apart from certified privileges - visible. The magic formula is "corporate identity", which must be visible both from a distance and on entering the pharmacy with regard to attitude, behaviour, and the communication of specialist skills, all the way through to the internal organisation. It is a question of corporate design. "Who am I, where am I, what am I, what do I have to offer?" All of these questions concerning the pharmacy should be answered clearly for all the senses by architecture. For these are precisely the questions to which the customer expects an answer, which he subconsciously registers and which help him to decide whether to go into the pharmacy or not. The range of designed identity extends from the business's own logo and all communication material, to the design of the business and the corresponding internet platform.

The architect has to bear all of these elements in mind because, as with any other provider of branded goods, this is an issue which involves nothing less than creating instant brand recognition, a question of ensuring and intensifying the customer's identification with "his pharmacy". It is the coherent unity of all these elements which allow a pharmacy to create a good external impression.

Inside, the colours, materials, and structure need to be coordinated. A restrainedly elegant and harmonious use of all three elements is essential here. Designing a pharmacy is, first and foremost, the job of the interior designer. It is evident that it is the offices who are equally at home with the disciplines of design, interior design, and architecture, who predominantly prove best at designing pharmacies. Or the designers may also be architects who have adequately demonstrated skills of the highest order in other areas such as living, gastronomy, offices, commercial premises or in different selected sectors.

The underlying design rule is: "Form follows content and function". In other words, a clear shape vocabulary and superior materials are required, and the two must be combined to create an atmosphere of integrity, as well as a spatial separation between the customer area and the pharmacy's working areas. A pharmacy is not a drugstore, and its design is required to meet the demands of a designer store - for example



医生、制药企业、药剂师三方互惠互存的售药模式不再发挥作用；传统的医学院校缺少了以前的风光；药剂师这一中间环节开始出现各种问题。作为专业咨询家，药剂师亟须证实自己在实践中获取的经验以及其被认可的职业头衔。同时，卫生体系自身仍存在价格问题。同网购或网上购药相比，制药企业的产品价格越来越高，这在某种程度上就造成了药店从以往合法、并享受各种特权的权威机构转变到仅出售自然治疗药物和提供健康咨询的小商店的局面。

建筑——身份的缔造者

在目前的市场情况下，药店的特权被取消，之间的界限越来越模糊。如同其他商店一样，药店同样需要具备自身的品牌，这可通过“企业标识”来实现。所有与药店自身特征相关的问题，如：名称、地点、性质、药品种类，都可通过建筑形式来表现，这些恰恰都是顾客所期待了解的。设计师在工作过程中，必须牢记以下元素：企业标识包括标语、材料、设计以及相应的网络平台。连贯的品牌标志，能够给顾客留下良好的印象。

药店内部色彩、材料及结构须良好地协调，这一点至关重要。很明显，在药店设计上，那些综合性设计公司或在生活、美食、办公及其他商业空间的设计上表现突出的设计师，更能取得令人满意的结果。

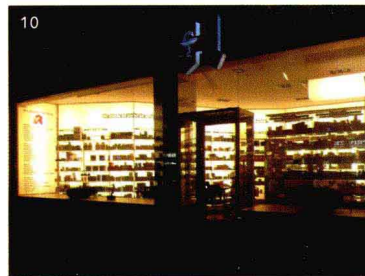
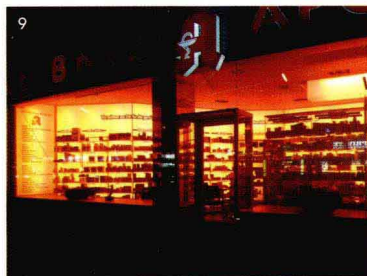
最基本的设计原则即：形式服从内容与功能。换句话说，清晰的结构以及上好的材料必须完美融合，以便打造一个连贯的空间。同时，顾客区同工作区应予以分离。药店如同其他设计商店，由于其产品的特殊性，其在装饰上必

an optician's shop. This is because, in keeping with their professional claim to provide expert guidance and specialist knowledge as the customer's person of trust, the pharmacy ranks in the premium league of retail trade. Based on their products, pharmacies are superior sales outlets. They have to be – and that's the way their furnishings have to look as well. Design details are oriented to the size, location, and contentual self-image of the pharmacy.

Apart from having friendly personnel who are highly skilled at what they do, a good pharmacy primarily distinguishes itself externally through the use of colour. At a time when even delivery rooms and hospitals or medical practices are decorated in cheerful colours, nobody wants to go into a pharmacy that is chalk-white. As far back as 1791 Johann Wolfgang von Goethe was already examining the effect of colours on people's behaviour and mood. We have the Brazilian theologian Dom Hélder Pessoa Câmara to thank for the following finding, formulated in simple yet moving words: "The light which falls on things transforms them." Therefore, for a professionally designed pharmacy, the choice of colour for floor, ceiling, walls, and furnishings is elemental for the design of the spatial atmosphere, whereby the effect of external light and the reproduction of colours by means of artificial light should also be considered. It is a question of atmosphere. If this is right, and goes hand in hand with competent

advice that creates trust, and friendly, skilled service, the pharmacy has won: both the customer and the turnover. If the first is not right, all the expertise in the world is of little or no use. Dark shades for the floor ensure that the customer feels looked after and secure. A change from dark to light flooring makes it possible to show the border between the public area and that of the personnel. The colours used should be calming and solid, and this should extend to the furniture, as a relaxing atmosphere is also an aid to well-being. If restrained background and material colours are also used, what is truly central will automatically become the focus of attention: the products.

It is important that these materials are correctly chosen. Because the pharmacist as a profession has a longstanding tradition, materials should be chosen which will age gracefully. Nothing is worse than a dispensary which looks like a DIY store. A corporate culture is a thing of lasting value which, like wine or love, matures with age, and should never be allowed to become tarnished. Fashion trends come and go, but a good pharmacy is like a mature individual, who is serene in himself, regardless of trends. Change may, at most, emerge out of the pharmacy's own corporate self-image.



须注重细节，引人注目。

一个好的药店，除了拥有技术水平高、友好可亲的员工之外，颜色的适当运用同样可以使其脱颖而出。现今时代，像产房、诊所这样的空间都使用鲜亮的色彩装饰，相信没有人喜欢走进一家灰白阴沉的药店。早在1971年，约翰·沃尔夫冈·歌德就曾研究过色彩对人类行为及心情的影响。因此，一个专业设计的药店中，地板、天花板、墙壁以及饰品颜色的选择至关重要。选择恰到好处，就

会营造一个和谐、友好又能突出专业特色技能的环境；相反，店内的专业特色便无从发挥。深色调打造安全感，而从暗到明的变化突出了空间的界限；淡雅的色彩给人放松、积极向上的感觉；再配以内敛的背景，人们的目标便会不知不觉的定格在药品上。

材料的选择同样重要，应注重经久耐用并永不过时。企业文化就如同美酒和爱情一样，愈陈愈香。时尚转瞬即逝，而一个好的药店就如同成熟的个体，不受潮流干扰。

4-10 Leibniz-Apotheke, Berlin

Illuminated display window of a pharmacy.

4-10 位于柏林的莱布尼茨药店，店内橱窗采用灯光照明。





Old pharmacies exercise a huge fascination over many people. In many places they have been lovingly refurbished and their original appearance restored, so that one can sense how people in the Middle Ages and the early Modern era must have felt when entering such places. Hidden away behind artistically numbered drawers, beneath tables, in boxes, tins, mortars, retorts, leather pouches, distilling apparatus and bottles, in secret cupboards or poison cabinets were those substances with which the apothecary [as the pharmacist was once known] mixed his medicines. It was not merely a question of assisting the individual in his everyday, often fruitless attempt to cure serious illnesses – the apothecary also sought cures for plagues which threatened both man and beast, for diseases which brought war in their wake, and for risks to the life and limb of the rulers.

For centuries, the apothecary's shop was a "workshop for health", mysterious and with a magical aura. In the view of the simple people, alchemy and magic were tangibly close there; and where else would one expect the manufacture of gold, or the creation of the "homunculus" than somewhere like a apothecary's shop whose technical equipment was more or less predestined for such uses? Following doctor's prescriptions or based on the apothecary's own imagination and expertise, pills, creams, drops, infusions, emetics, comfits, suppositories,

embrocations, cosmetics, and herbal mixtures for both internal and external use were expertly prepared. The apothecary's expert knowledge was equal to the doctor's when it came to medication ["materia medica"]; there is documentary evidence that rivalry already existed between the two disciplines in the Middle Ages. The gathering, drying, crushing, distilling, and colouring of medicinal plants and substances said to have curative properties, provided first practical experience. What they tended to lack was the theory, that means physicians trained with regard to plants and healing herbs using the works of antique and medieval authors. Until into the 19th century, there was no standard training for pharmacists, so that their number included respected natural scientists, as well as harmless hucksters and respectable artisans.

In general, however, access to the apothecary's shop appeared almost hermetic, something that was further reinforced by Latin inscriptions and enigmatic shorthand. That they were often housed beneath ancient vaults or in cellars strengthened this impression still further. The alchemical tradition, that of searching for the "quintessence" of things, the barely disputed existence of miracle pills, the collecting of gemstones, unicorn horn powder, bezoar stone, or the mysterious, human-shaped mandragora – all of these aroused astonishment and, indeed, fear. "Dosis facit venenum" – danger is simultaneously implicit in the old principle of healing: What was useful

KLAUS BERGDOLT

克劳斯·伯格都特

FROM HERB GARDEN TO MAIL-ORDER PHARMACY HISTORIC FACTS ABOUT THE PHARMACY

从芳草园到邮购药店
药店发展史

在很多地方，人们对古老的药店情有独钟，在那里可以感受中世纪以及近代人的生活——药剂师将盛放在不同容器中的原料混合调配，制成各种药材的场景仿佛清晰呈现。药剂师不仅仅帮助个别的患者，他们也会试图寻找治疗大范围传染病（如瘟疫等）的方法。

几个世纪以来，药店都被称为“健康工厂”，给人神秘、神奇的感觉。人们往往将其与炼金术或制造小矮人（传说中炼金术师制造的一种具有超强能力的小人）联系起

来。在中世纪，药剂师享受着和医生相同的地位，唯一的便是其缺乏理论指导。直到19世纪，在这一领域仍未出现专业理论标准，药剂师也成为了自然科学家、小药贩以及技工的总称。

古老的药店往往采用拱门入口或设置在地下室内，同雕刻的碑文一起营造出神秘莫测的感觉。炼金术可以说是提炼精华的代名词，而那些被称作精华的药用物质（牛黄等），如果使用不当就可导致死亡。如果没有药剂

or did good, what could preserve life could also – if wrongly administered – lead to death. Poisons and their antidotes have frighteningly common properties, and every visitor sensed this. That “Composita” had strength greater than the sum of their parts, and that “Simplicia” possessed an additional “Vis occulta” had already been stressed by Galen and Avicenna. Life and death, salvation and danger rubbed shoulders on the shelves, so that weighing scales and measuring unit took on a special significance. A beautiful apothecary’s shop demonstrated nothing less than the cultural standing of the given municipality. Indeed, without the dispensing of medicines, doctors’ efforts to preserve health were condemned to failure. Apothecaries, irrespective of the diversity of their training, enjoyed a very special level of trust amongst the people; an important quality which also reaped great rewards. Since time immemorial, apothecaries have been crucial advisors, as were those drug and root traders who took on the role of apothecary where none was available.

In early Modern times, from 1600 to 1800, the various types of apothecary [city council apothecary, court apothecary, monastery apothecary, or infirmary apothecary] were objects of prestige belonging to the municipalities, princes or clerics. Not infrequently, outstanding architects were commissioned with their design and construction. Many

possessed noble, almost luxurious furnishings, which fulfilled all possible aesthetic demands. Magnificent examples have been preserved, predominantly from the 18th century – from Portugal to Russia. The court apothecary in particular enjoyed high status for centuries and, just like the personal physician, accompanied the prince or king with his “travelling apothecary”, a beautifully crafted portable cabinet, which contained space for small bottles, cinnamon canisters, tins of unguent, and even books. The idea of the apothecary’s shop as the central place for the production and sale of medication, separate from a medical practice, had already been born in the high Middle Ages. It is likely that the example was set by the Arabs, although such establishments also existed in Byzantium. Pharmacological literature which not only legitimised the profession of apothecary, but also elevated its authority, can be traced back to ancient times. Works ascribed to Theophrastus, Pliny, Galen, and Dioscurides already had a legendary, almost axiomatic status. No less influential at the time were Avicenna’s “Canon Medicinae”, the “Antidotarium Nicolai”, and a work known as “Circa instans”, ascribed to the Italian physician Matthaeus Platearius. It was above all in the monasteries of the early Middle Ages that healing with plants and pharmaceuticals enjoyed great popularity. The floor plan of St. Gallen monastery [around 800] already foresaw a building for physicians and

apothecaries [“armarium pigmentorum”]. Almost every monastery had a herb garden, and this is now once again in fashion. An important element here was “signature reading”: It was believed that the therapeutic effectiveness of a plant could be recognised from its external shape and colour.

It was above all in the 13th century that early forms of the pharmacy, that means shops for medicines, were established in many European cities. The expanding international trade in drugs and herbs [Byzantium, Venice, Pisa, Nuremberg] had a crucial influence on this development. Whether the professional pharmacist ultimately developed out of the monasteries or from the guild of travelling drug traders [“huckster theory”] is still debated today. It were precisely the exotic, imported healing substances, whose origins possessed an aura of the legendary, which were considered to be highly effective, at latest since the Carolingian period. From the 14th century, apothecaries were sworn in by urban or state authorities; firstly in Italy and southern Europe and then later, north of the Alps, state concessions for establishing apothecaries were granted. The “Assizes” of the Norman king, Roger II [1140], ratified at the assembly of Ariano, contained the first [preserved] European Apothecary’s Code. This was followed – firstly for the Italian-ruled area – by Frederick II of Hohenstaufen’s “Constitutiones medicales” [1231]. In the West, pharmacy was now considered to be an independent science, separate from medicine, but equally necessary. This did not prevent



师配比的药品，医生的工作必定会功亏一篑。摒弃缺乏专业训练的因素，药剂师在人们的生活中享受着至高无上的信任感。他们被称为是必不可少的“健康咨询顾问”。

1600年至1800年，根据服务的人群不同，药剂师分为多种。例如，宫廷药剂师专为皇室贵族服务，享受着很高的社会地位。药店于中世纪诞生，从医疗机构中分离出来，主要职责是生产及销售药品；而药理学著作早在远古时

代就已经出现，不仅将药剂师这一职业合法化，同时提升了他们的权威地位。在中世纪早期，在修道院中，采用植物医药品治疗疾病备受欢迎。因此，几乎每个修道院都会设有一个芳草园，现在这一趋势又开始流行起来。曾经有人说过：“从植物的外观形状及色彩即可判断其医学效力。”

药草在全世界范围内的交易促进了药店的产生。13世纪，欧洲的很多城市开始出现药店的雏形；14世纪，开

始在意大利及南欧盛行，然后传到北部的阿尔卑斯地区。现在，药店在西方国家被看作是独立的机构，享有同医院相同的地位。相关部门会实行定期检查，药品价格的制定会受到权威部门的参与。药剂师作为自主商人，必须遵守相关规定。在中欧国家，必须获得许可才可开设药店。直到19世纪，药店的规模依旧很小，内部只有折叠椅、壁炉、橱柜及库房等必要元素。

16、17世纪，在欧洲一些国家，知名的草药植物开始大

Important substances are extracted from healing plants. 从药用植物中提取的重要物质。

- 1 Sage (Salvia officinalis)
- 2 Peppermint (Mentha x piperita)
- 3 Stinging nettle (Urtica dioica)

1. 鼠尾草
2. 薄荷
3. 大荨麻

that, in fact, it was practised more as a skilled trade. Regular inspections of apothecaries, as were prescribed in the Venetian “Capitulare de specialibus” [1258], were soon obligatory, but the prices were only partially fixed by the authorities. Apothecaries were generally considered to be free traders. However, stringent restrictions [oath, fixed prices, punishment for violations] were foreseen in the “Breslau Medical Code” of 1352. In central Europe, too, those wishing to open an apothecary’s shop generally required a licence. Until the 19th century, most apothecary’s shops were astonishingly small, their core elements formed by folding tables, a fireplace, a few cupboards, and a small storeroom.

The term “apothecarius” is only documented in central Europe since the middle of the 14th century. This was then the master of the apothecary’s shop or his deputy. Prior to 1300 there is documentary evidence of apothecaries – in the later, “pharmacist” sense of the word – in only a few German cities for example [1190 in Cologne, 1241 in Trier, 1275 in Mainz]. One special form was the northern German-Hanseatic “city council apothecary” [Ratsapotheke], a “wholesale business” for the sale of drugs and medication of all types, owned by the city itself. In Italy, for example in Florence, apothecaries [“speziali”] were for a long time members of the same guild as doctors and painters – the mixing of herbs, medicines and

colours being seen as a common feature. Since the income of many apothecaries was not very high, they also traded in candles, culinary herbs, cosmetics, amulets, and even relics. There were high penalties for forgeries. In most southern European countries, the training of apothecaries corresponded with the guild rules for skilled tradesmen in the late Middle Ages. Except in the monastery apothecaries, apprentices, journeymen, and masters all worked side by side in Italian apothecaries. Irrespective of this artisanal structure, a certain knowledge of Latin was required. In Germany too, the nature of the profession remained typical. In the late Middle Ages, the master examination was taken in Cologne and was attended by a member of the university’s medical faculty. The “materia medica” [term dates back to Dioscurides] prepared in the apothecary comprised a huge range of raw materials which could be processed into medicine. Paracelsus [1493–1541] radically updated the theory of “materia medica”. Illnesses were no longer considered to be the result of the wrong mixture of humours, but rather as local changes, which disturbed the organism as a whole, whose chemical processes were controlled by a life force [“Archaeus”]. Illnesses were to be fought with chemical medication, so that tinctures, extracts, essences – produced on the basis of chemical processes – took on a crucial role. Naturally, Paracelsus’s theory met with resistance. The Leiden medical professor

Franciscus Sylvius [1614–1672] proposed a compromise which, although it assumed that chemical fermentation processes took place in the body, equated health with the correct balance of acid and alkali, which was influenced by these fermentations. This “clinical chemistry”, whose founder is said to be Sylvius, was combined with the old teaching of “euchrasy” and/or the theory of the humours. Pharmacy became ever more complicated—and today it after all remains a chemistry-oriented profession.

In the 16th and 17th centuries, the number of healing plants known in Europe grew rapidly. In the newly founded botanical gardens [such as in Padua, Pisa, Florence and Leiden], exotic growths were planted which had been imported from America and other colonies, and these were then integrated into the established canon of healing plants. However, the professionals often argued about their effects; exotic forgeries were common. Conservative doctors and medical faculties rejected the new plants out of hand. Both doctors and pharmacists long debated whether the traditional mercury cure or rather guajak wood imported from America should be the preferred choice for treating syphilis, a disease which was brought by Charles VIII’s army from France to central Europe [hence “the French disease”].

Around 1500, the invention of printing encouraged the production of detailed herbal books, which popularised botanical and pharmaceutical knowledge to a certain extent. The



量繁殖。而在一些国家新建的植物园内，从美国及其他殖民地国家引进的品种也被大量种植。然而，那些传统的医生及医护人员却对于功效提出质疑。（医生和药剂师对使用水银及愈苍木是否可以治疗梅毒一直怀疑态度。）

1500年左右，随着印刷术的发展，中草药类书籍大量涌现，使得植物学及制药知识广泛传播。“干燥标本集”现被用于指印刷的植物插图书籍；药典专指权威著作，介绍药物研制规则及标准；药剂师手册包括专家词典，

这些书籍的出现使得很多医生及药剂师受益。到了17、18世纪，大量著作被修订以适应最新的科学及医学发展。自1530年起，意大利很多城市的大学都开设了植物医学课程，这足以说明同医生合作的模式在很早就已经形成；在德国的一些城市，大多数药剂师都受控于权威人士，以保护其权益不受庸医小贩的侵犯。

18世纪，药剂师学术化进程快速发展。弗雷德里克·威廉一世（普鲁士）于1725年颁布了医学法令——在柏

林所有的药剂师学徒必须通过权威机构的测试及半学术考试才可获得药剂师资格。19世纪，制药业开始其科学化进程，很多药剂师将自己视为自然科学家；一些“野心勃勃”的医学院学生开始从传统植物中分离活性成分（在1817年，弗雷德里克·威廉一世的著作中开始出现了“吗啡”这一名词）。生物碱基及配糖类物质的发现至今仍影响着药剂师的日常工作，传统的药品开始被人们摒弃，药理学及生物化学进入了鼎盛时期。19世纪后期，自然科学实证主义备受推崇，大量的微生物在很

works of Jacobus Tabernaemontanus, Otto Brunfels, Hieronymus Bock, Leonhart Fuchs or Pier Andrea Mattioli appeared with beautiful illustrations by famous artists. The word “Herbarium” – originally relating to collections of dried plants – now also referred to these printed illustrations of plants. Another new type of publication were the so-called pharmacopoeia, authoritative works in which pharmaceutical formulas were fixed and standardised by means of drug and formula lists [for the first time in Nuremberg in 1546]. There were also apothecary manuals, which contained all known “Simplicia” and “Composita” and usually also included a specialist dictionary. They were indispensable sources of information for apothecaries and doctors alike. In the 17th and 18th centuries, these works were constantly revised and adapted to correspond with the latest scientific and medical paradigm shifts. From 1530, the universities at Padua, Bologna, and Pisa had their own chairs of medical botany. This allows one to conclude that the typical cooperation with doctors, which exists today, developed early, particularly in Italy. In the cities of the German imperial cities, most apothecaries were under the control of the authorities who – in keeping with Hohensaufen tradition – granted them a “privilegium” for a specific city or territory, thus protecting them against the uncontrollable competition of hawkers, miracle doctors, herb gatherers, the-riac sellers, and charlatans. Simple people often

turned to the monastery apothecaries, where highly valued specific medications with promising names were, to some extent, being developed [Jesuit powder, Capuchin powder, Pulvis Carthusianorum]; not to mention the various different liqueurs.

In the 18th century it was quite common that pharmacist’s apprentices were offered lectures in general botany. The academisation of the profession, which complemented medical activities like no other, advanced rapidly. In keeping with the medical edict passed by Frederick Wilhelm I of Prussia [1725], on completion of his apprenticeship and at least seven years as a journeyman, the would-be pharmacist was required to pass a “Processus pharmaceutico-chymicus” at the “Collegium medico-chirurgicum” in Berlin and take a semi-academic examination. Those who wished to set up as pharmacists in small towns could be exempted from the academic examination. The pharmacist’s scientific and social standing depended not least on his chosen location.

The 19th century saw a further scientification of pharmacy. Many pharmacists saw themselves as natural scientists – to a far greater extent than did many physicians at the beginning of the century. Talented and ambitious students of the “materia medica”, whether their training was “artisanal” or “scientific”, now had the opportunity to isolate and artificially produce the active ingredients in traditionally-used plants.

Thus in 1817 Friedrich Wilhelm Sertürner presented morphine in a famous work. Justus von Liebig [1803–1873] rose from being a pharmacist’s apprentice in Heppenheim to the position of pharmacy inspector in Hesse, in addition to becoming one of the leading chemists of his age. Thanks to his dedication, pharmacy in Germany was finally academised. It was above all the discovery of alkaloids and glycosides which now influenced the daily lives of pharmacists. While orthodox medicine was in crisis and the Krakow professor Josef Dietl loudly proclaimed its incompetence in 1840 [“therapeutic nihilism”], pharmacology and biochemistry enjoyed a boom. During the second half of the 19th century natural scientific positivism asserted itself within the faculties of medicine. Countless germs were discovered within a relatively short space of time. In close cooperation with physicians, and using the identical methodology, pharmacy and pharmacology were finally promoted to a scientific university subject. The western governments supported this process. The *Société de Pharmacie de Paris*, founded in 1803, saw itself as an elite scientific society, as did the *American Pharmaceutical Association* which was formed in 1852. In many European countries, standardised pharmacopoeia were published on the basis of the latest research, for example, in Germany, the “Pharmacopoea Germanica”, the first comprehensive work of this kind in that country. In the old, respected pharmacies, industrially manufactured pharmaceuticals began

- 4 Pharmacist with mortar in the 16th century (woodcarving of Jost Amman)
- 5 Stamp for the 750th anniversary of the profession of a pharmacist (Deutsche Bundespost, 1991)
- 6 St. Cosmas and St. Damian: patron saints of doctor and pharmacist (cover of “Feldtbuch der Wundartzney”, 1517)
- 7 Jesus Christ as a pharmacist (copperplate print, about 1750)
- 8 Oil painting of a pharmacist of the 18th century
- 9 Pharmacist in the 19th century at his place of work

4. 16世纪, 设计师使用研钵制药 (约斯特·安曼的木雕作品)
5. 药剂师职业出现750周年纪念邮票 (德国联邦邮局发行, 1991)
6. 医圣葛斯马与迪米安 (图书封面, 1517)
7. 药剂师-耶稣 (铜版印刷, 1750)
8. 18世纪, 以药剂师为素材的油画
9. 19世纪, 工作中的药剂师

to dominate, whereby some pharmacists, such as Heinrich Merck of Darmstadt, even managed the leap to become major industrialists. The subsequent great wars put the new system to a very special kind of test: The organised storage of huge amounts of pharmaceuticals, vaccines, and various prophylactics made the pharmaceutical industry interesting with regard to military medicine. Mass-produced medication was significantly cheaper than that produced manually, although naturally the pharmacists could no longer vouch for the quality or effectiveness of such products; their job was largely restricted to explaining their effects. In the USA, cheap drugstores were set up, while in Europe “drug-gists” and herb traders competed with the pharmacists. Interestingly, France differentiated between first and second class pharmacists. In an anti-scientific backlash, both advocates of alternative medicine and charlatans flexed their muscles in the area of pharmacy.

Around the middle of the 20th century, the market became clearer to both patients and physicians: Leave was finally taken from “custom-made” medication. The West German authorities now tried to gain control of the situation by introducing stringent legislation and monitoring the training of pharmacists. The “Obercollegium Medicum et Sanitatis” in Berlin drew up highly rigorous standards in order to regulate the training of pharmacists. The external appearance of the pharmacies developed –

as critics had already bemoaned at the end of the 19th century – into elegant stores. The pharmacist was elevated to become an esteemed member of polite society. Much that was once associated with the pharmacy still is: drugs, medication, herbs, prescriptions, scents, and, above all, well-informed individuals who, in complement to or competition with doctors, offer advice and assistance in case of illness. Such advice is highly valued as medication is still regarded as treacherous: Warnings against side effects are still, indeed increasingly, being made. “Ask your doctor or pharmacist” is a well known slogan. One particular challenge facing pharmacists is the boom in alternative therapies and the astonishingly high level of trust that many people place in non-orthodox medicine. The pharmacist’s workplace has undergone a radical change. Modern pharmacies boast a practical design, and the market situation forces the owner to sell products which have only the slenderest connection with health or illness. The trade in industrial pharma products stands to the fore, while the manufacture of remedies and tinctures takes a back seat. Many pharmacies meanwhile resemble health food stores. In terms of quantity, however, the exchange of prescriptions and pharmaceuticals still plays a crucial role. Customers expect pharmacists, who mutated into “academics” in the 19th century, to possess sound scientific knowledge of the various pharma products, their chemical

composition, and their side effects. Pharmacies are also, now more than ever, integrated into the state “health system” all the way through to its mandate as local provider, which cannot be interrupted. Today, as independent businesspeople, many pharmacists feel that they are being led by the nose. Whilst in the golden years of West Germany’s economic miracle new pharmacies shot out of the ground like mushrooms and payment for medication from the health insurance funds whose financial scope seemed inexhaustible, presented no problem at all, the current crisis in the health system has also been affecting pharmacies for some time. Their obligations remain but their privileges are dwindling. The international competition from aggressively advertising mail-order pharmacies, online orders, as well as patients and/or customers informing themselves, and the public’s increasing disdain for expert advice, are additional sources of pressure. Just like medical practices, hospitals and out-patient clinics, the pharmacy too is facing drastic changes.



短的时间被发现，至此制药业及药理学被设为大学学科。在西方的许多国家，基于现代研究的药典大量出版。古老药店内，工业医药品开始占据主要地位，许多药剂师转行为实业家。此外，战争的持续促进了工业药品的批量生产，而药品质量却逐渐被忽视。在美国，众多的廉价药店开始涌现，欧洲国家药商开始与药剂师对立。更为有趣的是，在法国药剂师居然被分成不同的级别。

20世纪中叶，病人及医生对制药业市场的情况越来越清楚，因此，西德政府试图通过严格立法监督药剂师行业。19世纪末期，古老的药店在外观上都改造成了优雅高贵的商店样式，药剂师也因此成为了文明社会备受尊重的成员。现在，药剂师面临着替代疗法以及人们对新研制药剂过度信任的双重挑战。现代药店在设计上突出实用性，在市场形式的推动下倾向于出售保健品。顾客期待“药剂师应用有足够的科学知识，

对药品的功效及副作用了如指掌”。当下，很多药店已被纳入国家卫生系统。药剂师，作为自主商人，却感觉被牵着鼻子前进，换句话说，他们的职责依旧，但特权正在被逐渐取消。在网购及网上药店的冲击下，以及公众对专业建议的摒弃下，药剂师面临着越来越多的压力。如同医院、诊所一样，药店也正经历着翻天覆地的变化。