four different fragrances on me, one on each knee and one on each upper arm. The cab driver said, "Gee, you smell terrific." I said, "Which one is it?" I didn't have him sniff my knees, but I asked him to sniff my arms to decide what fragrance he was smelling.

You do get neurotic. You do put a great deal of yourself into fragrance development. After a while, you think you yourself are crawling into that bottle, but I don't think it will ever change. And I am warmed by the fact that this strange and wonderful business won't ever change.

Creative process in perfumery

Carlos Benaim, Senior Perfumer, International Flavors & Fragrances Inc., New York City

Most of the writings on creativity in perfumery have focused on the creative product: the perfume. Little has been said about the creative process itself. In putting together this presentation, I've come to understand why this is so. The processes involved in the creation of a fragrance are many, complex, and terribly abstract. I would like to share with you my notions about how a perfume is created, primarily from the vantage point of what goes on in the perfumer's head. What are the sources of inspiration to the perfumer? How does a fragrance develop from concept to finished creation?

To begin, let's establish a working definition of creativity as it applies to our field. We speak here of a form of thinking characterized by novelty and nonconformity and resulting in unusual solutions that don't follow the beaten path. The creative processes tap many levels of functioning. Inspiration, for example, is a "gut" process, sharing many attributes of daydreams and fantasy. However, it is only by processing this material through our logical thinking that we are able to translate it into a creation.

It has often been said that creativity involves 10% inspiration and 90% perspiration! As we proceed, the truth of this cliche will become painfully clear.

Broadly speaking, the most fertile source of inspiration to the perfumer is nature. First, the senses are bombarded with stimulation. Imagine yourself, if you will, walking through a field of lilies-of-the-valley just after a heavy April shower. We experience this event via its impact on our highly trained noses as well as our other senses. We are provided with a perception of many scents, such as that of the wet earth along with the greenness of the flower. These impressions are recorded in memory as images which incorporate not only the physical perception of the smell, but also the perfumer's association to it, such as youth, freshness, and the exhilaration of spring. These physical sensations, along with the images and emotions they evoke, constitute the perfumer's olfactive view of the world, which is reflected in his creation. For example, in the odors of jasmine, muguet, or rose, nature provides sensationally beautiful notes. Flooding the perfumer's senses and imagination, these odors have inspired such masterpieces as Diorissimo and Joy.

The physical world is not the perfumer's only source of inspiring input. Indeed, many other kinds of sensations are processed into the perfumer's working repertoire as well. The richness of this system of olfactive memories serves as a ready indicator of the perfumer's creativity. At my first meeting with Ernest Shiftan, in fact, I remember his asking me to recall for him some of my vivid memories of smells. I was immediately carried back to the image of the unique, pungent scent of combined fruits and herbs used in holiday celebration.

Relationships with people provide another source of stimulation for the perfumer. Complex sensual and sexual sensations are written into the "living" dimension of the perfume. Animal notes like musk or civet are used symbolically to represent aspects of our human experience that the flower just can't convey. The sexiness of a Sex Appeal of Jovan or a Chypre de Coty eloquently speaks to this point.

The chemists are continually providing us with new aromatic products. Some of these interesting materials trigger novel responses and suggest new accords to the perfumer, who may build upon them a new perfume. For example, a key woody note in Halston originated in someone's lab, not in a tree.

Marketing concepts often set off the creative process. The designs of a couturier, the form or packaging of a new crystal bottle, may excite the imagination, suggesting a direction to the perfumer. For example, Lauder's Aliage and Ralph Lauren's fragrances were designed to fit the sports concept which is so fashionable today.

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By dissecting these influences upon creation in our industry, I hope that I haven't given the impression that these sources of inspiration function independently of one another. In fact, all these factors typically come into play—motivating the perfumer to synthesize his personal impressions, feelings, and fantasies into the form of a finished perfume.

We have been discussing the inspiration end of this art. Let's move on to consider how inspiration comes together with perspiration (or plain sweat) to translate a concept into a creation.

Imagine that a perfumery company wants to launch a new couturier fragrance: what happens in the mind of the perfumer? The request is for an oriental type, to be packaged in a lalique water pipe and to be called Casbah. The first step is to sit down and allow the mind to play freely with the idea. For me, this evokes images and memories of my native Morocco. I remember the smell of jasmine petals and of orange flower water splashed on passersby by joyous celebrants, the special taste of cedarwood tar that impregnated the water sold from goat skin sacs in the streets, the aromas of the open market where cumin and coriander mix with ripe peaches and apricots, the cloying smell of hashish in suffocating alleyways, the nauseating trail of burning incense; not to mention the unexpected butyric note of hundreds of shoes lined up outside the mosque at prayer time. All this will find its way into my composition.

Coming back to the harsh reality of New York City, these images must then be connected with raw materials on the shelves which comprise the perfumer's palette. As you know, at our disposal is a vast array of natural extracts, animal products, and aromatic chemicals. Research continually yields new products, interesting in their own unique characters or invaluable in their synthetic reproduction of naturals.

This may be readily illustrated by our hypothetical Casbah project. My past work with orange flower suggests that an accord including orange flower, leather, and sandalwood may be appropriate. Products similar in some way to the orange flower, such as tuberose and jonquille, are brought to mind. This kind of association based on similarity or shared qualities is central to creative thinking.

My memory of the smell of hashish is crystallized in a combination of patchouli and styrax with a tar effect. We continue in this vein, smelling potential elements in our perfume.

Then begins the experimental phase, an arduous and lengthy task at best. Armed with wonderful ideas and products, we leave behind preconceived notions and conventional solutions in search of a novel and exciting accord. The perfumer's style will dictate how the formula evolves.

Let me describe to you a couple of alternative work strategies. Experiments may be conducted to develop a basic accord, or motif, which will provide the backbone of the fragrance. Once this is done, the perfumer may proceed by building interesting complements and contracts onto this accord. This step-by-step construction of a fragrance may be compared with a more synthetic approach. I speak here of the perfumer who begins with a notion of his final product in mind. A formula expressing the complete view may be written at the outset, then juggled or modified to match the product to the desired concept or goal.

Whatever strategies are used, the perfumer must concern himself not only with creating character, but with other qualities as well. These include diffusion, long lastingness, appeal of the topnote, and *sillage* (or trail). To achieve this, a technical appreciation of the raw materials' physical properties is crucial. In addition, the separate elements combined into any perfume have their own character, affinities, and antagonisms. The perfumer must pay close attention to the way each influences the others.

Once weighed by the perfumer's assistant, the experiments must be evaluated on blotters, then skin. Hundreds of experiments may be required to achieve the desired perfection. The whole process is a thoughtful one.

Smelling is the way the perfumer checks his thought processes. This is detailed, painstaking work, in which even one part per million may make a noticeable difference. Contrary to the popular notion that inspiration, intuition, and talent suffice, the rigors of learning and experimental discipline are also central.

The perfumes we make today are far more complex than those created in the past. The increasing use of synthetic products in place of naturals necessitates the introduction of many more ingredients in order to achieve an impression of richness in the perfume, especially when cost is severely restricted. The quality of the perfumer's interpretation of the concept is far more important than the concept itself in determining the success of the fragrance. Here the truly creative perfumer can show his virtuosity. Different perfumers beginning with the same idea often produce strikingly different fragrances. For instance, Aliage and Diorella are both outdoorsy perfumes, reflecting dissimilar interpretations and styles.

Individual style is another important aspect of creativity in our business. Like painters, a perfumer may be recognizable by the special composition of his palatte, as well as by his stroke or chosen theme. For example, I would compare Josephine Catapano's style to that of Monet: they both use a myriad of little touches to create an impression. The perfumer's as well as the painter's style evolves continuously over the course of his professional life. In the same way as Picasso evolved from representational to abstract in his style, so Roudnitska moved from

the representation of nature in Diorissimo to the fantasy of Diorella.

We have noted that the creative task of the perfumer liberates him from old habits and usual choices. However, this is not an entirely liberating process: it also imposes restrictions. For example, the perfume must be comprehensible and appreciable to everyone. Otherwise the result is bizarre rather than creative. Every novel response is not a beautiful creation. Returning to our oriental fragrance, other restrictions on the perfumer's work are brought to light. Besides the technical problems in executing the theme at low cost, we must contend with the issues of stability and Research Institute of Fragrance Materials regulations.

The roughest problem, though, is that of communication. Once finished, a perfume is evaluated in two groups: an internal odor evaluation board (OEB) and the customer's evaluation team. The sense of smell is far less differentiated than that of sight or hearing in most people. Thus our language to describe smells is rather limited. Only extensive dialogue among customer, salesman, evaluator, and perfumer can overcome this gap in communication. Each part of this team effort must be extraordinarily sensitive to the messages of the others to avoid misinterpretation.

When the perfume leaves the house, the work is usually not over. The customer's evaluation team then typically requests modifications. The perfumer usually hopes these fall in the domains of longlastingness or diffusion rather than character.

The creative process is not necessarily a rewarding one. It often ends in disappointment and anger for the perfumers whose work is rejected. Imagine presenting to OEB a fragrance you consider earthshaking and wonderful. It may be summarily eliminated as old-fashioned. Or worse still, you may subtly be told it stinks.

At one point in my own career I was entranced by the topnote given by a product with the lovely name Absolute Bourjeons de Cassis. Each time I used it, I was told it smelled like cat urine, the pet peeve of an ardent OEB fan. By the way, this type of note has been successfully used in the topnote of Amazone.

The perfumer needs a strong ego to survive the realities of the commercial perfumery world. Success, of course, is the ultimate reward which keeps us plugging. In addition, having a sense of becoming or growing professionally, rather than being or stagnating, is invaluable to the creative perfumer as he meets the daily frustrations of his work.

I'd like to comment just briefly on creativity, American style. Classic definitions of the conditions fostering creativity in our industry include aloneness, inactivity, daydreaming, and freethinking. Instead, creativity in America has to adapt itself to the fast pace of the marketing

world. It is incredible that so many great creations have been composed in such a highly pressured environment.

America is now the world center of creative perfumery. A free society, we are more receptive to innovation than the old world. The American revolution in perfumery is now touching Europe. Until ten years ago, an Opium would have been considered an "American perfume" in the pejorative sense.

One of the most important trends in American perfumery today is a floral one. I believe, however, that this will change. In perfumery, as in other arts, abstraction is the future. As tastes become more and more sophisticated, creativity gains more and more leeway. The beginnings of this are already in evidence. For example, green notes, once reserved for sophisticated markets, are successfully filtering down to mass market fragrances.

We will transcend the usual classical accords, whose elements (like jasmine) are no longer common to the experience of the urban dweller. We move instead towards unusual accords, challenging our imagination and tapping our increasing repertoire of materials.

Birth of a fragrance for a product

John Day, Senior Scientist and Chief Perfumer, Colgate-Palmolive Co., Piscataway, New Jersey

At the conception of a fragrance, marketing presents a briefing on the fragrance type and product profile to the in-house perfumers and three or four perfume supply houses.

Concept: luxury soap to be positioned against "X" soap or "Y" company.

Guidelines: timing two months; fragrance to be completely original, new, and different; to smell expensive but be inexpensive; to cost between "A" and "D."

Marketing's description of the fragrance: something like perfumes "A," "B," "C" and "D," but not really—green but not too green—floral but not too floral—different!!

Gestation follows from this discussion as the perfumers go to their drawing boards; we study "X" soap to be sure we do not duplicate the fragrance. We evaluate and study the best selling perfumes. From there we begin to formulate the original new fragrance.

The perfumer works with natural oils, synthetics, chemicals, and specialties. We formulate and re-formulate until we have achieved the proper balance and feel our perfume will be a winner. The perfume is then put into the soap base and milled into soap bars.

Complications result when the perfume oil contains an ingredient that is on the suspect list of RIFM, so it must be replaced. The perfumer goes back to the drawing board to work on a replacement. When we have solved this problem, the new fragrance is then sent to the soap group to be put into soap bars for testing.

The product group formulates the fragrance into a bar of soap. The soap is evaluated for both color and odor stability under room temperature and rapid aging conditions. We receive candidates from the outside suppliers, and they too undergo these stability studies.

When the fragrance is unstable in the desired soap base or the fragrance causes unacceptable color changes upon aging, reformulation is necessary. Once acceptable stability is achieved, labor begins.

The first stage of labor is consumer evaluation of the new fragrance candidates. Small in-house sniff panels of about twenty people are conducted to evaluate the new fragrances (in-house plus outside house candidates) against soap "X." Typically, the panelists are asked to read the luxury soap concept developed by marketing and evaluate each soap fragrance for preference and for how well it matches the concept.

A complication arises when the new fragrance candidates lose to soap "X" in the initial screening. The perfumer goes back to the formulation drawing board again. The supply houses are asked to reformulate their fragrances and re-submit candidates.

The second stage of labor begins once fragrances have been received and have successfully passed the small sniff panels. Additional larger scale in-house sniff tests are then conducted. Keeping the concept in mind, these sniff panels pit the new in-house fragrance against the outside candidates and all against soap "X." The ultimate goal is to obtain one or two fragrances from all the candidates which match the concept and beat soap "X" for larger-scale testing.

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