

**ATOMS  
AND  
ALCHEMY**

# ATOMS AND ALCHEMY

Chymistry and the  
Experimental Origins of the  
Scientific Revolution

William R. Newman

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Where and how far the market should extend is a perpetual, delicate issue for the mayor's office. The space seems too small to accommodate the strong stallholder demand. That which is currently available is occupied by three hundred stallholders, and there are five hundred on the waiting list kept by Nicolas's office. Stallholders quitting the business free up approximately forty places each year for reallocation. In addition to "subscriber" stallholders, there are occasionals who request a place when the market opens in the morning. Their number rises in summer and fine weather.

The city has always had to deal with the market's tendency to overwhelm it. This has alternately been perceived as a positive or a threatening development. Though relations between city and market have sometimes been conflictual, the city has generally favored and facilitated the market's rise. In the Middle Ages, the market regularly overflowed the cemetery and the small square next to Saint-Siffrein called the Place de la Fusterie. In those centuries it continually moved into new areas, increasingly encroaching on the public right of way. In the fourteenth century it became necessary to build new walls to integrate the market area, then renamed the Forum novum—the city was actually remodeled to accommodate its market. Then in 1831, to the indignation of all lovers of old stone, the mayor received permission to demolish the medieval walls to enlarge the fairgrounds. The city thus accepted the market's impulse to expand but never surrendered its intention to control it. When new products appeared, the city allotted them a particular spot or legalized spontaneous enlargement after the fact so as to better circumscribe it. In any case, the city had no intention of being submerged by the Friday flow and was concerned to limit the famous "embarras" [traffic jams] described by Jean-François Field in the late eighteenth century.

Between the two world wars, the city's vigilant goodwill gave way to tenuous relations. Under pressure from sedentary shopkeepers, who were growing in number and getting organized, the mayor's office adopted a policy of suspicion, and stallholders were regularly subjected to police inspections. For shopkeepers, the Friday market, which at the time was shifting to retail sale of food and manufactured products, was looking like a powerful source of competition.

This defensive, pettifogging attitude toward itinerant trade no longer applies or is felt to be necessary. Local boutiques and stallholders are no longer in competition with each other. Sedentary trade in Carpentras is dynamic and adaptable enough to benefit from the crowds and bustle of the Friday market. The city counts around four hundred shops.

Businesses on the outskirts—auto repair shops and gas stations, furniture and farm machine stores—require vast sales surfaces. This is where the city's five supermarkets are, the biggest being Leclerc (2,900 sq. m.) and Intermarché (1,700 sq. m.). Most retail stores are concentrated in the old city center; most are small, and their density is highest in the main market streets. Specialization is spatialized: the Rue des Halles is food; the Rue de la République, clothes; the Passage Boyer has service activities only. Because city center shops are specialized and relatively prestigious (with the exception of a few food stores), they attract a clientele from well beyond the city walls. People come all the way from Sault, Althen-les-Paluds, Sarrians, approximately thirty kilometers away, to buy pastry or crystallized fruit. According to the chambers of commerce and industry for Avignon and the Vaucluse, Carpentras business draws as many as seventy thousand persons for certain products.

Sales increase on Fridays not only because there are more customers but also because boutiques increase sales surface by setting up stalls in front of their windows that mix in with market stalls and diversify product supply. This is especially the case in the Rue des Halles and the Place de la Mairie. The wares put out on Friday may be of a different nature and price than what is inside; the idea is to align them with those of the open-air market. "On Friday mornings," Boyac explains, "I have to double my efforts, enlarge the display to draw in the customers. Everything gets rotated compared to ordinary days. For some product categories, where there's broad demand, I sometimes sell not low-quality but nonrated produce. Oranges, for example. On regular days we sell large-caliber ones, whereas on Fridays we sell more ordinary-caliber ones . . . I sell lower-quality produce on Fridays because I don't want to sell it the other days of the week. For example, today I have only Belgian endive. But on market day I'll have a shipment of French endive, which is good, but still not as good [as Belgian], and I'll sell it at one or two francs less."

With this two-sided arrangement, which enables them to take advantage of the greater socioeconomic heterogeneity of the Friday crowd without losing their everyday clientele, city merchants "play" the market "game." Boyac has fruits and vegetables for families who have come in from the north of the city, others for "his" customers: "connoisseurs," people in the know, shippers and growers to whom he sells "with a certain pride." Some merchants have actually modeled their shop on the stall setup. They don't just put out an outdoor Friday display but have reorganized the shop itself in "market" fashion. "When I redid the shop," Avon explains, "my idea was to widen the sidewalk into the shop so that



## The Medieval Tradition of Alchemical Corpuscular Theory

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### Erastus and the Critique of Chymical Analysis

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