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Paix where we were lunching). "They go everywhere with me, those two men. I'm sure if I talked to the wrong people I might have an accident." It didn't seem to perturb his usual good cheer.

I returned from Europe with plans for beginning a new program in kinetics. It had become clear to me during my sabbatical that one of the basic problems of kinetics was mechanism. It was pointless to speculate on the transition state of a chemical reaction until one was very certain as to what reaction one was observing. I searched long and hard for a simple system as free from chemical complexity as possible. The decomposition of N_2O to give $N_2 + O_2$, which was well studied, seemed too complex. Small amounts of NO were produced and it was not clear what role they might play, since NO was a known catalyst for the decomposition. Among the simply systems only ozone, O_3, fit the requirements. Only three species existed in the system, O, O_2, and O_3. Only one of these was reactive, O atoms. Arthur Axworthy, a new student, was interested and we began what became my most hazardous research. Our first experiment with pure O_3 at 100°C exploded, destroying our beautifully constructed equipment and leaving only fine particles of pyrex. Axworthy, miraculously, came out of it with only minor cuts. Over the next three years about one out of three experiments exploded. But we were well prepared with explosion barriers, so only a day was required to rebuild. Axworthy became a superb glassblower.

I describe the ozone work because it provides an excellent example of the connectedness of science and technology. We began it with no thought of any practical applications or idea that ozone might be of more general interest. I had no idea of the stratospheric ozone layer in 1952, let alone its significance. By 1957, when we published our findings, we had become "world experts" on a material that had become important enough to have an International Symposium devoted to it. We were able to verify the original two-step Chapman mechanism (1906) for its decomposition, prove that the 1934 16-step mechanism was incorrect, and provide the first detailed rate constants for the two steps. We also showed the significance of excited $O(^1D)$ in the photolysis and explained the surprising catalytic effect of H_2O on the photolysis.

This experience was typical of the connections that have occurred over and over in my own work and in the work of many of my colleagues. When photochemical smog was discovered in Los Angeles in 1946 and later ozone was shown to be one of its active agents, I was pulled into work on air pollution that has continued over 30 years. This work on air pollution excited an interest in oxidation and peroxides and this in turn has involved me in combustion research since 1964.

The decision to go back into chemical kinetics was a fortunate one. It

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