C O N C L U S I O N S

Just a few salient features of the work is again being summed up.

When we review the reactions of the carbenes against those of the ketenes in this study, we find that for the type of products that was desired (cross intermolecular cycloadditions) the ketene were rather unsuitable for the models used. The ketenes generated were reactive and led to intermolecular products among themselves. Even in the case of diazo compounds 1, 3 dipolar reactions decreases with increasing delocalisation of the negative charge on the carbon (R. Huisgen Angew. Chem. 75 743, 1962). Nevertheless it may be said that intramolecular/cross reactions have been found to occur in other systems (W.T. Brady, A.D.Patel Synthesis 565, 1972; J.Org.Chem. 38 4106, 1973; A.E.Greene, J.P.Depris JACS 101 4003, 1979).

The cleavage of the cyclopropane systems did not lead to only one isomeric olefin in the systems studied, moreover the products were optically inactive. This does not preclude isolation of asymmetrically induced product with other cleavage reagents and in other systems. Simple procedures to vicinally substituted cyclohexanes have been

prepared for further cyclization to bicyclic systems and other bigger molecular framework.

The cycloaddition reactions of α-diazotetralone show that these are not generally favoured. Only with dimethyl fumarate an addition product could be isolated.

According to the choice of olefin and of metal ion catalyst three types of products, cyclopropane, 2-pyrazoline and 1-pyrazoline have been isolated with diazomethane (See [redacted] - Summary). A double bond with more electron density led to cyclopropane and in other cases 2-pyrazolines are common. In this connection it must also be remembered that 1-pyrazoline also loses nitrogen more easily than 2-pyrazolines. The nature of substituent to the carboxylic ester influences 1-pyrazoline formation.

As the phase transfer catalytic experiment were not well studied these experiments and conclusions thereof are not embodied in this work.