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Winnicott's contribution

SIR: I read Dr Wardle's comprehensive article "Twentieth-century influences on the development in Britain of services for child and adolescent psychiatry" (*Journal*, July 1991, **159**, 53), with interest. It seems extraordinary that he omits Dr Donald Winnicott's enormous contribution to the understanding of children. Winnicott qualified as a consultant paediatrician in 1923 and later became a psychoanalyst and a child psychiatrist. He was appointed psychiatric consultant to the Government Evacuation Scheme in the county of Oxford in 1940 and worked with children evacuated during the war. While Klein was concerned solely with the internal world of the child, Winnicott, along with Bowlby, recognised the significance of the early mother–child relationship on the development of the child's personality. He developed, among other things, the concepts of the facilitating environment, the use of child's play in treatment, and the transitional phenomena. His radio broadcasts and popular writings helped to make these developing ideas accessible to the general public. Dr Wardle's account would be incomplete without the acknowledgement of Winnicott's contribution.

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Incidence rates of schizophrenia

SIR: Recent papers concerning unexplained variations in incidence rates of schizophrenia by Kendell & Adams (*Journal*, June 1991, **158**, 758–763) and by season of birth according to genetic risk by O'Callaghan *et al* (*Journal*, June 1991, **158**, 764–769) provide an element of support for the theoretical consideration of the role of light as an aetiological factor in the genesis of the disorder. This was discussed in correspondence (Quested, *Journal*, November 1990, **157**, 782), and then proposed as a short paper at the Spring 1991 Quarterly meeting of the Royal College of Psychiatrists. O'Callaghan *et al* found that a winter birth excess was confined to those at low genetic risk for the condition, thus strengthening the evidence for the aetiological role of an environmental factor. Kendell & Adams report the interesting finding of a correlation between fluctuations in the month of birth of a sample of schizophrenics and temperature variations from the mean in the third month of gestation. The most interesting aspect of their results is that the influence inverted according to whether the births occurred in Spring or Autumn. Increased incidence rates were seen in births occurring in a phase of increasing day-length following a fall in temperature six months previously, while higher rates were seen for births occurring during a phase of decreasing day-length following an increase in temperature six months previously. While this is difficult to understand in terms of the viral hypothesis which the study was testing, the finding is highly relevant when considered in terms of biological rhythms under the influence of photoperiod and is actually predicted by the theory referred to above. Animal studies of the effect of photoperiodic fluctuations on neurodevelopment have revealed the positive correlation of post-natal day-length with cerebral mass and density in males (Dark, 1987) and the relevance of the prenatal maternal photoperiod to both somatic and neurodevelopment in males and females (Lee, 1988). One of the fundamental purposes of the transfer of photoperiodic information between mother and offspring in animals is to prepare the foetus for the expected season of birth so that appropriate patterns of development can occur. Variations in the maternal photoperiod have been shown to set up different patterns of growth even though the encountered light: dark ratio at birth may be constant (Horton, 1990).

In the present context of the understanding of schizophrenia as a neurodevelopmental disorder, it is possible that variations in photoperiod could mediate the establishment of inappropriate development patterns. The model is well placed to explain present queries in schizophrenia research such as the increased incidence in winter births, especially in those with no family history, and rates in second-generation Afro-Caribbeans, as well as urban/rural differences.

It is likely that discordance between the signal communicating expected season of birth and actual post-natal photoperiod could interact with asymmetrical cerebral development to cause the differences seen in neuropathological studies of schizophrenia. Kendell & Adam's paper suggests the sensitive period for the transfer of seasonal phase information is the third gestational month, in humans, and the "influence which varies consistently with season and temperature" referred to in the abstract is, in all likelihood, light itself.