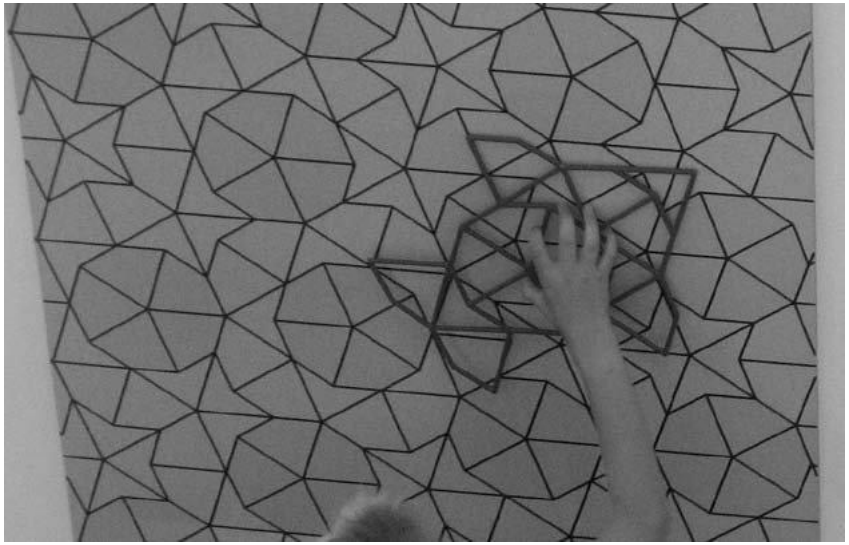

Burkhard C. Schipper

Sex Hormones and Competitive Bidding.

It is now generally accepted that complex mental disorders are the results of interplay between genetic and environmental factors. This holds out the prospect that by studying G x E interplay we can explain individual variation in vulnerability and resilience to environmental hazards in the development of mental disorders. Furthermore studying G x E findings may give insights in neurobiological mechanisms of psychiatric disorder and so improve individualized treatment and potentially prevention. In this paper, we provide an overview of the state of field with regard to G x E in mental disorders. Strategies for G x E research are introduced. G x E findings from selected mental disorders with onset in childhood or adolescence are reviewed [such as depressive disorders, attention-deficit/ hyperactivity disorder (ADHD), obesity, schizophrenia and substance use disorders]. Early seminal studies provided evidence for G x E in the pathogenesis of depression implicating 5-HTTLPR, and conduct problems implicating MAOA. Since then G x E effects have been seen across a wide range of mental disorders (e.g., ADHD, anxiety, schizophrenia, substance abuse disorder) implicating a wide range of measured genes and measured environments (e.g., pre-, peri- and postnatal influences of both a physical and a social nature). To date few of these G x E effects have been sufficiently replicated. Indeed meta-analyses have raised doubts about the robustness of even the most well studied findings. In future we need larger, sufficiently powered studies that include a detailed and sophisticated characterization of both phenotype and the environmental risk.