

## SUPPLEMENTAL REPORT OF WALTER O. BOCKTING, PHD

### Schroer v. Billington

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#### **Additional materials reviewed for this supplemental report:**

1. Expert report of Chester W. Schmidt, Jr., MD, dated November 22, 2006.

#### **Supplement to Expert Opinion of September 14, 2006:**

2. Chromosomal configuration is merely one of many aspects of sex; sex is more encompassing. According to J. Money and colleagues (1972, 1994), whose scholarship provides the basis for Dr. Schmidt's conclusion that sex refers to chromosomal configuration (page 3, paragraph 1; page 4, paragraph 3), sex is multifaceted and includes the additional aspects of gonadal sex, fetal hormonal sex (prenatal hormones produced by the gonads), internal morphologic sex (internal genitalia, i.e., ovaries, uterus, testes), external morphological sex (external genitalia, i.e., penis, clitoris, vulva), hypothalamic sex (sex of the brain), sex of assignment and rearing, pubertal hormonal sex, as well as gender identity and role. This definition of sex includes the first three components of sexual identity that I defined in my expert opinion of 9/14/2006, sex assigned at birth being the first component.

3. Sex is typically assigned at birth on the basis of the appearance of the external genitalia *rather than on chromosomal configuration*. Only in cases of children born with ambiguous genitalia, additional aspects of sex (e.g., internal genitalia, chromosomal sex, hormonal sex) are assessed and considered in the decision as to what the best sex of assignment is. In this decision, the most likely outcome of the child's gender identity development is the most important factor: The goal is for the sex assigned at birth to be congruent with the future gender identity of the child.

4. My definition of sexual identity differs from that of Dr. Schmidt, who equates sexual identity with gender identity (page 3, paragraph 2). In my definition, sexual identity has at least four components: sex assigned at birth, gender identity, social sex role, and sexual orientation. Gender identity refers to a person's basic sense of belonging to one sex or the other (boy or man, girl or woman) (Stoller, 1964). Although scientific consensus is lacking as to exactly what factors determine gender identity, more recent research on the etiology of transsexualism points toward the role of sexual differentiation of the brain in gender identity development (e.g., Cohen-Kettenis & Gooren, 1999; Kruijver, et al., 2000; Swaab & Hofman, 1995; Zhou, Hofman, Gooren, & Swaab, 1995). The findings of these studies suggest that gender identity is not wholly acquired as argued by Dr. Schmidt on page 4, paragraph 3 of his report.

5. Transsexuals experience incongruence between their sex assigned at birth and their gender identity. In order to alleviate this incongruence, many transsexuals undergo sex reassignment, including changes in primary and secondary sex characteristics (through hormone therapy and genital reconstructive surgery) and changes in sex of assignment (e.g., change in sex indicator on birth certificate, driver's license, and other identification documents). However, what does *not* change is their gender identity: most transsexuals report a history of crossgender feelings and identity dating back to childhood. Thus, contrary to Dr. Schmidt's opinion that transsexuals change their gender identity but not their sex (page 4, paragraph 3), transsexuals do change some aspects of their sex (e.g., sex assigned at birth, hormonal sex, internal and external morphological sex) but not others (e.g., gender identity, hypothalamic sex).

6. Dr. Schmidt states on page 5, paragraph 6 of his report that the science supporting the existence of Gender Identity Disorder (GID) is limited and based only on case studies. However, since the early 1970s, numerous studies have been conducted advancing our scientific knowledge in the area of gender identity disorders. Today, a large body of research clearly supports GID's existence (see Cohen-Kettenis & Gooren, 1999, Cohen-Kettenis & Pfaefflin, 2003, and Pfaefflin & Junge, 1998, for a review). This research includes not only case studies, but also qualitative

and quantitative behavioral and biological studies conducted with large samples of transgender and transsexual individuals. Together, these studies have demonstrated that the various aspects of sex and components of sexual identity are not always in alignment, and that, for many transsexual individuals, sex reassignment is medically necessary and effective in alleviating the distress associated with the incongruence between their sex assigned at birth and their gender identity by bringing these components into alignment.

7. I may wish to supplement these opinions or the bases for them as a result of new scientific research or publications or in response to statements and issues that may arise in my area of expertise in the depositions or other testimony of Defendant's witnesses, or in documents that have not yet been produced by Defendant upon which Defendant may rely at trial.

December 21, 2006



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**References:**

- Cohen-Kettenis, P. T., & Gooren, L. J. G. (1999). Transsexualism: A review of etiology, diagnosis and treatment. *Journal of Psychosomatic research*, 46(4), 315-333.
- Cohen-Kettenis, P.T., & Pfaefflin, F. (2003). *Transgenderism and Intersexuality in Childhood and Adolescence: Making choices*. Thousand Oaks, CA: Sage.
- Kruijver, F. P. M., Zhou, J., Pool, C. W., Hofman, M. A., Gooren, L. J. G., & Swaab, D. F. (2000). Male-to-female transsexuals have female neuron numbers in a limbic nucleus. *The Journal of Clinical Endocrinology & Metabolism*, 85, 5, 2034-2041.
- Money, J., Ehrhardt, A. A. (1972). *Man & Woman, Boy & Girl: Differentiation and Dimorphism of Gender Identity from Conception to Maturity*. Baltimore, MD: The Johns Hopkins University Press.
- Money, J. (1994). *Sex Errors of the Body and Related Syndromes: A Guide to Counseling Children, Adolescence and their Families* (2<sup>nd</sup> Ed.). Baltimore, MD: Paul H. Brookes Publishing Co.

Pfaefflin, F., & Junge, A. (1998). *Sex Reassignment. Thirty Years of International Follow-up Studies after Sex Reassignment Surgery: A Comprehensive Review, 1961-1991*. [Available online at [www.symposion.com/ijt](http://www.symposion.com/ijt)]

Swaab, D. F., Hofman, M. A. (1995). Sexual differentiation of the human hypothalamus in relation to gender and sexual orientation. *Trends in Neurosciences*, 18, 264-270.

Zhou, J., Hofman, M. A., Gooren, L. J. G., & Swaab, D. F. (1995). A sex difference in the human brain and its relation to transsexuality. *Nature*, 378, 68-70.