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15054-000, Brazil. *Some relations between orthogonal L-polynomials and orthogonal polynomials.*

Szegő (see for example his book) introduced the mapping  $2x = z + 1/z$  between real Szegő polynomials (i.e. real orthogonal polynomials on the unit circle) and orthogonal polynomials on the interval  $[-1, 1]$ . Using this mapping Geronimus in [1962] derived the relations between the coefficients of the associated recurrence relations. Delsarte and Genin [1986], through the mapping  $2x = \sqrt{z} + 1/\sqrt{z}$ , obtained the connection between real Szegő polynomials and symmetric orthogonal polynomials on  $[-1, 1]$ , which was further explored, for example, in Zhedanov [1994]. In Sri Ranga [1995] the mapping  $2x = \sqrt{t} - 1/\sqrt{t}$  was used to obtain a relation between a type of orthogonal L-polynomials on  $(0, \infty)$  and symmetric orthogonal polynomials on  $(-\infty, \infty)$ . Finally in Andrade, Bracciali and Sri Ranga [2007] the mapping  $2x = z + 1/z$  was used to obtain a relation between another type of orthogonal L-polynomials on  $(0, \infty)$  and orthogonal polynomials on  $(1, \infty)$ . The objective here is to look at these relations from a different point of view. This also reveals some Relations between T-fractions and J-fractions. (Received September 15, 2008)