Assume the theorem is false. We know the following:

$$(\forall v_0)\ \ \mathrm{sv}_1(v_0) = \mathrm{sv}_2(v_0) \implies \mathrm{SINGLEVALUED}(v_0) \tag{1}$$

$$(\forall v_0, v_1)\ \ \langle v_0, v_1\rangle \in \mathit{POWER} \implies \mathscr{P}(v_0) = v_1 \tag{2}$$

We then substitute v_{64} for v_0 to obtain

$$(\forall v_1, v_{64})\ \ \langle v_{64}, v_1\rangle \in \mathit{POWER} \implies \mathscr{P}(v_{64}) = v_1 \tag{3}$$

In $(\forall v_0)\ \ \mathrm{U}(\mathscr{P}(v_0)) = v_0$ we substitute v_{64} for v_0 to obtain

$$(\forall v_{64})\ \ \mathrm{U}(\mathscr{P}(v_{64})) = v_{64}$$

which together with (3) yields

$$(\forall v_1, v_{64})\ \ \langle v_{64}, v_1\rangle \in \mathit{POWER} \implies \mathrm{U}(v_1) = v_{64}$$

We then substitute v_0 for v_{64} to obtain

$$(\forall v_0, v_1)\ \ \langle v_0, v_1\rangle \in \mathit{POWER} \implies \mathrm{U}(v_1) = v_0 \tag{4}$$

We know the following:

$$(\forall v_0)\ v_0 \subseteq V \times V \ \wedge\ \mathrm{SINGLEVALUED}(v_0) \implies \mathrm{FUNCTION}(v_0)$$

We then substitute ${v_{64}}^{-1}$ for v_0 to obtain

$$(\forall v_{64})\ {v_{64}}^{-1} \subseteq V \times V \ \wedge\ \mathrm{SINGLEVALUED}\left({v_{64}}^{-1}\right) \implies \mathrm{FUNCTION}\left({v_{64}}^{-1}\right) \tag{5}$$

We know the following:

$$(\forall v_0)\ {v_0}^{-1} \subseteq V \times V$$

We then substitute v_{64} for v_0 to obtain

$$(\forall v_{64})\ {v_{64}}^{-1} \subseteq V \times V$$

which together with (5) yields

$$(\forall v_{64})\ \ \mathrm{SINGLEVALUED}\left({v_{64}}^{-1}\right) \implies \mathrm{FUNCTION}\left({v_{64}}^{-1}\right)$$

We then substitute v_0 for v_{64} to obtain

$$(\forall v_0)\ \ \mathrm{SINGLEVALUED}\left({v_0}^{-1}\right) \implies \mathrm{FUNCTION}\left({v_0}^{-1}\right) \tag{6}$$

We know the following:

$$(\forall v_0)\ \ \mathrm{SINGLEVALUED}(v_0) \ \vee\ \langle \mathrm{sv}_3(v_0), \mathrm{sv}_1(v_0)\rangle \in v_0$$

We then substitute ${v_0}^{-1}$ for v_0 to obtain

$$(\forall v_0)\ \ \mathrm{SINGLEVALUED}\left({v_0}^{-1}\right)\ \vee\ \left\langle \mathrm{sv}_3\left({v_0}^{-1}\right), \mathrm{sv}_1\left({v_0}^{-1}\right)\right\rangle \in {v_0}^{-1}$$

which together with (6) yields

$$(\forall v_0)\ \ \mathrm{FUNCTION}\left({v_0}^{-1}\right)\ \vee\ \left\langle \mathrm{sv}_3\left({v_0}^{-1}\right), \mathrm{sv}_1\left({v_0}^{-1}\right)\right\rangle \in {v_0}^{-1} \tag{7}$$

We know the following:

$$(\forall v_0)\ \ \mathrm{SINGLEVALUED}\left(v_0\right)\ \vee\ \left\langle \mathrm{sv}_3\left(v_0\right), \mathrm{sv}_2\left(v_0\right)\right\rangle \in v_0$$

We then substitute ${v_0}^{-1}$ for v_0 to obtain

$$(\forall v_0)\ \ \mathrm{SINGLEVALUED}\left({v_0}^{-1}\right)\ \vee\ \left\langle \mathrm{sv}_3\left({v_0}^{-1}\right), \mathrm{sv}_2\left({v_0}^{-1}\right)\right\rangle \in {v_0}^{-1}$$

which together with (6) yields

$$(\forall v_0)\ \ \mathrm{FUNCTION}\left({v_0}^{-1}\right)\ \vee\ \left\langle \mathrm{sv}_3\left({v_0}^{-1}\right), \mathrm{sv}_2\left({v_0}^{-1}\right)\right\rangle \in {v_0}^{-1} \tag{8}$$

In (4) we substitute $\mathscr{P}(v_{64})$ for v_1 to obtain

$$(\forall v_0, v_{64})\ \ \langle v_0, \mathscr{P}(v_{64})\rangle \in \mathit{POWER} \implies \mathrm{U}\left(\mathscr{P}(v_{64})\right) = v_0$$

which together with $(\forall v_{64})\ \ \mathrm{U}\left(\mathscr{P}(v_{64})\right) = v_{64}$ yields

$$(\forall v_0, v_{64})\ \ \langle v_0, \mathscr{P}(v_{64})\rangle \in \mathit{POWER} \implies v_0 = v_{64}$$

We then substitute v_1 for v_{64} to obtain

$$(\forall v_0, v_1)\ \ \langle v_0, \mathscr{P}(v_1)\rangle \in \mathit{POWER} \implies v_0 = v_1 \tag{9}$$

We know the following:

$$(\forall v_0)\ \ \mathrm{FUNCTION}\left(v_0\right)\ \wedge\ \mathrm{FUNCTION}\left({v_0}^{-1}\right) \implies \mathrm{ONEONE}\left(v_0\right)$$

We then substitute POWER for v_0 to obtain

$$\mathrm{FUNCTION}\left(\mathit{POWER}\right)\ \wedge\ \mathrm{FUNCTION}\left(\mathit{POWER}^{-1}\right) \implies \mathrm{ONEONE}\left(\mathit{POWER}\right)$$

which together with $\mathrm{FUNCTION}\left(\mathit{POWER}\right)$ yields

$$\mathrm{FUNCTION}\left(\mathit{POWER}^{-1}\right) \implies \mathrm{ONEONE}\left(\mathit{POWER}\right) \tag{10}$$

In (7) we substitute POWER for v_0 to obtain

$$\mathrm{FUNCTION}\left(\mathit{POWER}^{-1}\right)\ \vee\ \left\langle \mathrm{sv}_3\left(\mathit{POWER}^{-1}\right), \mathrm{sv}_1\left(\mathit{POWER}^{-1}\right)\right\rangle \in \mathit{POWER}^{-1}$$

which together with (10) yields

$$\text{ONEONE}\,(POWER) \;\vee\; \left\langle \text{sv}_3\left(POWER^{-1}\right), \text{sv}_1\left(POWER^{-1}\right)\right\rangle \in POWER^{-1}$$

which together with $\neg\,\text{ONEONE}\,(POWER)$ yields

$$\left\langle \text{sv}_3\left(POWER^{-1}\right), \text{sv}_1\left(POWER^{-1}\right)\right\rangle \in POWER^{-1} \tag{11}$$

We know the following:

$$(\forall v_0, v_1, v_2)\;\; \langle v_0, v_1\rangle \in {v_2}^{-1} \implies \langle v_1, v_0\rangle \in v_2 \tag{12}$$

We then substitute $\text{sv}_3\left(POWER^{-1}\right)$ for v_0 and $\text{sv}_1\left(POWER^{-1}\right)$ for v_1 and $POWER$ for v_2 to obtain

$$\left\langle \text{sv}_3\left(POWER^{-1}\right), \text{sv}_1\left(POWER^{-1}\right)\right\rangle \in POWER^{-1} \implies \left\langle \text{sv}_1\left(POWER^{-1}\right), \text{sv}_3\left(POWER^{-1}\right)\right\rangle \in POW$$

which together with (11) yields

$$\left\langle \text{sv}_1\left(POWER^{-1}\right), \text{sv}_3\left(POWER^{-1}\right)\right\rangle \in POWER \tag{13}$$

In (8) we substitute $POWER$ for v_0 to obtain

$$\text{FUNCTION}\left(POWER^{-1}\right) \;\vee\; \left\langle \text{sv}_3\left(POWER^{-1}\right), \text{sv}_2\left(POWER^{-1}\right)\right\rangle \in POWER^{-1}$$

which together with (10) yields

$$\text{ONEONE}\,(POWER) \;\vee\; \left\langle \text{sv}_3\left(POWER^{-1}\right), \text{sv}_2\left(POWER^{-1}\right)\right\rangle \in POWER^{-1}$$

which together with $\neg\,\text{ONEONE}\,(POWER)$ yields

$$\left\langle \text{sv}_3\left(POWER^{-1}\right), \text{sv}_2\left(POWER^{-1}\right)\right\rangle \in POWER^{-1} \tag{14}$$

In (2) we substitute $\text{sv}_1\left(POWER^{-1}\right)$ for v_0 and $\text{sv}_3\left(POWER^{-1}\right)$ for v_1 to obtain

$$\left\langle \text{sv}_1\left(POWER^{-1}\right), \text{sv}_3\left(POWER^{-1}\right)\right\rangle \in POWER \implies \mathscr{P}(\text{sv}_1\left(POWER^{-1}\right)) = \text{sv}_3\left(POWER^{-1}\right)$$

which together with (13) yields

$$\mathscr{P}(\text{sv}_1\left(POWER^{-1}\right)) = \text{sv}_3\left(POWER^{-1}\right)$$

which together with (14) yields

$$\left\langle \mathscr{P}(\text{sv}_1\left(POWER^{-1}\right)), \text{sv}_2\left(POWER^{-1}\right)\right\rangle \in POWER^{-1} \tag{15}$$

In (12) we substitute $\mathscr{P}(\text{sv}_1\left(POWER^{-1}\right))$ for v_0 and $\text{sv}_2\left(POWER^{-1}\right)$ for v_1 and $POWER$ for v_2 to obtain

$$\left\langle \mathscr{P}(\text{sv}_1\left(POWER^{-1}\right)), \text{sv}_2\left(POWER^{-1}\right)\right\rangle \in POWER^{-1} \implies \left\langle \text{sv}_2\left(POWER^{-1}\right), \mathscr{P}(\text{sv}_1\left(POWER^{-1}\right))\right\rangle$$

which together with (15) yields

$$\left\langle \mathrm{sv}_2\left(POWER^{-1}\right), \mathscr{P}(\mathrm{sv}_1\left(POWER^{-1}\right))\right\rangle \in POWER \tag{16}$$

In (9) we substitute $\mathrm{sv}_2\left(POWER^{-1}\right)$ for v_0 and $\mathrm{sv}_1\left(POWER^{-1}\right)$ for v_1 to obtain

$$\left\langle \mathrm{sv}_2\left(POWER^{-1}\right), \mathscr{P}(\mathrm{sv}_1\left(POWER^{-1}\right))\right\rangle \in POWER \implies \mathrm{sv}_2\left(POWER^{-1}\right) = \mathrm{sv}_1\left(POWER^{-1}\right)$$

which together with (16) yields

$$\mathrm{sv}_2\left(POWER^{-1}\right) = \mathrm{sv}_1\left(POWER^{-1}\right) \tag{17}$$

In (1) we substitute $POWER^{-1}$ for v_0 to obtain

$$\mathrm{sv}_2\left(POWER^{-1}\right) = \mathrm{sv}_1\left(POWER^{-1}\right) \implies \mathrm{SINGLEVALUED}\left(POWER^{-1}\right)$$

which together with (17) yields

$$\mathrm{SINGLEVALUED}\left(POWER^{-1}\right)$$

In (6) we substitute $POWER$ for v_0 to obtain

$$\mathrm{SINGLEVALUED}\left(POWER^{-1}\right) \implies \mathrm{FUNCTION}\left(POWER^{-1}\right)$$

which together with $\mathrm{SINGLEVALUED}\left(POWER^{-1}\right)$ yields

$$\mathrm{FUNCTION}\left(POWER^{-1}\right)$$

which together with (10) yields

$$\mathrm{ONEONE}\left(POWER\right)$$

but this contradicts $\neg\,\mathrm{ONEONE}\left(POWER\right)$.