The surface activity of siloxane-containing block copolymers in organic base polymers is well established. When blended at very low bulk concentrations (1-5 wt. %), surface concentrations of these modifiers in the blend approach 100%. The apparently uniform overlayer formed by these copolymers make them useful as modifiers of properties dependent on the constitution of the outermost monolayer(s), e.g., wettability and biocompatibility. We have prepared several amphipathic, segmented multipolymers for use as Surface Modifying Additives (SMA). One block of the multipolymer is a low surface energy polydimethylsiloxane (PSX). The second block is usually polar but not surface-active. Annealing the polymer/SMA blend (1-5% SMA) enriches the surface in PSX. In this conformation the polar block is constrained to be near the surface, possibly folded under the PSX block. Polar liquid advancing angles are >90°, indicative of a PSX-rich surface. Receding angles and angles measured after short contact times are dramatically lower, indicating an exchange of polar block for PSX. When compared to hydrophobic copolymer SMAs in the same base polymer, the amphipathic SMA gives greater contact angle hysteresis and is capable of rendering certain base polymers wettable by both polar and nonpolar liquids. The concept of tethering a nonsurface-active molecule to a surface-active one can be extended to include anticoagulants, other biologically-active agents, polymer stabilizers, antistats and other functional species which are most effective when concentrated at an interface.