Something as ambitious as “Voyeurs de Venus” shouldn’t work.

Lydia R. Diamond’s play is as densely packed as a Russian nesting doll, and twice as self-referential. Yet this is no hot mess that Company One has on its hands, but an elegant, edgy piece of stagecraft.

The top level of “Voyeurs” interwoven stories concerns Sara Washington, a cultural anthropologist with big ideas and oodles of guilt. She’s conflicted about everything, from her sense of racial identity (she’s an African-American woman married to the whitest of white guys) to her ambitions.

She’s got a book deal to pen the story of Saartjie Baartman, better known as the Hottentot Venus of the early 19th century. During her brief life, Saartjie was taken from her native South Africa to tour Europe as a sideshow exhibit. To her white captors, Saartjie’s large buttocks and elongated labia classified her as a freak, an object of both fetishism and derision.

Diamond ping pongs back and forth between Saartjie’s story and Sara’s, the two often intermingling. Navigating a sea of slimy publishers and inner turmoil, Sara can’t decide whether telling Saartjie’s tragic tale will vindicate her memory or subject her to further humiliation at the hands of a freak-loving public. Her anxieties play out in a series of nightmare dances in which racial roles reverse themselves, and Sara surrenders to her decidedly un-PC desires.

Meanwhile, Saartjie bounces from manipulator to manipulator, finally landing in the arms of Georges Cuvier, the slimy French naturalist who subjugates her both sexually and medically.

If this all sounds rather dark and dense, it is. But it’s often also funny, light, and celebratory. Diamond’s skill as a playwright is such that we can laugh one moment and cringe the next, and be scintillated even as we’re horrified.

“Voyeurs” disparate elements are wound together by Summer L. Williams’ precise directorial hand. She gives full breadth to Diamond’s many ideas, while always keeping things moving - literally. Jarrod Bray’s circular set features a revolving outer ring that carries actors and props on and off through diaphanous curtains. Its mechanical grinding evokes the machinations of time and history, sweeping individual strife beneath its wheels.
The excellent cast is more than up for Diamond’s heady dialogue. At the center of “Voyeurs” is Kortney Adams, who finds the delicate balance between Sara’s intelligence and self-delusion. Marvelyn McFarlane strikes a compelling Saartjie, and Michael Steven Costello’s Cuvier is as despicable as he is funny.

Diamond asks a lot of her audience, but she reminds us early on that the heart of theater is participation.

“That makes it dialogue,” Sara says. “That makes this not television.”

It drives home the fact that of all the levels of voyeurism in “Voyeurs de Venus,” the final ghoulish observers are those of us watching it all unfold, from the not-so-cozy darkness of our seats.

“Voyeurs De Venus,” presented by Company One at the BCA Plaza Theatre, Sunday afternoon. Through Nov. 22.