## ingenious tale

By ARTHUR TURFA of the Collegian Staff

Usually a work of speculative historical fiction finds itself thrown in with the funtasy and science fiction books Books like Philip K Dick's The Man in the High Tower , which paints the Axis as the victors of WW II, will never be considered to be Literature (notice the capital

However, the genre has found itself a champion in recent months. Donald Thomas, whose literary efforts have been mainly in verse rather than prose has produced a chronicle of the House of

## Review<sup>\*</sup>

Stuart s<sup>c</sup> struggle for Great Britain's throne that seizes the reader's inferest and relaxes its grip only when the last page has been read

What distinguishes "Prince Charlie's Bluff - A Novel of the Kingdom of Virginia from its pedestrian predecessors is an ingenious device Rather than relating events in the third person. Thomas conceives of a fragmented journal kept by a contemporary of Bonnie Prince Charlie that is prepared for publication by the grandson of the journal's author.

· Thomas approaches all events through this premise. The publication even is entrusted to Woodrow Wilson, president of Princeton University, "who, had the circumstances of history been altered, might also have been President of the United

The illusion that the book describes actual historical events is kept going by sentences like "How quickly the power of government un-der Lord Casimir's Regency passed to McAlistair and his patriots' is well enough known". It is not that Thomas lacks imagination to carry the drama of the Kingdom of Virginia to the present day, in tinue to produce similar prose tact his imagination doesn't works, and not devote himself seem to suffer from any solely to poetry.

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of his work as being a part of much larger, albeit unwritten, whole

As the journal author, Lovat Fraser, was a soldier, it isn't surprising at all to discover that a large part of it contains vivid battle description. General Wolfe's Quebec campaign of 1759, which turns out differently for George II in this work, is extremely well-

Prince Charles' political maneuverings to seize power in the colony of Virginia, aided by several colorful supporting. characters, makes for enjoyable reading. Col. George Washington turns up here and there as a man who has determined never to wage war

The Prince's old nemesis from the Battle of Culloden (1745, where in actuality, the Stuart hopes were snuffed out the Hanoverians brutality) William, Duke of Cumberland, returns with an army to save the northern colonies and to put an end to the hopes of the Pretender.

At the Battle of Annapolis, in late May 1761, for those who haven't become acquainted with the novel, the inglorious defeat of the Stuarts at Culloden is avenged. Although the battle took two days, the second day is reported through secondhand information, as Lovat Fraser spends that day conducting a skirmish in An-

Thomas' characters have a remarkable tendency to come alive. -The pseudo-historical work reads much better than the standard historical fare, both scholarly and nonscholarly.

All in all, "Prince Charlie's (actually geographical feature from the Battle of Annapolis, and not a ruse contrived by His Royal Highness) is one of the more entertaining novels to have appeared this year.

Hopefully Thomas will con-

work with numbers!

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'Charlie's Bluff' PSU researchers seek artificial heart

Collegian Staff Writer

A reliable artificial heart is a little closer to reality because of research conducted by engineers at University Park The research effort began in 1970 when Dr. William Pierce, a

cardiac surgeon and associate professor of surgery at Hershey Medical Center, expressed an interest in a joint effort with the School of Engineering to develop an artificial heart.

John Brighton, professor of mechanical engineering, and Winfred Phillips, associate professor of aerospace engineering, became involved in the project.

The research has two basic objectives: to develop an artificial heart, and to develop a heart assist, a device designed to aid the heart for a limited time while it heals

The artificial heart was designed by people from Hershey and University Park. The engineers at University Park then designed a mechanical system to test the artificial heart. Once a heart has been built and tested, it is implanted in a

test animal at Hershey. The researchers decided on a collapsing sac contained in a rigid outer case as the basic design of the artificial heart. An air pulse is introduced, compressing the sac and expelling

the blood from the artificial heart. Brighton explained the similarities and differences of the artificial heart to the human heart.

The mechanical heart is similar, in regard to having a flexible pumping chamber and inlet and outlet valves," he

'The main difference is rather than having muscles supply the contracting force for blood ejection, the mechanical heart uses compressed air surrounding the pumping chamber.

While the artificial heart has a long way to go until it's perfected, there is a good chance the heart assist will be perfected in the near future, according to Phillips

A calf at Hershey has survived nine months with a heart assist. "This is an indication we have a long life mechanical device that does minimal blood damage and provides a reasonable bood flow," Phillips said.

After each heart is built, it is tested in a mechanical engineering lab.

Early in the research effort, it was decided to construct a mechanical model of the circulatory system as the heart would 'see" it. The important operational measures of the artificial heart would be taken by mechanical simulation of the circulatory system

The mechanical simulation has the advantages of being less expensive and more reliable than implanting an artificial heart in an animal and trying to measure the heart's perfor-



JOHN BRIGHTON (left) AND WINFRED PHILLIPS examining different models of an artificial heart in their testing

mance, according to Phillips.

What got two engineers interested in artificial hearts? "It seemed like a useful application of my background in fluid mechanics in dealing with real and important problems as opposed to dealing only in abstract theories and equations,

Financial support has come from several sources. The Pennsylvania Science and Engineering Foundation provided support for the first three years of research, and the National Institute of Health has provided support since then.

The National Science Foundation also has supported engineering studies to develop the artificial heart.

## wishes a HAPPY THANKSGIVING

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our 1974 fall pledge class Sherri Leopold Mary Lou Manfredi Valerie Milton Kathy O'Brien

Karen Swavely Have a great term break!

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