

Arthurdale Reviewed: Sustainable New Deal Housing in Appalachia

EDRA Conference
May 2021

Gregory Galford, PhD
Virginia Tech

Lisa Tucker, PhD
Virginia Tech

Structure of Presentation

- I. *Purpose* *Analyze past to inform future housing*
- II. *Goals* *Provide template for future housing discussion*
- III. *Significance* *Housing needs are changing now*
- IV. *Context* *History and culture frame issue*
- V. *Methods* *Mixed methods with focus on qualitative*
- VI. *Expected Results* *New family demographics demand new types*
- VII. *Implications* *Land use, Const. methods, Design, Finance*

Learning Objectives / Goals

You will be aware of this historic and rural sustainable model of housing.

You will be aware of how current sustainable testing programs can be used to verify historic homes.



Purpose

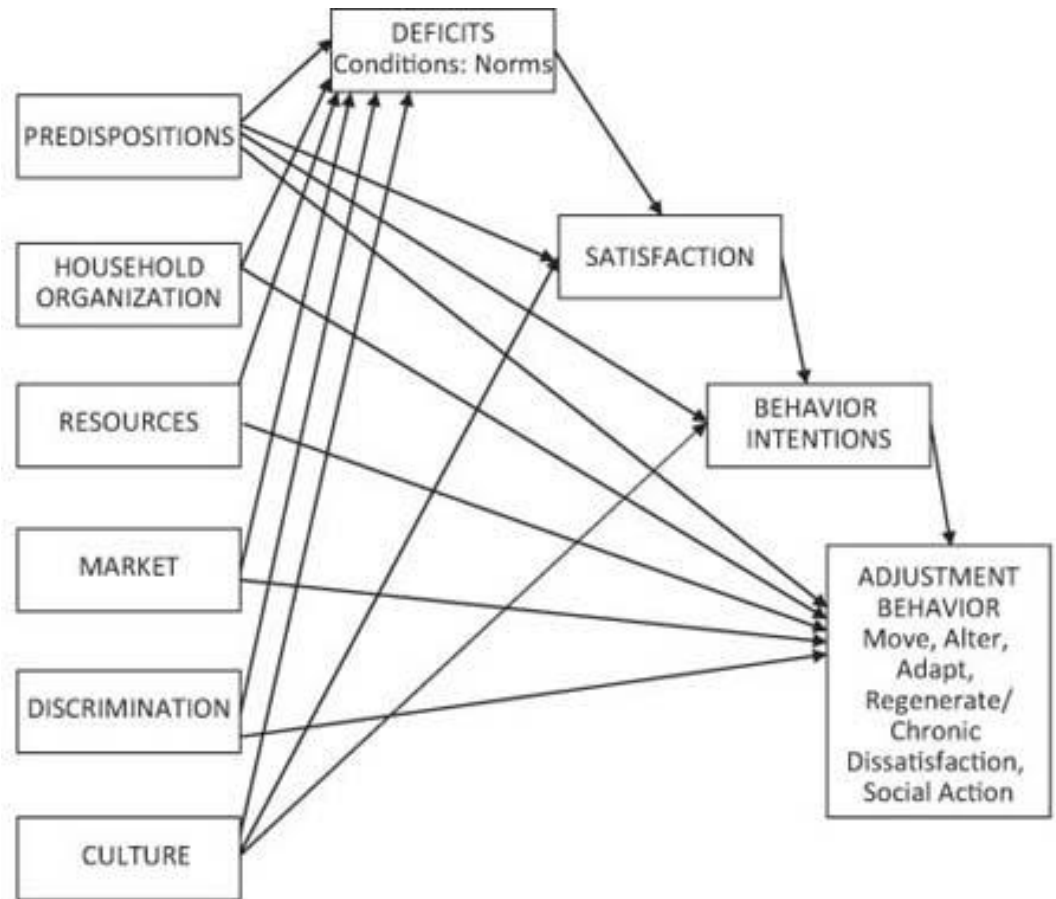
- *Examine examples of historic planned housing as a type*
- *Analyze documents and data for patterns and insights*
- *Situate within regional history*
- *Situate within company town and housing history*
- *Illustrate sustainable features*
- *Tell the story of Eleanor Roosevelt's involvement*

Significance / Theoretical

Framework

“A Theory of Family Housing Adjustment”

-Morris and Winter, 1975



Source: Based on Morris and Winter, 1978.

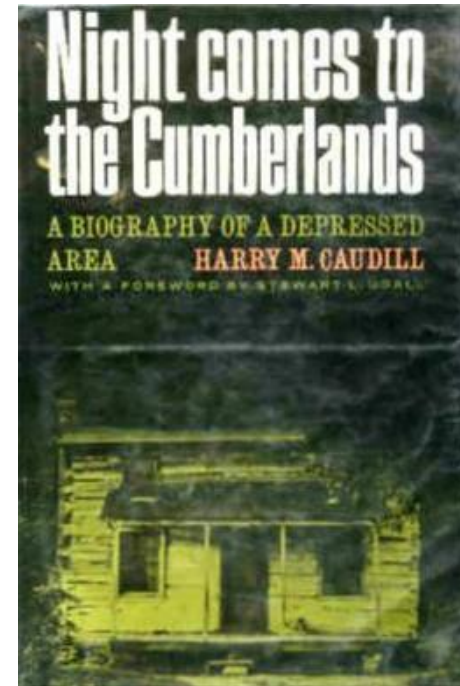
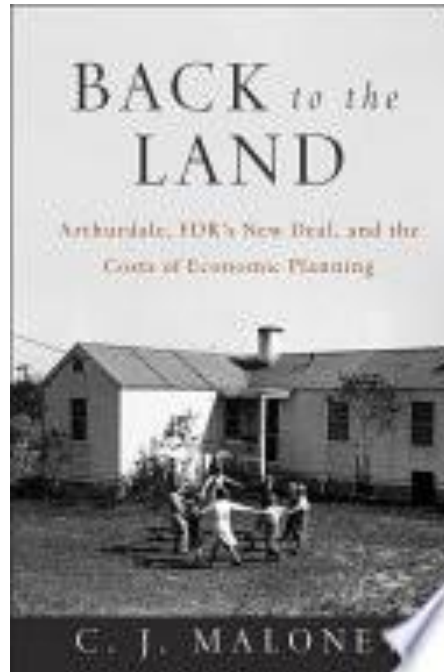
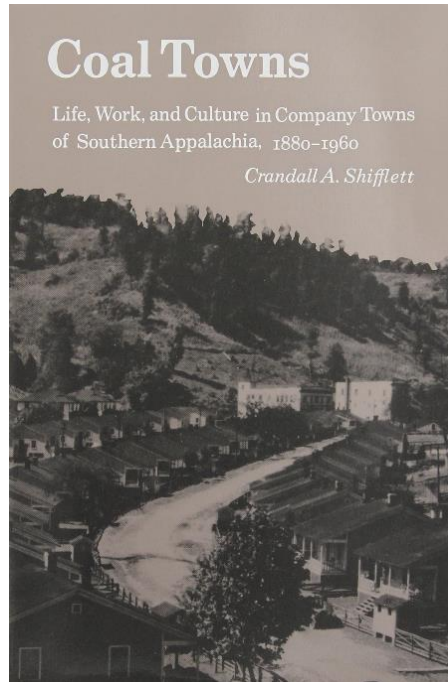
Significance / Theoretical Framework

- *Morris and Winter (1975)*
- ***Family norms and cultural norms as basis for decisions***
 - *Residential mobility*
 - *Residential adaptation*
 - *Family adaptation*

Framework: Living Building Challenge

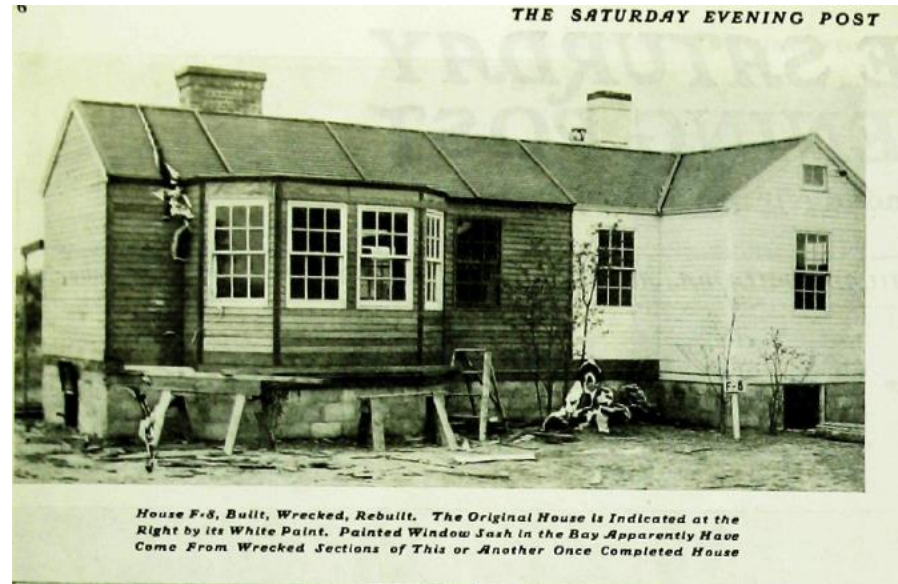


Literature review



Three Phases

- *Prefabricated houses*
E.F. Hodgson Company
50 houses



Three Phases

- ***Phase 2***

“Wagner” Stone houses

75 houses

- ***Phase 3***

Three styles--Tudor Revival, Colonial
Revival or 1 ½ story bungalows

40 houses



Renovated original house at Arthurdale

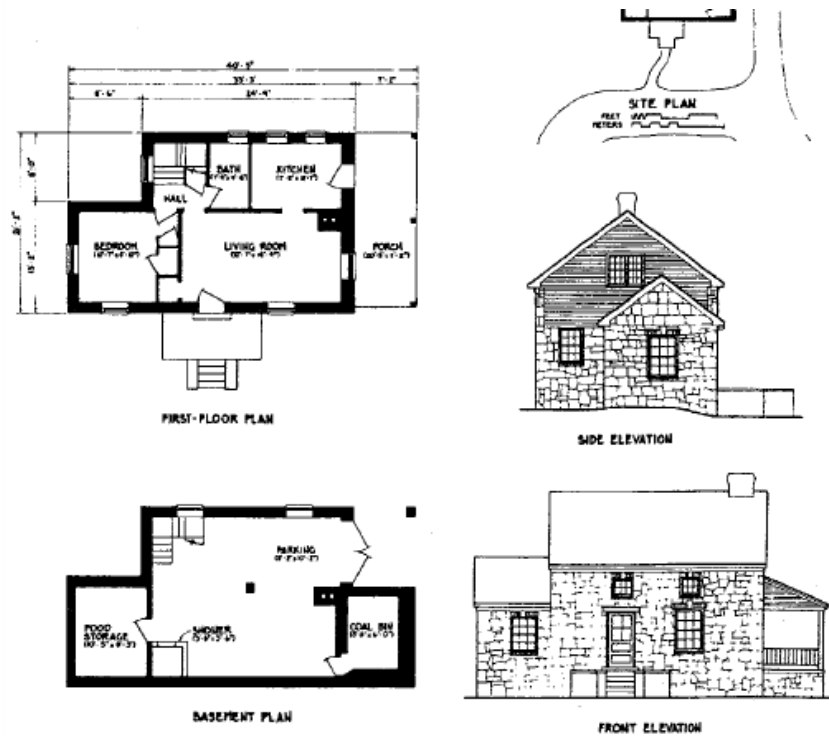
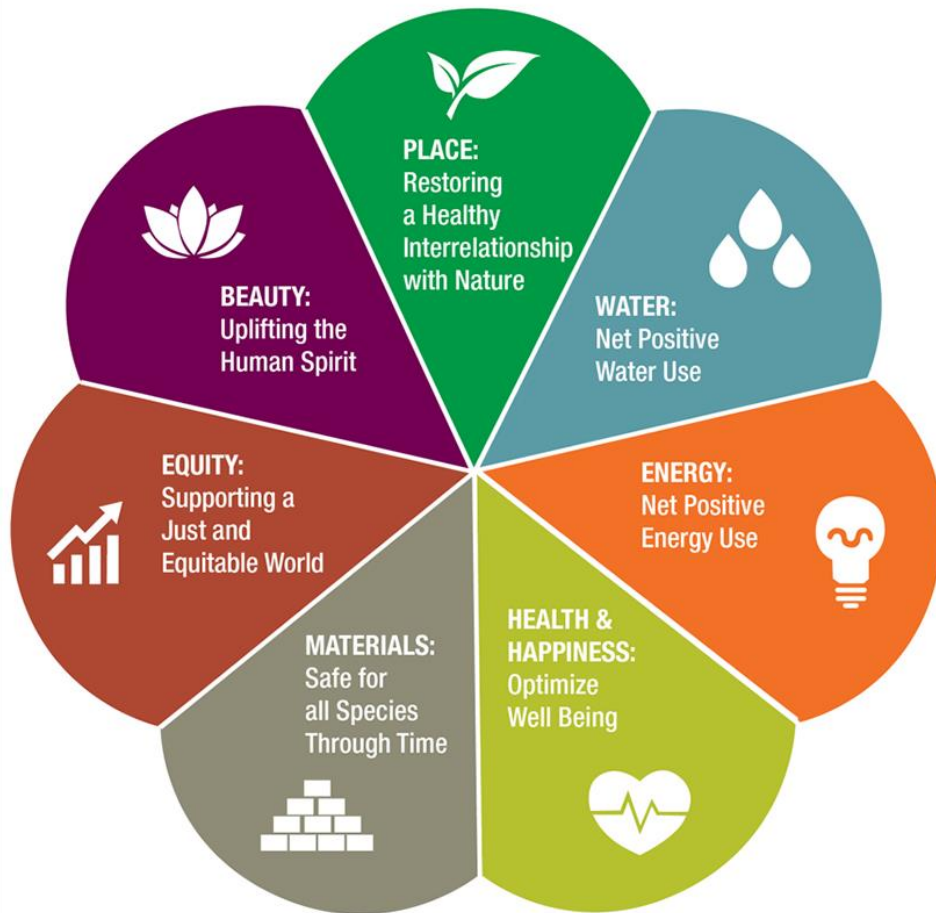
Methods

- **Presentation**
 - *Document Analysis*
 - *Literature Review*
 - *Statistical Data*

- **Paper**
 - *Case Study*
 - *Interview*
 - *Observation*
 - *Surveys*



Tool of Analysis--Living Building Challenge



SIX-ROOM TYPE HOUSE

NOTE: TYPICAL PLAN ACCORDING TO HISTORIC PHOTOGRAPHS AND OWNERS' RECOLLECTIONS, BASED ON ACTUAL DIMENSIONS OF HOUSE ON CIRCLE 2.

Sustainable Features

Living Building Challenge	Arthurdale Houses	Notes
PLACE		
01. Ecology of Place	Locally adapted to site	
02. Urban Agriculture	On-site agriculture (and livestock)	Cows, pigs and chickens
03. Habitat Exchange		Not applicable at the time
04. Human-Scaled Living	Porches	
WATER		
05. Responsible Water Use	Rain water collection?	Would need adaptation
06. Net Positive Water		
ENERGY		
07. Energy + Carbon Reduction	Double walls were designed with “arctic” lined Celotex insulation (1/2” cane fibre insulation); doors were fitted with screens to permit natural ventilation	Would need adaptation
08. Net Positive Carbon		No applicable at the time

Sustainable Features

HEALTH + HAPPINESS		
09. Healthy Interior Environment	Kitchen were designed to be of the latest “sanitary” technology. They were designed to be both cheerful (full of light) and convenient; sunrooms had plenty of natural light	
10. Healthy Interior Performance	Interiors were designed to evoke a sense of comfort and this was used in the advertising by Hodgson Company	
11. Access to Nature	Windows all rooms Sited for growing food and raising animals on the property	
MATERIALS		
12. Responsible Materials	Locally available Prefabricated panel construction used in phase 1	
13. Red List		Not applicable at the time/could be used
14. Responsible Sourcing	Locally available	
15. Living Economy Sourcing	Local workmanship/created jobs	
16. Net Positive Waste	Use of prefabricated construction resulted in a lack on construction waste on site	

Sustainable Features

EQUITY		
17. Universal Access	Most houses were located on a single level. Although ADA was not yet law, this would have contributed to a more accessible interior	
18. Inclusion	Economically equitable	
BEAUTY		
19. Beauty + Biophilia	Houses were designed with plenty of natural daylight and windows for views. Lots were sized to accommodate growing food and other plants on the site.	
20. Inspiration + Education	The development relied on the Homesteading program as an educational tool for residents.	

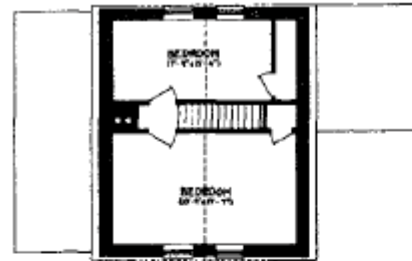
Findings

Sustainable features of the Arthurdale houses

A viable example for current housing

Expected Findings

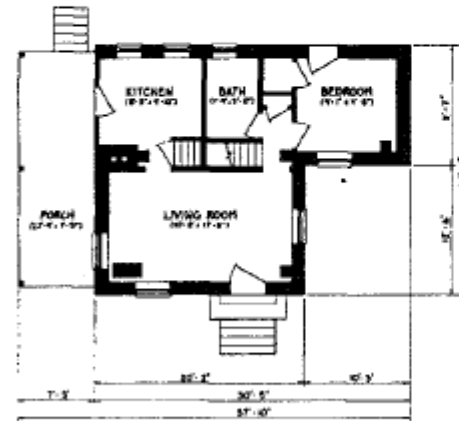
How what was actually built compares to writing about the designs



SECOND-FLOOR PLAN



FRONT ELEVATION



FIRST-FLOOR PLAN



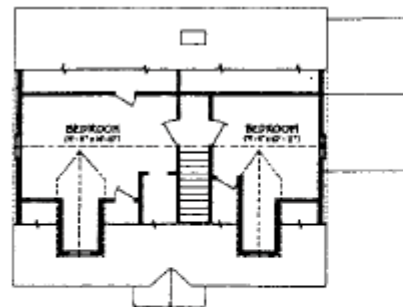
REAR ELEVATION

FIVE-ROOM TYPE HOUSE

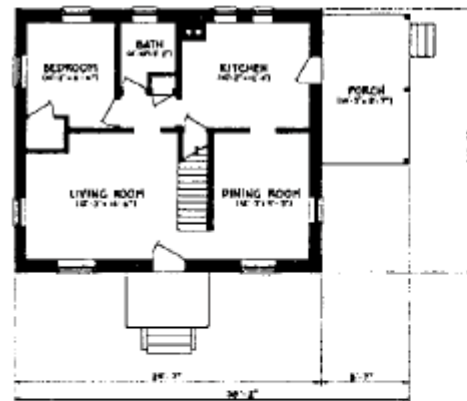
NOTE: TYPICAL PLAN ACCORDING TO HISTORIC PHOTOGRAPHS AND OWNERS' RECOLLECTIONS, BASED ON ACTUAL MEASUREMENTS OF HOUSE ON CIRCLE 2.

Implications

- *Build on artistic, historic, and cultural models for today*
- *Housing that is planned but incremental*
- *Rethink of historic model for 21st century Appalachia and Living Building Challenge Housing*



SECOND-FLOOR PLAN



FIRST-FLOOR PLAN



FRONT ELEVATION



SIDE ELEVATION

SIX-ROOM TYPE HOUSE

NOTE: TYPICAL PLAN ACCORDING TO HISTORIC PHOTOGRAPHS AND OWNERS' RECOLLECTIONS, BASED ON ACTUAL MEASUREMENTS OF A HOUSE ON SR 4020

References

Caudill, H. (1963). *Night Comes to the Cumberlandlands* 305. Atlantic-Little, Brown.

Ghirardo, D.Y. (1989). *Building New Communities. New Deal America and Fascist Italy* (pp.1-223). Princeton University Press.

Maloney, C. (2011). *Back to the land: Arthurdale, FDR's New Deal, and the costs of economic planning*: John Wiley & Sons.

Morris, E. W., & Winter, M. (1975). A theory of family housing adjustment. *Journal of Marriage and the Family*, 37(1), 79–88.

Shifflett, C.A. (1995). *Coal towns: Life, work, and culture in company towns of southern Appalachia, 1880-1960*. Univ. of Tennessee Press.

Thomas, J.B. (1998). *An Appalachian New Deal: West Virginia in the Great Depression*. University Press of Kentucky.

Williams, J. A. (2003). *Appalachia: A history*: Univ of North Carolina Press.

Questions