Kristjan Ahronson, Into the Ocean. Vikings, Irish, and Environmental Change in Iceland and the North (Toronto: Toronto University Press,  $2015) \mid 1$ 

In the dialectic between established "certainties" and fundamental ambiguities that characterise north Atlantic islands, Kristjan Ahronson develops the argumentation on the relationships between Scots, Irish, and Norsemen of the early medieval period. The interaction of humans and their environments, as well as peoples' migrations and the cultural diffusion in the north Atlantic, are the main areas of investigation of a book that is intended to be designed not only for a specialized audience. Popperian theory of science and interdisciplinarity represent the conceptual framework in which the author develops his method or, even better, his crossing of methodologies that are jointly employed to reach a multidimensional pictures of the subjects under inquiry.

The book is structured into four parts: a chapter that resumes the developments of literature on the topic, a chapter on methodology, a chapter on toponomy, and a section on the actual research pursued in the southern Islands and its findings in the Seljialand area.

The first chapter supplies an overview on scholarly theories and ideas on Celtic and Norse settings in the Atlantic. Ahronson sums up the various approaches given to the problem, stating the importance of being aware of the historical dimension of the problem itself, in order to produce a new solution to it. This is followed by a discussion on the role played by medieval literature in establishing movements of peoples in the north by nineteenth centuries scholars. The chronology of migrations and hypothesis of colonization were based on these texts and on toponomy, much like the one Eugène Beauvois published in 1875 that supported the discovery of New World by the Irish before 1000 AD, plus the existence of pre-Vikings early-Christian settlements in Iceland. The author's focus on Beauvois, assessing how theories affect the historical period that produced them (in Beauvois' case diffusionism and racial determinism), acknowledges, however, his contribution to the debate.

The second chapter deals with the Popperian concept of science as a critical process with unity of method, a process of proposing conjectures and refutations in which interdisiplinarity plays a key role, since a community enterprise in Popper's view that needs conversation between disciplines. Welcoming this approach, the author states interdisiplinarity as the best method to approach Celtic studies and archaeology, as these fields are dealing with problems that emerge in areas of convergence of separate theoretical

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traditions.

Ahronson's declared intention is to provide this strong theoretical statement of interdisciplinarity functions as an introduction to his actual research. The theoretical discourse is crucial in the book's framework, familiarizing the reader with the crossing of the different methodologies that will be employed in the following chapters. It is clear that, in affirming the effectiveness of his method, that the author wishes to promote the ground-breaking outcomes of his research, i.e. that there Scots and Irish may have settled Iceland a century before the Norsemen, who arrived around 870 AD, and the factual relationship in the south Iceland area between early-Christian Celtic community and the Norse who came later.

Before proceeding with the 'Seljialand section' of the book (chapter 4 to 7), chapter three deals with toponomy, analysing *pap*-names in Scotland's Hebridean Island. *Pap*-names have been used to suggest early Christian settlements, on the assumption that the Norse called *papar* the early Christian Gaels. Ahronson brilliantly argues that, instead of being directly linked to a pre-Vikings Gaelic speakers' settlements, *pap*-names should be interpreted as a reflection of the earliest Scandinavian colonization in the north Atlantic area. In fact, *pap*-names are probably among the earliest Scandinavian-origin names in the area, casting new light on the poorly understood relationship between Gaelic and Norse speakers, especially in the Faroe Islands and Iceland.

The section on the Seljialand area opens with chapter four on the function of the artificial caves in Seljialand, southwest Iceland, which are traditionally linked with monastic communities of Gaels and they are also known for the presence of cross rock-cut sculpture. This relationship is, however, unclear and the research provides resolution to the question on the basis of the survey of 39 artificial caves. Fieldwork identified sites with typical assemblage of human and animal house structures surrounded by field boundaries. The prominence of the sites in the landscape and the fertile land and the island's early literature, suggest the sites were exploited and inhabited from an early period, as the subdivision of the land and the community use can be inferred by the name of the site, Seljialand, "shielings land". The possible dating of the cave is explored in chapter five through the study of the sequences of sediments and then in locating in it a dump of debristype material within the sequences for dating an episode of construction of the caves. The

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analysis of the layers is based on the new technique of tephra contouring, which implies the geochemical analysis of stratified volcanic airfall (*tephra*). The outlined hypothesis is that the caves and the exploitation of the land, as well as the introduction of domesticates in the area around 800 AD, that means about a century before the Vikings' migration in Iceland. Chapter six applied tephra contouring for investigating past land surfaces. The assessment of vegetation changes in the period around Norse migration contextualizes the human activity in the landscape, such as the creation of open grassland environments and the introduction of non-indigenous herbivores. Chapter seven identifies Icelandic caves that present rock-cut cross sculptures as part of a coherent art-historical tradition within the Scottish Columban family's crosses of the seventh and eighth centuries. This also reinforces the hypothesis of an early-Christian settlement in Seljialand ca. 800 AD, before the Norse coming.

Throughout the book, Ahronson builds his argumentations step by step, connecting all the findings to support his final theory. The reader is kept steadily tight to his dialectic between theoretical claims and research findings' responses, safeguarding scientific rigor while constantly projecting the problem on a further investigative level. Moreover, the book is supplied by rich iconographic material about the caves and the rock-cut cross sculptures. *Into the Ocean* will be of interest to scholars in fields such as archaeology, Norse and Gaelic history and literature, geology and environmental studies, while the use of a clear language makes it attractive also for a non-specialized audience, as intended by the author. The only obstacle to this last remark could reside in the lack of a chronological table that might help the reader to get oriented in the historical dimension of the problem and hyper technicism of the language when speaking about tephra's methodology.