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# Genealogenetic biography: A proposed transdisciplinary concept and methodology

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#### Copyright:

© 2025. The Author. Licensee: AOSIS. This work is licensed under the Creative Commons Attribution License. This article introduces the concept of genealogenetic biography as a transdisciplinary approach to augment the epistemology of both family history narratives and historical scholarship. This approach promotes an admixture between traditional genealogy and ancestral genetics; genetic genealogy and biographical writing; social sciences methodology and natural sciences technology; and academic research and societal collaboration. The objective of the genealogenetic biography is to create new knowledge by unearthing the complexity of the concealed lives of ordinary individuals and families over time. The research workflow of genealogenetic biography begins with discipline-based study that proceeds towards incorporating interdisciplinary study. It gradually becomes transdisciplinary – from traditional pedigree reconstruction to ancestral genetic analysis and database triangulation. This progression extends to the investigation of multidisciplinary contexts, culminating in the integration of both micro- and macro-historical evidence. The article also presents an appraisal of the consequences for traditional and genetic genealogy as a recognised field of study. Envisaged applications of genealogenetic biography in history, education and transdisciplinary research are also given. The article concludes by drawing attention to future directions.

**Transdisciplinary contribution:** The proposed genealogenetic biography is a novel kind of critical family history writing that integrates traditional genealogy, ancestral genetics, multidisciplinary contexts and micro- and macro-history to unearth hidden human experiences over time. New knowledge is created through the collaboration of scholarly and non-academic grassroots societal members.

**Keywords:** ancestry; genealogy; traditional genealogy; genetic genealogy; family history; genealogenetic biography; transdisciplinary historical scholarship.

#### Introduction

Genealogies and biographies featured as prominent literature methodologies in ancient and medieval historiography until a dramatic shift occurred in the second half of the 19th century with the onset of the professionalisation of history in Europe and North America. Despite their popularity in the contemporary societal sphere, traditional genealogy and biography unfortunately from time to time continue to be ranked by professional historians as inferior to academic engagement with history. <sup>2,3</sup>

The topic of biography remains controversial and contested from an academic perspective, with historians being divided between those who accept biography and those who reject its practice.<sup>3</sup> Podnieks identified the problem areas in this respect as:

[E] pistemological, ethical, and aesthetic issues, the impossibility to capture the entire life of a person, invasion of privacy, fact vs fiction, and the absence of a critical vocabulary and theoretical framework by which to judge the texts.<sup>4</sup>

Alternatively, Barman, however, advocates that biography is in fact both viable and valuable.<sup>5</sup> Attention to the trajectory of a single life can, for example, reveal a larger narrative about the various societies through which an individual moved and can therefore reveal histories of events and experiences with greater insight and empathy.<sup>6</sup> Its value is thus not found in its distinctiveness but in its exemplariness. Renders expounded further that the life of that person described in a biography can actually serve as an allegory for larger issues affecting society and culture.<sup>7</sup>

Another stepchild of history is traditional genealogy. In this article, 'traditional genealogy' collectively refers to both genealogy and family history. Although these terms are often used interchangeably to describe both, they do differ in meaning and scope. Genealogy is the systematic

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tracing of ancestors into meaningful relationships or pedigrees using appropriate records and oral history. Family history is the progression from basic genealogical lineages to the investigation of the multiple contexts of families and individuals within each family unit, culminating in a (published) family narrative.<sup>8,9</sup> Notably, Darby and other authors pointed out that less than 20% of family researchers seek information about the context of their ancestors' lives.<sup>9</sup> Barman further lamented that many of those who research the context proceed to describe the lives of their forebears in a descriptive narrative manner, with little critical analysis of the individual's character and their engagement with social structures and other contexts, and the impact these had on them. Barman viewed such descriptive narratives as non-productive biographies.<sup>5</sup>

According to Nash, traditional genealogy has served many contradictory purposes in the past and present. On the one hand, it safeguards unique national culture; supports ethnic identity; validates diversity and multiculturalism; illuminates the heterogeneous nature of a nation; reveals pre-national cultural relationships; portrays existing multinational collective identities; confirms places, interactions, representations, identities and recreation; and articulates intricacies of alliances, relationships, gender and cultural geography. On the other hand, it can also be harnessed to fuel ethnic, racial and nationalist fundamentalism.<sup>10</sup> Personal genealogy sometimes takes no notice of national and global relatedness and identity and may advertently or inadvertently promote exclusion on various levels. It often risks ignoring the social dimensions of kinship, thereby excluding relationships, characteristics and origins that are not necessarily biological.11

Some of the mentioned criticisms, which may amount to stereotyping, were challenged by Mills, lamenting the continued 'fractured coexistence' of professional historians and academics and genealogists and family history researchers. The divide is nevertheless real, as especially witnessed in the academic sphere, where traditional genealogy frequently plays a rather subordinate role, featuring only in a handful of cultural historical studies at the postgraduate level, and then only to merely serve as a point of departure to research phenomena, inheritance and developments over time.2 Cortada echoed the views of Mills, stating that history scholars and family historians seldom attend the events of each other, such as conferences or societal meetings. He also alluded to the fact that the hoary, stereotyped reputation of genealogists as being disorganised, inaccurate and unscientific amateur investigators has misled many academic historians to be unaware of the solid, professional and rigorous work that numerous family history researchers deliver. Yet, his research, conducted in 2023, revealed that the 'research methods used by professional and amateur historians are more alike than different' and that it is crucial for these historians who live in 'parallel universes' to enter into conversation with each other.12

On the other hand, there are some history scholars who recognise the epistemology of traditional genealogical research. A few accredited academic institutions in the United Kingdom (UK), United States (US) and Ireland have actually embarked on efforts to cross the divide. This is evident from their respective websites that promote undergraduate and postgraduate degrees in genealogy, family history, heraldry and palaeography. 13,14,15,16,17,18 Also, in 2020 and 2022, respectively, Sleeter and Bell reported that the discipline of sociology has introduced traditional genealogy as a pedagogical tool. Students research their family histories, which serve as a point of departure for studying complex or abstract social issues such as critical race theory, critical feminist theory and cultural diversity.<sup>19,20</sup> Nevertheless, on a global scale, the investigation and interrogation of genealogy and family history as a recognised discipline, both in itself and in an interactive mode with other disciplines, remains largely unexplored and untheorised by history scholars in particular. 21,22

One variable that has the potential to significantly change the limitations ascribed to traditional genealogy and augment its perceived inferior academic credentials is direct-to-public commercial deoxyribonucleic acid (DNA) testing platforms.<sup>23</sup> Launched around the year 2000, these ancestral genetic tests are enabling genealogists to address the disjunction between biological connection and recorded pedigrees. Before, individuals were convinced - without any organic evidence - that they were the 'exact blood relations of all their greatgreat-great-grandparents' based only on 'administrative, legal and affectual reasons'.24 With the introduction of DNA testing, an alternate or supplementary historical archive is being created in the form of genetically based genealogy, known as genetic genealogy - genetic testing in tandem with traditional genealogy.<sup>22</sup> Hereditary data can be retrieved and analysed through 'the greatest history book ever written ... the one hidden in our DNA'.25 For the past 25 years, genealogists have been using genetic testing to either confirm or debunk documented family relationships. Moreover, genetic genealogy has assisted genealogists to identify unknown ancestors and legitimate biological progeny, to distinguish formerly unknown or incorrectly allocated branches in families and to identify unknown living relatives. Overall, it also provides important clues to stimulate further research and assists genealogists to overcome former barriers created by the absence of traditional sources of information. In this respect, DNA analysis can overcome information gaps where records are inadequate or nonexistent, for example, for those with slave ancestry, biased Eurocentric archival documentation, non-hereditary surname practices, or seeking the furthest common ancestor of a family clan. It also assists in demystifying folklore and validating oral traditions, 23,26,27 and is utilised to trace geographical migration patterns and admixture between ethnic groups over centuries of an individual's ancestors22 and even assist adoptees in finding their biological heritage. 23,27

In the view of the author, the advantages mentioned confirm the need for a transdisciplinary approach to not only address concerns regarding the unacknowledged and untheorised field of traditional and genetic genealogy but also to affirm its status as a fundamental component of biographical history writing within the historical domain. Transdisciplinarity is broadly defined as an approach to research that integrates and transcends the boundaries of individual academic disciplines. It promotes innovative, cooperative and intentional collaboration between disciplines and stakeholders outside academia to establish a cohesive, holistic framework that addresses complex issues in a holistic way. This approach aims to solve multi-layered problems, uncover extraordinary singularities, construct new knowledge and develop advanced strategic technologies. 28,29,30 Fleming stated that transdisciplinary investigations can also be employed to illuminate the complexity of the concealed lives of ordinary individuals and families from ages past.<sup>31</sup>

## Objective of the article

This article proposes the introduction of 'genealogenetic biography' (a term coined by the author) as a new genre of transdisciplinary ancestral history writing in order to augment a deeper and more critical understanding of the history and human experience of ordinary individuals within families over time. Moreover, by integrating the attributes and skills of genealogists with those of scholarly historians and scientists, history can be made more accessible and digestible to 'the public [who] is the ultimate client and consumer'.<sup>21</sup> Ultimately, the genealogenetic biography project seeks to achieve what the historian Robin Fleming explicated in 2009:

The only way historians can bring dry bones back to life is by crossing disciplinary boundaries, and not the more familiar ones that stand between history and anthropology or history and literature. Instead, we have to clamber over the much higher barriers that lie between science and the humanities. If we educate ourselves in developments outside the humanities, we have a chance of uncovering some extraordinary lives.<sup>31</sup>

# Genealogenetic biography: Conceptual framework

Genealogenetic biography is defined as a new genre of transdisciplinary critical history writing that integrates traditional and genetic genealogy, multidisciplinary context and micro- and macro-history. It aims to collate the ancestral genetic chronicle and the main genealogical family narrative into a cohesive unit, while simultaneously investigating the interplay and impact of a multitude of contextual scenarios involving individuals and family units over time. It is not limited to important historical figures but also encompasses ordinary people and families. It utilises an admixture of traditional genealogy and ancestral genetics; genetic genealogy and biographical writing; social sciences methodology and natural sciences technology; and academic research and grassroots societal collaboration and contribution to produce a coherent genealogenetic biography.

It must be noted that although emphasis is placed on the integration of genetic genealogy as an augmenting historical archive into the historical domain, the genealogical, genetic and biographical methodologies referred to in this article are not new. To date, they have been applied to varying degrees in history, forensic science, sociology, anthropology, ethnology and others. 19,20,23,27,32,33,34,35 In contrast, this article focuses on the *novel* application of genetic genealogy (a non-academic natural-social science methodology) in critical history writing through the production of the genealogenetic biography. This proposed biographical approach therefore aligns with the broadly accepted understanding of what the concept of transdisciplinarity entails.

During the synthesis of a genealogenetic biography, the multidisciplinary contexts of individuals belonging to a particular family at a given time, and over a specified time period, must be explored and investigated. This requires the integration of longitudinal and latitudinal knowledge, perspectives and insights, and hence, information from a wide range of primary and secondary sources must be consulted, analysed and interpreted.<sup>5,8,11,19,36</sup> Nonetheless, it moves beyond the descriptive narrative writing often employed by family historians to also include an interpretive and critical family history biography (i.e. a genealogenetic biography). Figure 1 illustrates this progression from pedigree or lineage compilation to descriptive narratives to critical biographical engagement, the associated history researchers and the feedback between the various levels.

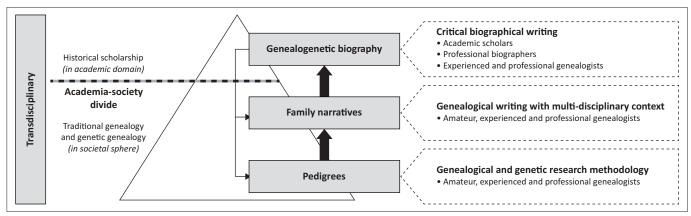


FIGURE 1: The transdisciplinary genealogenetic biography as critical family history writing and its relation to traditional and genetic genealogy, with associated practitioners.

In the traditional descriptive family narrative, knowledge and inputs from two or three academic disciplines collaborating in parallel or sequentially from their separate disciplinary perspectives – are merely extracted to contribute towards a shared objective. The disciplines are applied in an additive, not integrative, manner. 28,29,30 Genealogenetic biography, on the other hand, proceeds beyond this approach and is characterised by a consolidative critical analysis of the human experience within respective contexts.<sup>19,36</sup> When families and individuals within family units are placed in context, a deeper understanding of their human experiences is achieved. This is particularly true when relationships between powers, institutions and structures within the various contexts are analysed through an integrated lens. These contexts include familial relations, historical events, political authorities, geographical and demographic influences, cultural practices, socio-economic settings, built environments, legal constraints, technological developments, environmental factors and religious beliefs. In this sense, the genealogenetic biography achieves what Meister referred to regarding the interplay between individuals or families, microhistories and macrohistory, which must be researched and integrated.37

The contribution of genealogenetic biography to the historical domain is envisaged in five ways. Firstly, by increasing the integrity and scholarship of the works produced by family researchers and biographers. Secondly, by elevating the field of traditional and genetic genealogy towards scholarly recognition and engagement. Thirdly, by enhancing scholarly writing beyond the disciplinary boundary of history. Fourthly, by increasing the standing of biography within academic circles. And fifthly, by enabling non-academic members of society to contribute grassroots knowledge, unique skills and tested practices throughout the research process as equally esteemed stakeholders (as depicted in Figure 1).

Genealogenetic biography creates a bridge to cross the divide between the academic world and the societal sphere, which would allow for greater interaction and collaboration to the benefit of both sides. The pyramid in Figure 1 does not rank historical work according to value or worth but rather illustrates the existing levels of historians and the different criteria and requirements that result in some levels being more selective or exclusive. It presents the reality that academic (professional) historians must pursue a longer path of education and training, and hence, a smaller pool of them exists in comparison to amateur family historians (amateur, experienced and professional genealogists). The diagram assists in understanding these broad levels and their intersection.

When more amateur family historians begin to engage with genealogenetic biography writing voluntarily, they can become better equipped to deliver work of academic quality with the prospect of publishing their findings in scholarly articles. The proposed concept introduced in this article, therefore, promotes attainable collaboration between nonacademic and scholarly historians as valued partners or stakeholders of equal status, thereby bridging the academiasociety divide (see Figure 1). This concept differs considerably from Cortada's proposal for collaboration between the various levels of historians. He suggested that amateur historians should conduct research on behalf of professional historians who select and guide the projects and who ultimately collate and publish the findings in scholarly articles. These amateur historians, on the other hand, can produce narrations beyond family history to include topics on historical buildings, churches and farms; minor military campaigns; local notables such as teachers, pastors and women community leaders; and the restoration of graveyards with improved strategies for genealogical data collection.<sup>12</sup> However, amateur historians are already producing work of this nature independent of the academic environment, but in Cortada's collaboration model they remain acquiescent to professional historians.

As a critical genealogy and family history endeavour, genealogenetic biography has the potential to be recognised in the historical domain as a viable and respected form of academic history writing and can be a vehicle for scholars and non-academic historians to engage in discussions and debates to address misconceptions, gain mutual understanding of the differences and similarities of each other's research approaches, strategies and outputs, and establish collaborative models. The envisaged communication, feedback and collaboration between the various levels can result in the reciprocated transfer of knowledge, skills, techniques, values and standards (see Figure 1). These collaborations may also promote a more prominent standing of traditional and genetic genealogy in the scholarly domain, which, in turn, may encourage more professional historians to explore and theorise its potential as a recognised history sub-field in the academic domain. The impact of genealogenetic biography on the ongoing discourse around the contested genre of biography can also be deliberated.

# Genealogenetic biography: Research process and methodology

Genealogenetic biographical research begins with a discipline-based study that proceeds towards the incorporation of interdisciplinary investigations, which progressively becomes transdisciplinary – an approach described by Van Eeden.<sup>38</sup> The proposed research process and methodological steps are presented schematically in Figure 2 and are discussed accordingly. The discipline-specific point of departure is genealogy (Steps 2–4), progressing towards the integration of interdisciplinary genetic genealogy (Steps 5–8) and culminating in a synthesised, critical family historical biography that investigates, integrates and interprets information and perspectives from multiple disciplines to form a cohesive unit (Steps 9–10).

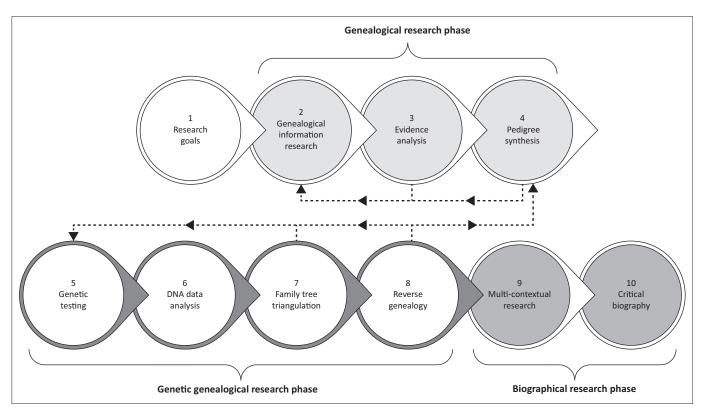
However, it is important to note that the first step in any research project, as indicated in Figure 2, is identifying the research objectives and formulating clear, appropriate and researchable questions. In a recent article, Van der Waldt described different types of research questions and expounded that these will define the relevant research approaches, processes and methodologies which, in turn, determine the appropriate techniques and technologies and the sequence of their application.<sup>39</sup> In a transdisciplinary project, research questions also guide the important involvement of scholarly or industrial disciplinary specialists, non-academic experienced or professional groups and other societal stakeholders.

Research questions that support the genealogenetic biographical project are primarily of a qualitative, quantitative, explorative, ethnographical and phenomenal nature. Primary questions address family origins; biogeographical or ethnic admixture; genealogical, genetic and non-biological family structures and relationships; important life events; and placement within society. Secondary questions, on the other hand, can probe a vast range of 'history-from-below' themes through the lens of a chosen family at a given time or over a selected time period. For example, questions can be asked on family dynamics, identity and belonging; lived experiences in various interacting contexts; evolution of social or religious structures; the impact of political and socio-economic powers and changes; powers, factors, values, motivations and agendas that influenced decisions; demographic characteristics, community interactions and inter-racial relationships; the presentation of a hereditary condition and its related genetic mechanism, historical treatment strategies and its effect on family members; psychological well-being and coping mechanisms during challenging times, or devastating environmental, ecological or political events; domestic life and migratory patterns; and many more.

#### Genealogical research phase

Family history researchers consult a wide range of sources of documented, visual and oral history in the public domain as well as sources accessed with permission (e.g. via interviews and correspondence) to search for information on identities, relationships, events and situations in question. Documented source material includes birth, baptismal, marriage and death records; census lists and voter rolls; journals, newspapers and Government Gazettes; passenger lists and immigration records; military and employment records; cemetery records and urban or rural graveyards; deeds and transport records; maps; genealogical online platforms and databases; unpublished family articles (such as Bibles, diaries, letters and memoirs); and family videos and photographs. Semi-structured interviews can provide additional grassroots information about an individual's character, personality and lifestyle with associated anecdotes (Step 2). Visiting relevant sites and places, where possible, can add depth to the researcher's investigative experience and may even reveal unexpected sources of information.

Sources and gathered evidence are analysed for authenticity, reliability and applicability while conflicting information is resolved through additional genealogical research (Step 3).



DNA, deoxyribonucleic acid.

FIGURE 2: The research process and methodological workflow of genealogenetic biography.

Once all the data have been validated, the pedigree or lineage is constructed and presented as a family line, family tree, or family register, often but not exclusively using genealogy database software. Gaps for further genealogical investigation are identified (Step 4). The Genealogical Proof Standard¹ guides family researchers in the genealogical research process regarding research methodology, evidence analysis and interpretation, writing, ethics and related challenges, and quality control.<sup>40,41</sup>

#### Genetic genealogical research phase

Genealogists and family historians must seek out living relatives for genetic investigations, as exhumation of human remains has substantial legal, ethical and financial implications. Cheek swabs or spit kits are used to obtain DNA. These samples are analysed primarily by direct-to-customer commercial testing companies. Genetic analysis involves the extraction of DNA from collected human cells, its amplification, the separation of replicated fragments and the detection of these DNA fragments (Step 5).

Following the technical analysis, the interpretation of raw DNA results is performed using company-customised software algorithms that compare targeted segments. The matching probability with other tested individuals stored on the test company's database is also calculated. This is not only one of the method's key strengths but also potentially one of its key weaknesses. The more extensive a company's database, the greater the likelihood of substantive matches. The smaller the database, the fewer the chances for useful data, and the greater the probability of a diminished contribution. To obtain a larger catchment of predicted matches, often referred to as 'cousin matching', genealogists download the raw genetic data from the testing company's website and upload it to other open-source reference laboratories, proprietary database websites and public database platforms. Each match indicates the predicted degree of biological relatedness in terms of genetic distance, measured in centimorgans. All these predicted matches are analysed further using in-house proprietary tools or thirdparty analytical tools to determine relationship relevancy (Step 6).23,42

In the next step, the most probable genetic matches are corroborated with additional genealogical data to determine true relationships and identify common ancestral couples that confirm biological relationships (Step 7). After updating the genealogical tree (constructed in Step 4) with the genealogical details of confirmed genetic matches and also uploading this tree to the other platforms, reverse traditional genealogy is conducted. This involves searching for descendants of a person instead of ancestors to find the unifying relationship (or marriage) that links the matches

and to identify one or more key DNA test-takers or interviewees who are more closely related to the person or family of interest.<sup>23,42</sup> For example, tracing the descendants of a great-grandfather using traditional genealogical methods such as birth certificates, death notices, social media, genealogical databases and public websites can reveal living grandchildren and other relatives. When contacted, these individuals may contribute additional historical information regarding the individual of interest and participate in confirmatory DNA testing (Step 8). The genetic genealogy research approach is governed by Genetic Genealogy Standards<sup>2</sup> and additional guidelines compiled by the International Society of Genetic Genealogy.<sup>43,44</sup>

#### Biographical research phase

A wide range of primary and secondary sources of a documented, visual and oral nature available in the public domain must be consulted, analysed and interpreted to obtain information regarding the various contexts in which families and individuals within families find themselves over time. This requires research across disciplines. In addition, the critical analysis of the powers, relationships and exchanges between these contexts and individual role-players, as well as the interplay of these microhistories both among themselves and in relation to macrohistory, must be considered and integrated to illuminate the human experience. Also, semi-structured interviews with members in society, where possible, can provide access to private or unpublished information, anecdotes and visual material (Step 9).37 In the final step, synthesis of critical biographical writing commences after the collection, evaluation, analysis, interpretation and comparison of documented, visual and oral information and scientific data (haplogroups, ethnicity and genetic matches). Near the completion of the biography, editorial input by key participating individuals in society can enhance the correlation between the input information collected during interviews or correspondence and its interpreted format in the compiled biography. The projected result is an authenticated genealogenetic biography that is both scientifically rigorous and socially relevant (Step 10).

# Genealogenetic biography: Envisaged applications

In addition to the relevant disciplines that collaborate to study families and their histories within all their contextual complexities and relationships, the synthesis of the genealogenetic biography opens new avenues of inquiry. Because genetic genealogy augments the historical archive, genealogenetic biography must inherently consider new configurations of relatedness that may emerge as

<sup>1.</sup>Genealogical Proof Standard: A recommended minimum standard for genealogists to guide the production of credible work. It has five elements: reasonable exhaustive research; complete and accurate source citations; reliable, correlated and interpreted evidence; contradictory evidence resolution; and coherently written conclusions. The standard was developed in the 1990s by the Board for Certification of Genealogists in the USA and is promoted by numerous genealogical societies and family history associations worldwide.

<sup>2.</sup>Genetic Genealogy Standards: A recommended minimum standard developed in 2015 by the Genetic Genealogy Standards Committee in the USA consisting of genealogists, genetic genealogists, and scientists. It is endorsed by the International Society of Genetic Genealogy and is available online. The Standards consist of two sections: Standards for obtaining, using, and sharing genetic genealogy test results, and Standards for the interpretation of genetic genealogy test results.

hereditary information becomes available. How and to what extent an association with the whereabouts of people of a particular ancient biogeographical origin impacts existing family members and their historical understanding of identity and belonging must be examined. History scholars are also encouraged to ask how investigations into mainstream history, cultural history, subaltern history, social history, pre-colonial, colonial and post-colonial history, as well as gendered history, can be enhanced. This can be achieved by exploring the avenues of the human experience of ordinary, rudimentary individuals or families through genealogenetic biography as the point of departure.

Genealogenetic biography can assist family researchers to avoid pitfalls associated with personal or family genealogy, such as ethnic, racial and nationalist fundamentalism, and to move towards recognising social kinship and national community. Genealogenetic biography inherently builds on the strengths of traditional genealogy and creates the capacity for innate transdisciplinary research into family history. This includes themes such as family folklore reconstruction; workforce participation; biogeographical migration; and exploring local, regional and national culture, identity and relatedness. It can also examine multiculturalism; geographical culture; cultural heritage, transmission and relationships; ethnic identity and diversity; national heterogeneity; multinational collective identities; as well as interactions, representations, identities, alliances and relationships between contextual powers, forces, roleplayers and structures. Additionally, it can address racial disparity and marginalisation; gendered identity and roles; and (bio)ethics. Therefore, genealogenetic biography potentially provides a model or platform for history academics and researchers in social sciences to revisit entrenched narratives or engage in alternate transdisciplinary investigations.

Furthermore, the transdisciplinary disposition of the genre of genealogenetic biography creates an environment for reciprocated transfer of knowledge, skills, techniques, and standards between collaborating parties. Additionally, gained knowledge can be fed back into the participating disciplines and their respective educational programmes towards pedagogical improvement, which is a frequent outcome of transdisciplinary research partnerships. Lastly, Sleeter and Bell have already illustrated how traditional genealogy has been applied in sociology as a pedagogical tool to teach abstract concepts. 19,20 This raises the question whether genealogenetic biography has similar potential. If this kind of biography was to be the point of departure, could it be utilised as a mechanism or tool to assist students in engaging with difficult or abstract concepts within a contextual framework, to promote critical analytical thinking and to teach students transdisciplinary research thought, skills and techniques? The plausibility of genealogenetic biography as an educational tool may be worth investigating in the future.

#### Conclusion and future directions

This article proposes the genre of genealogenetic biography as a new kind of critical genealogical research as a subset of history as an academic domain that utilises a transdisciplinary approach to integrating traditional and genetic genealogy, multidisciplinary contexts and microand macro-history. However, the challenge lies in its executability. A pilot study is already underway in the Department of Historical and Heritage Studies at the University of Pretoria, in collaboration with non-academic members of society. A largely unexplored South African family is being researched as a case study by converging the domains of biography, genealogy and genetics to answer questions on origin, family history, identity, socio-cultural interactions, historical power forces and structures, and migration. In doing so, depth and new insight into the human experience of this particular family are envisaged. The pilot study will also probe the strengths and limitations of genealogenetic biography, along with related ethical issues.

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#### **Competing interests**

The author declares that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

#### **Ethical considerations**

An application for full ethical approval was made to the Faculty of Humanities Research Ethics Committee, University of Pretoria, South Africa, and ethics consent was received on 23 May 2025. The ethics approval number is HUM031/0724A.

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J.C.A.J. is the sole author of this research article.

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