

Contents lists available at ScienceDirect

### Environmental Science and Policy



journal homepage: www.elsevier.com/locate/envsci

# Searching for pure gold: The impact of ethical gold sourcing certification programmes in the UK and Switzerland



#### Peter Oakley

Royal College of Art, Kensington Gore, London SW7 2EU, United Kingdom

ARTICLE INFO	A B S T R A C T
Keywords: Ethical gold ASGM Fair trade Jewellery Watches Supply chain	This paper explains the history of the first ethical gold certification programme: Fairtrade and Fairmined Gold, launched in February 2011, and its two successors. By presenting an overview of the key events that occurred in the UK and Switzerland relating to these three leading certification schemes, it outlines the trajectory and relevance of ethical gold in both countries up to the present day. This material is then used to explain why ethical gold certification has survived but remained peripheral to gold jewellery manufacturing in the UK throughout the past decade, whilst growing in relevance and institutional support in Switzerland over the same period. The paper also considers the overall impact of ethical gold certification programmes on global gold supply chains since their inception and concludes by reflecting on the extent to which these schemes have benefitted artisanal and small-scale gold mining communities around the globe.

#### 1. Introduction

The start of the last decade saw the appearance of a new material: 'ethical gold'. This was realised through the creation of ethically focused certification programmes which were intended to assist artisanal and small-scale gold miners. The first such programme, Fairtrade and Fairmined Gold (FT/FM Gold), was launched in the UK in February 2011. Though the FT/FM Gold scheme only lasted just over two years, its two successor programmes have persisted and expanded, though not to the extent predicted by the original protagonists. The current situation of ethical gold as an established but niche commodity raises several questions. Why has ethical gold certification survived but apparently remained peripheral to gold jewellery manufacturing in the UK? Have ethical gold programmes had any significant impact on the overall structure of global gold supply chains? And have any of the artisanal and small-scale gold miners that are the supposed beneficiaries gained anything from the existence of these schemes? This article will also consider the extent to which ethical gold certification programmes really create personal connections that bind jewellers and watchmakers in the developed world with artisanal and small-scale gold mining communities.

#### 2. Research field sites, respondents, and methods

The material presented has been drawn from an ethnographic and

textual longitudinal study of the fine jewellery and watch industries and the gold networks that provide the raw material for this manufacturing and retailing sector. The research began with four years of full-time field study (2008–2012), which coincided with Fairtrade's period of industry engagement in 2009–2010 and the public launch of the FT/FM Gold scheme in early 2011. This was followed by nine years of periodic fieldwork amongst the networks of professional jewellers, company directors and managers, specialist technicians, chemists and metallurgists, ethical gold campaigners, ASGM community representatives and ethical gold sourcing programme leaders, stewards, and auditors. The fieldwork was augmented by consistent engagement with primary texts produced by and for the industry on the topic, as well as the ethical gold campaign and certification programme literature.

The primary field sites for engaging with jewellery professionals have been the UK's two jewellery manufacturing districts - the Birmingham Jewellery Quarter and London's Hatton Garden - as well as Goldsmiths' Hall in the City of London and the two leading UK trade shows: International Jewellery London (IJL) and The Jewellery Show at the NEC in Birmingham. I also undertook regular field visits to Switzerland to attend industry events focused on sustainable and responsible practice, visit jewellers' workplaces, and meet with industry professionals. UK fieldwork also included visits to jewellery workshops, casting houses, and refiners located beyond the jewellery districts to discuss developments in the certification programmes and their impact, as well as observe the material implications of their implementation. I

https://doi.org/10.1016/j.envsci.2022.02.016

Received 31 August 2021; Received in revised form 31 January 2022; Accepted 14 February 2022 Available online 24 February 2022

1462-9011/© 2022 The Author. Published by Elsevier Ltd. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

E-mail address: peter.oakley@rca.ac.uk.

also attended a range of the industry-facing and press-focused events delivered by the organisations managing the certification programmes, jeweller activist groups and industry bodies and held private meetings with staff working for the certification bodies. The first tranche of fieldwork (2008–2012) was funded by the Arts and Humanities Research Council. After 2012 the research was supported by awards from the RCA's Research Development Fund (2014; 2018–2019) and grants from UKRI's Global Challenges Research Fund (2018) and Strategic Priorities Fund (2021–2022).

As events where jewellery professionals publicly reasserted their status in, and allegiance to, the industry and reconfirmed or established new professional relationships, trade shows were a unique opportunity to gather information about industry's structure and dynamics and the (sometimes shifting) positions of its key players regarding ethical gold. In addition, they were one of the few places where industry professionals and campaigners came into direct contact on relatively equal terms. Observing or taking part in these interactions became a key aspect of the research. As sites of intersection of the two groups' belief systems, over the course of the decade ethical gold events at trade shows came to hold a high level of uncertainty for their participants. This contrasted with the activists' carefully choreographed and tightly controlled campaign events and the industry associations' exclusive and hierarchical meetings.

The research methods employed in the research were ethnographic participant-observation, field observations and textual analysis. The ethnographic research involved 'studying up' i.e. research amongst elites (Nader, 1969; Gusterson, 1997). The refining, manufacturing, and retailing stages of gold product supply chains are populated by overlapping and interacting elites. These include a professional-technical elite of gold metallurgists and assayers, an economic elite of high-net-worth individuals, and a cultural elite of taste arbiters. My background as a professional analytical chemist, augmented by training as a precious metal assayer in 2009 during my initial fieldwork, helped me position myself as a researcher within these exclusive social networks.

Most of the fieldwork was conducted prior to the COVID pandemic in pre-lockdown environments. Since early 2020 I have joined activist groups' Zoom meeting sessions and attended NGOs' and industry associations' online presentations on ethical gold and certification. Whilst these have enabled me to keep abreast of recent developments and maintain pre-existing contacts, it is evident they do not have the same value as attending the face-to-face events. As places where industry leaders attempted to reassert what they saw as the jewellery and watch trade's values, the shows became a social space where these could be contested. But jewellery and watch industry trade shows have been in overall decline over the past decade due to a range of factors, including dropping audience numbers and disputes over management practices (see Foulkes, 2019; Graff, 2018; Miller, 2020). Their problems have been exacerbated by two years of cancellations due to the pandemic (DeMarco, 2020). The future of some events, including IJL and the Baselworld watch show held in Switzerland, is now uncertain. Their loss would have a significant impact on how research on these industries might be conducted.

#### 3. Considering terms

This article revolves around three key terms: ASGM, supply chains, and ethical gold. To help frame this discussion, this section will provide a brief outline of each term, unpacking aspects that are key to understanding the subsequent primary material and the focus of the discussion.

#### 3.1. Artisanal and small-scale gold mining

Artisanal and Small-scale Gold Mining (ASGM) and its parent term: artisanal and small-scale mining (ASM), were first coined and

popularised in the international development literature. A full description of the development of ASM and ASGM as concepts are covered in greater depth by many other papers published in EXIS and elsewhere; this outline will only touch on the points most relevant to the current argument.

Early development interventions were undertaken in the ASM sphere with the expectation that through a combination of financial aid, technical advice, and entrepreneurism, ASM practitioners would inevitably embrace more technically advanced practices and ASM would consequently disappear. But the stubborn persistence and consistent expansion of ASM numbers (see Seccatore et al., 2014) has led to a belief in some quarters that ASM can never be globally eradicated due to its economic pull in the absence of alternative livelihoods (Barreto et al., 2018). Consequently, the best response is to sympathetically control ASM through incentivised formalisation (UNITAR and UN Environment, 2018). ASGM is at the forefront of this drive, due to gold's ubiquity, liquidity, and relative ease of extraction (Hilson, 2008; United Nations Environment Program, 2012). Ethical gold certification schemes can be seen as practical attempts to operationalise this approach. In recent vears ASGM has also received additional attention in the context of the Minamata Convention, due to the widespread use of mercury by artisanal miners (Clifford, 2014; Hilson et al., 2018; Spiegel et al., 2015; United Nations Environment Program, 2013, United Nations Environment Programme, 2017). Though ethical gold certification programmes are constructed with the intention of coming to an accommodation with ASGM communities, their advocates have to contend with a much less sympathetic viewpoint that treats ASM as a dysfunctional and destructive force that should be eradicated rather than stabilised.

#### 3.2. Supply chains

The notion that the transfer of materials from the point of extraction or harvesting to the producers of physical goods and on to consumers in the form of end products should be conceptualised as a chain is embedded in business literature and the public consciousness. This is exemplified in a managerial specialism, '*supply chain management* (SCM), a role that employs the de facto standard model and diagnostic tool 'Supply Chain Operations Reference' (SCOR). Both SCM and SCOR were developed over the last two decades of the twentieth century. Both were constructed within, and uncritically reproduce, a neo-liberal approach to trading, equating efficiency and sustainability with profitability (see Brun and Karaosman, 2020; (Handfield, 1999).

More generalist uses of the term inadvertently promote an overly simplified version of commodity flows. Unlike physical chains, commodity systems typically have multiple points of entry and a range of convergent and divergent potential routes leading to a variety of often diverse end points. These all compete and wax or wane over time, depending on the aggregate impact of external forces. Indeed, the concept of the commodity state requires this multiplicity: the construction of any commodity's exchange value is built on its multiple potential end-uses (see Kopytoff, 1986). Conceptualising such commodity movements as a complex river drainage system is perhaps a more productive way of understanding how commodity movements occur in practice, even if this makes for a less tidy metaphor. In addition, unlike physical chains where each link is of a similar size and form, in supply chains there are obvious and often grotesque dissimilarities between the economic and political clout of the constituent organisations or individuals.

#### 3.3. Ethical gold

As with the trading of most other classical commodities, by the beginning of the twenty-first century the global gold market was operating according to neo-liberal principles. This was, in part, a long-term consequence of Western Central Banks' determination to exclude gold from the global monetary system, following the rise of fiat currencies in the early twentieth century that followed the collapse of the international Gold Standard (see Bryan, 2010; Bernstein, 2004; Eichengreen, 1985). The dominant gold trading market is run by the London Bullion Market Association (LBMA), with the price, called the daily fix or spot price, determined by the LBMA's small number of direct market participants through a process of competitive bidding (Capano, 2008; LBMA, 2021). Though the focus for global physical gold trading is based in London, since the 1970 s the leading country for gold refining has been Switzerland (Green, 1985; O'Callaghan, 1993). It is the sheer size of the LBMA's daily trades, which amount to hundreds of tonnes of gold, that determines the price of all other commercial gold trades made that day across the world. The LBMA daily fix even influences informal goldfield purchases across the developing world, though the local buyers often factor in a high discount in their favour.

It is the perceived unfairness of this existing free market system that lay behind the notion of 'ethical gold', which is linked to a wider desire for social justice for the developing world's population. In an ethical gold certification programme, subsistence miners are paid a guaranteed price for their output, closely linked to the spot price, making them independent of the local gold traders. In addition, such schemes typically include a premium on purchases that are paid to, and intended to improve the wellbeing of, the mining community. In return, the miners agree to adhere to defined legal, safe, and socially and environmentally responsible mining practices, as well as jointly determining how the premium will be spent (Fairtrade Foundation, 2012; Maldar, 2011; Oakley, 2015a). How the fair price is calculated, how big the premium should be, and who should be eligible to benefit from the premiums, as well as who should police all the participants and through what mechanisms and regulations, are all issues that the architects of any such initiatives must resolve.

The term 'ethical gold' is a pithy epithet that glosses a complicated set of socially and politically inflected set of economic arrangements. These are underpinned by a substructure of expectations and beliefs about social justice and subsistence miners that has imposed the notion of the deserving and exploited poor on individuals and communities labouring in the developing world. As such, the principle of ethical gold certification can be considered a neo-colonial mechanism of control, as it only extends its rights and benefits to those in the developing world deemed worthy enough according to criteria decided upon by Western societies that are policed by representatives from those societies (see Ardant, 1965; Nkrumah, 1974; Sartre, 2001). Unsurprisingly, this is not the lens ethical gold certification advocates use to promote such schemes to potential jewellery licensees or gold jewellery consumers in Western nations. But tensions between ASGM communities' rights to self-determination and the external imposition of regulations by certification bodies located in the West were a consistent feature in the history of the first ethical gold certification programme.

The campaigners' adoption of the adjective 'ethical' has also had an implied if unanticipated aspect: all gold produced under different circumstances to the ones approved by the scheme have come to be considered and treated as unethical. This newly constructed duality was to have far reaching, and sometimes counterproductive, impacts.

## 4. Implementing a fair trade vision: fairtrade and fairmined Gold 2011–2013

FT/FM Gold was the outcome of a partnership agreement struck in 2009 between the Fairtrade movement, advocated for by the Fairtrade Foundation (the UK & Ireland's Fairtrade promotional body) and the Alliance for Responsible Mining (ARM), a grassroots organisation begun in Latin America in 2004. In pressing the Fairtrade Licensing Organisation (FLO) to construct a Fairtrade Gold Standard, the Foundation was taking the Fairtrade movement into unknown territory. At that point, Fairtrade products were all based on agricultural or forestry commodities, each with a relatively simple and stable value accumulation structure (Bowes, 2011). The proposal was to adapt existing certification

programmes developed for these materials, in particular cotton, to create one for gold (Oakley, 2015a; Valerio, 2013).

Equally ground-breaking was the arrangement itself. Prior to embarking on gold certification, Fairtrade had never entered such a partnership to construct a commodity standard before. The benefits were evident. ARM had already developed the criteria for a workable small-scale gold mining standard. This material informed the FLO criteria and substantially speeded up its development process (see ARM, 2021; Echavarria, 2008). In addition, ARM could provide technical knowledge on mining techniques and technology. Lastly, as ARM predominantly consisted of representatives from mining communities, the partnership arrangement could be used to leverage the first applications for producer licenses from these same communities. However, the underlying asymmetry in the relationship between Fairtrade and ARM regarding each organisations' respective role and status was never really addressed.

The Fairtrade and Fairmined Gold Standard, named to flag the contributions of both parties, was built on Fair Trade principles and Fairtrade's established certification structure. This consisted of producer (type A) and buyer (type B) licences, which delineated the market for the Fairtrade product. All license holders had to submit to and pay for regular audits, conducted by FloCert, the certification arm of the Fairtrade movement (Fairtrade 2012, 2021).

The FT/FM Gold programme followed Fairtrade's long-term strategy of implementing social justice through the application of business principles (see Bowes, 2011; Lamb, 2008). However, despite this approach and the Foundation's claim to be accepting of commercial imperatives, at the same time Fairtrade made sweeping moral judgements about the identities and behaviours of the actors in the existing system of gold mining, trading, and processing. Artisanal miners were presented in the promotional literature and at events as 'the deserving poor', universally hardworking and honest. In contrast, all local goldfield gold buyers and all the traders located along the subsequent stages in the supply chain were described as exploitative middlemen (for examples see Fairtrade Foundation, 2012; Frampton, 2017; Maldar, 2011; Valerio, 2013). This simplistic binary opposition closely followed Fairtrade's previous publicity campaigns for other certified commodities in both tone and focus. But in the case of FT/FM Gold, some activists also felt it acceptable to extend the same moral judgement to every individual, organisation and professional association connected to the jewellery and watch trade. This was despite these being the very people Fairtrade expected to sign up as licensees. The first campaigners operating in this field had threatened to publicise such claims to put pressure on luxury jewellers to improve their practices. As a bargaining tactic this led to some early successes (Bloomfield, 2017). But the actual broadcasting of these confrontational narratives had the opposite effect. In response most members of the mainstream UK jewellery industry closed ranks and became openly antagonistic towards the FT/FM Gold representatives and dismissive of the FT/FM Gold scheme.

Though the launch trumpeted FT/FM Gold's potential future impact, this relied on an incremental increase in buyer licensees and a consistent and rising supply of FT/FM Gold to match the growing licensee demand. Much was made of the fact that twenty jewellers were already licensees (see Bishop, 2011; Taylor, 2011). By far the highest profile of these was Stephen Webster, creative director of his eponymous company and of Garrards, the Bond Street jeweller (Clarke, 2011; Webster, 2015). But the rest of the licensees were sole traders or small- or medium-sized enterprises (SMEs) with a small workforce, few assets, and relatively low financial reserves.

The months following the launch proved to be less auspicious. For the rest of the year no physical FT/FM gold was available in the UK, due to issues with a Bolivian export licence. This meant the licensee jewellers could not capitalise on the publicity that had been generated. Fairtrade did not publicly acknowledge this setback, which severely compromised the licensees over the important selling period in the run-up to Christmas, though it became widely known across the trade. Having publicly declared their support for ethical gold and a belief in its superiority, the licensees had to choose between having no product to sell or being reduced to using 'unethical gold' bought on the open market.

The following year the supply/demand imbalance tipped the other way. The miners found they had no buyers for the FT/FM gold. In contrast to the spike in late summer and early autumn that is linked pre-Christmas manufacturing, spring and early summer is the lowest point of demand in the UK jewellery industry's annual cycle. Due to immediate cash flow needs, the miners had to sell their output on the open market, foregoing the premium payments they would have received from licensees in the FT/FM Gold programme.

Tensions between the two ends of the supply chain joined by the certification standard were exacerbated by other events. In May 2012 the Responsible Jewellery Council (RJC), an industry association formed to develop a more ethical approach in the industry, announced a proposal to recognise FT/FM Gold producer licenses under the RJC's Recognised Responsible Mining Standard. If this was passed, FT/FM producers would then be able to sell their gold on to RJC's Chain-of-Custody Standard licensees. This recognition, whilst benefitting the miners, would create additional competition for buyers of FT/FM gold. The proposal elicited an open letter, organised by ethical gold campaigners in the US, that decried ARMs willingness to collaborate with the RJC, an association the campaigners denounced as primarily a means of industry greenwashing (IndustriALL et al., 2013). Despite this attempt at derailment, formal recognition was confirmed by the RJC and ARM in an October press release (ARM and RJC announce their collaboration, 2011).

In his published response to the campaigners' open letter, ARM's spokesperson felt the need to reiterate the miners' autonomy:

It is important to understand that to whom and where to sell gold always remains in the hands of miners. The recognition by RJC of the producer section (part A) of the Fairtrade and Fairmined standard will provide miners with increased choices.

#### Eduardo Martino, July (2012).

This statement spoke to the Fairtrade movement's key claim that Fairtrade operated under business principles. Despite the promoters' implicit claims and many licensees' belief in a special bond between the certified producers and buyers, support for the FT/FM gold programme did not override open market principles; any of the participants were free to seek any other avenues for buying or selling their products as they saw fit. For the miners, the RJC's validation was an opportunity to gain wider market options that could resolve the issue of being left with a glut of certified material they could not sell within the existing certification system. For the jewellers, it meant the appearance of further competition for what was already a difficult-to-source raw material at the times they really needed it.

The tensions that arose over 'trading with the enemy' came on top of another disagreement over the principles of auditing. Fairtrade applies a 'track and trace' model, where each batch of Fairtrade certified material is monitored as a discrete entity during its journey through the trading system. This approach, finessed through the development of multiple agricultural certification programmes, provides Fairtrade licensees and consumers with the assurance they desire that the commodity they are handling has been produced according to Fairtrade criteria. However, the gold industry has traditionally operated according to an alternative model called 'mass balancing'. Mass balancing responds to the specificities of processing a material of high value, as it allows for the gold trapped within ore processing and refining systems to be acknowledged and accounted for. the adoption of mass balancing also significantly reduces the producers' auditing burden. The dispute arose over ARM's proposal that localised mass balancing be incorporated into the early stages of gold processing. This proposal was claimed by many of the UK licensees as an attempt to fundamentally compromise FT/FM certification as it would potentially involve the mixing of closely tracked and untracked material (Oakley, 2015a, 2019).

between Fairtrade and ARM was to be dissolved.

#### 5. Fairtrade gold in the UK 2013-2019

The demise of the FT/FM partnership damaged Fairtrade's relationship with the mining communities that held the FT/FM producer licenses. However, Fairtrade retained three elements that allowed it to start a stand-alone successor programme. Firstly, it had a core group of committed and experienced licensee jewellers. As Marc Choyt noted in (2018), following the split the FT/FM licensee jewellers in the UK remained overwhelmingly loyal to Fairtrade, the partner they had most contact with. Secondly, it had an infrastructure of intermediate companies that also held licenses, such as the gold importer, supplier and jewellery retailer CRED, as well as casting houses that the licensee jewellers could patronise with orders. Thirdly, it had strong UK consumer recognition of, and widespread support for, the Fairtrade brand.

CRED's founder and owner, Greg Valerio, had always maintained that wedding rings would be the ideal vehicle for Fairtrade gold due to their symbolic associations (e.g. Valerio, 2011, 2013). In 2013, Brown and Newirth, the UK's largest gold wedding ring manufacturer, and one of Fairtrade's newer licensees, launched a range of Fairtrade gold wedding rings, developed and promoted in partnership with CRED (Retail Jeweller, 2013; Professional Jeweller, 2014a, 2014b). This heightened emphasis on the wedding market was also evident in Fairtrade's 'I Do' promotional campaign, launched in 2015 to support the new scheme (PA Media, 2021; Bishop, 2016; Hailes, 2016; Smithers, 2015). I Do followed Fairtrade's established practice of having invited licensee miners speak at campaigner events and its exploitation of Fairtrade's committed campaigner base:

Fairtrade's campaigner network will be asked to reach out to jewellers on their high street to ask them to sell Fairtrade gold. They will also promote the buying of Fairtrade gold jewellery in their community as a way for everyone, no matter who they are, to use the power of their purchase to make a difference to lives of miners.

#### Hailes, August 2016.

To broaden its gold supply, Fairtrade started to explore East Africa in search of new licensee producers. In 2012 it secured a grant from Comic Relief to support miner certification initiatives in Kenya, Tanzania, and Uganda. However, though around 400 kg of Fairtrade gold moved through the system during 2017 (Butler, 2017), this almost all came from the Peruvian mines that had initially held FT/FM licences and were also supplying ARM's Fairmined programme (Fairtrade Foundation, 2016).

The amount of Fairtrade gold destined for UK jewellers was far more modest. Though other companies were starting to build their own supply chains (Professional Jeweller, 2014a, 2014b), CRED was still the largest importer. Between 2012 and 2016 CRED shipped between 10 and 20 kg per year. In 2017 this rose to 28 kg and the first shipment of African Fairtrade Gold arrived (Catchpole, 2018). At the time it was predicted that the African licensees would contribute 8 kg of gold per year over following three years (Fairtrade Foundation, 2017; Frampton, 2017). But in late 2019 CRED went into administration. CRED's new CEO blamed the company's collapse on poor trading conditions and increasing difficulties purchasing sufficient Fairtrade gold (Faulkner, 2019). This was not just the loss of a key link in the supply chain. Though Valerio had sold the company in 2013, as the leading established importer of Fairtrade gold CRED had remained the lynchpin for Fairtrade Gold in the UK (Frampton, 2017).

Despite these setbacks, Fairtrade's licensee jewellers have remained loyal to Fair Trade ideals and the Fairtrade Gold scheme. There are currently 33 licensee jewellers listed on Fairtrade's website and many were members of the original 20 who signed up in 2011 (Fairtrade Foundation, 2021).

In April 2013 it was publicly announced that the FT/FM partnership

#### 6. Fairmined gold in Switzerland 2013-2019

Following the dissolution of the partnership, Fairtrade retained a small customer base amongst jewellers in the UK. But its most substantial successes came from new partnerships, most of whom were based in Switzerland.

The highest profile of these has been with the Swiss jeweller and watchmaker Chopard. In 2014 Chopard launched the L.U.C. Tourbillon Qualité Fleurier Fairmined watch, produced in a limited edition of 25 timepieces and retailing at \$144,570. Uniquely for the time, the watch's rose gold case was made of Fairmined gold. This was heavily promoted in promotional literature and was a feature picked up by the industry media (e.g. Davies, 2015; Doak, 2014; van Halem, 2014; The Jewellery Editor, 2014). Chopard had taken an enormous risk in producing a watch that sat squarely within the crowded and highly competitive elite luxury watch category yet relied heavily on ethical provenance of its gold to gain market share. Since the rebirth of the luxury watch sector in the 1990 s, elite watches have been promoted based on their manufacturer's heritage and the strength of the timekeeping technology (Donzé, 2015, 2015b).

The L.U.C Tourbillon Fairmined proved to be only the first in a sequence of models Chopard were to make from Fairmined gold. The following year they released the more aspirational luxury L.U.C XPS, priced at \$18,900 in an edition of 250 pieces (see also Liu, 2015) and in 2017 the L.U.C XPS Twist Qualité Fleurier Fairmined, again retailing at the aspirational luxury price point of \$21,400 (Markl, 2017). Two years later it returned to the elite watch category with the Chopard L.U.C Flying T Twin, priced at \$118,500 and limited to 50 pieces (Besler, 2019). By this point Chopard had announced that all its future watch and jewellery production would be using ethically sourced gold.

Chopard had been promoting ethical gold sourcing since 2010 through its Green Carpet Challenge range of jewellery, presented each year at Cannes (Liu, 2015). But the commitment to manufacture the Fairmined watch models was of a different order. To conform to the Fairmined certification regulations, production had to be undertaken entirely separately from all other case manufacturing using gold, entailing a temporary shutdown of conventional production at their Geneva factory. Consequently, the L.U.C. Tourbillon Qualité Fleurier Fairmined functioned as a proof-of-concept not just for market interest but also in terms of production capability. Its success helped consolidate Chopard's market positioning as a responsible luxury brand (Doak, 2014; Liu, 2015).

ARM's Swiss connections were also developing along other fronts. In 2013 a small but influential group of companies: the gold refiners Argor-Heraeus, Metalor and PAMP, the banker Impact Finance, the watchmaker A. Favre & Fils and jeweller Cartier, came together to form the Swiss Better Gold Association (Swiss Better Gold Association, 2021a). The SBGA partnered with the Swiss State Secretariat for Economic Affairs (SECO) to create the Better Gold Initiative (BGI). This public-private partnership started providing support for ASGM communities who wanted to improve their technical, organisational, social, and environmental practices (Swiss Better Gold Association, 2021a). From 2013–2016 the BGI ran a series of pilot implementation activities in Peruvian mines linked to ARM, resulting in the export of 1500 kg of certified Fairmined gold to Switzerland.

The second phase (2017–2020) involved a more ambitious programme, encompassing Colombia and Bolivia as well as Peru. The initiative's remit was also extended to cover international dialogue on the formalisation of the ASGM sector and the Swiss gold industry's requirements (Swiss Confederation, 2019).

Over the first five years the SBGA took on a few new members (Chopard joined in 2017), but the number associating significantly accelerated during 2019 and 2020. By 2021 SBGA's membership included all four of the largest Swiss gold refiners, with a combined production capacity of 2900 tonnes (Ruysschaet, 2015), as well as a strong showing of Swiss watch manufacturers and leading swiss

jewellers. This expansion was matched by the extent of their collaboration with SECO. 2021 saw the start of the third phase, re-branded as the Swiss Better Gold Initiative (SBGI). SECO contributed CHF4600,000 (almost seven million dollars) alongside an assumed industry contribution of CHF 11,200,000 (just over twelve million dollars) (Swiss Confederation, 2021). The aims for the third phase are to extend ASGM certification into new jurisdictions, improve framework conditions for responsible ASM, develop collaboration and cooperation with international partners, and strengthen institutionalized multi-stakeholder dialogue (Swiss Better Gold Association, 2021b).

The SBGI does not operate its own ASGM certification scheme, instead relying on the Fairtrade Gold and Fairmined Gold programmes and the RJC's certification schemes for medium and large gold operations (Better Gold Initiative, 2021). The SBGI's significance in the ethical gold sphere lies in offering ASGM communities direct access to the Swiss trading market at advantageous selling prices and its ability underwrite the entirety of a certified ASGM community's production. As the SBGI also provides funding for environmental and social investment projects (financed by a 1% supplement on the gold purchases collected and managed by the SBGI), participating ASGM communities benefit directly through the premiums and guaranteed buyers and indirectly through associated international aid projects.

One of the biggest beneficiaries of the BGI's investment to date has been the SOTRAMI mine and its surrounding villages, which has received \$1.2 million to install a water pipeline and pumping system, \$124,000 to repair gabion walls protecting the Santa Rosa ravine and holding mine tailings, and \$86,000 to install electrical power to the mining town of Santa Filomena.

The ASGM communities in the Chocó region of Colombia have also had their fortunes revived through the BGI. AGSM operations in the Chocó typically mine alluvial gold deposits and manual panning is the usual extraction technique (Tubb, 2020). This, together with the local communities' ownership of the region's mineral rights, makes the region one of the most viable for international development interventions around ASGM. The Colombian Oro Verde initiative was Valerio's original inspiration for engagement with ASGM and the Oro Verde miners were seen as potential participants in the FT/FM Gold programme (Valerio, 2013). But a dispute within the US Fairtrade movement led to its succession from FLO and FloCert which meant FT/FM Gold could not be certified in the US, Oro Verde's strongest market. In response, Oro Verde decided to try and sell their gold direct to jewellers with their own set premium of 45%, a misjudgement that resulted in the organisation's collapse and liquidation (Oakley, 2015; Frampton, 2017). In 2019 Chopard and the Swiss refiner Valcambi instigated a new value chain for Chocó gold miners, paving the way for them to certify as responsible ASGM producers (Anexpo, 2019).

In 2019 Duush Mandal, an ASGM community NGO in Mongolia, received Fairmined accreditation. Duush Mandal had been supported by the Sustainable Artisanal Mining (SAM) project, funded through the Swiss development agency in Mongolia. ARM have also been active in trying to extend the reach of responsible mining further by tackling the biggest barrier: the certification process. This is being attempted through development of the Code of Risk mitigation for Artisanal and small-scale miners engaging in Formal Trade (CRAFT) programme. Launched in 2018 and revised in 2020, CRAFT is an open-source tool for ASM miners who want to make their practice more responsible, with the intention of preparing them to apply for certification (ARM/Resolve, 2021).

#### 7. Lessons learnt?

The narrative presented above demonstrates the difficulties involved in constructing a robust certification programme that provides meaningful long-term benefits for ASGM communities whilst enabling jewellers to source responsibly mined gold at a reasonable price. It also illustrates the obstacles faced by ethical sourcing programmes that attempt to create a bond between ASGM producers based in the Global South and jewellers running small companies in the Global North. Establishing a stable equilibrium between supply and demand with low volumes of gold is a fraught task.

The structural imbalance in the Fairtrade-ARM partnership in terms of disregarding the ASGM communities' expectations, authority, and autonomy fatally compromised the FT/FM gold partnership. ARM was brought in as a collaborator (the first arrangement of this type), but the same miners were expected to conform to Fairtrade's depictions of workers in the developing world, which employed unhelpful and even counterproductive stereotypes.

This intersected with another problematic aspect of the Fairtrade certification programme: the assumption on the part of the licensee jewellers that they had a personal connection with the ASGM producers. The belief there would be an immense debt of gratitude amongst the miners was fostered by Fairtrade's charismatic campaigners, carefully authored promotional texts, emotive photographs and what amounted to performances by chaperoned ASGM miners at staged events (for examples, see (Fairtrade Foundation, 2012; Fairtrade Foundation, 2017) (see also Luning and de Theije, 2014). At the time of FT/FM gold's launch I felt the staged photographs of grateful miners and orchestrated event appearances, with the inevitable photo opportunity for the press, held uncomfortable echoes of nineteenth century World's Fair presentations of tribal peoples (Corbey, 1993). Fairtrade' close control of the representatives at all such events meant direct engagement proved impossible. However, indications of the miners' lack of understanding of the precarious financial and market position of the SME licensee jewellers occasionally surfaced in interviews with third parties held around the time of the launch (e.g. BBC Radio 5, 2011).

The underlying problem was that though the original FT/FM certification scheme's promoters expertly constructed an illusion of a personal direct connection between FT/FM licensees, the structure of the certification programme never eliminated the disruptive potential of the open market. Despite assuming a dominant position in the partnership, Fairtrade never had any intention of engineering a balance between supply and demand. Their 'solution' was to try and encourage as many additional licensees as possible to join, in the hope that the system would somehow reach a critical mass of stability (see Professional Jeweller, 2011). This strategy was pursued despite Fairtrade's and ARM's experiences of how difficult it was for ASGM mining communities to coalesce around meeting the challenges of certification and the length of time it took to get licensed once they did.

The consequences of neglecting this imbalance became apparent when CRED could no longer compete with the Swiss buyers for gold from the mines that held licenses for both programmes. By 2019 the value of the Fairtrade premiums, by then reduced to £ 2000 per kg to make the scheme viable for UK SME jewellers, fell far short of the Fairmined premium of £ 4000 per kg, which the BGI effectively guaranteed to the Peruvian and Bolivian miners through to its promise to underwrite their total production.

For the ASGM mining communities who helped develop the initial FT/FM standard and then put themselves through the FT/FM certification process, almost twenty years of hard work have finally bourne fruit through the support of the BGI. They currently have buyers prepared to soak up their entire gold output at a guaranteed robust price and with the Fairmined premium. Through membership of ARM, the community also has a voice in the management of the Fairmined certification standard that underpins this arrangement. It is perhaps gratifying to note that the current Fairmined Standard still bears a clear relationship to the 'Golden Rules' for responsible ASGM that were proposed by these same communities back in 2006 (see Echavarria, 2008) and that these are being pushed forwards into the CRAFT initiative.

#### 8. Back to the beginning

In conclusion, we can now return to the questions posed in the

introduction:

## Why have ethical gold certification programmes survived but apparently remained peripheral to gold jewellery manufacturing in the UK?

Fairtrade Gold's survival has been down to the commitment and tenacity of its licensee jewellers, who have remained loyal to the ideals of pure gold and the programme throughout the decade. The practical issues that constrained the FT/FM Gold programme are evident, but coming to conclusions about Fairtrade Gold's lack of expansion during the middle of the decade is more difficult. On the industry side key factors were the previous alienation of most of the UK jewellery trade through the toxicity of the original FT/FM campaign, and a continuing uncertainty around the supply of physical Fairtrade Gold, both of which made potential licensees less keen to engage. Fairtrade displayed limited interest in actively seeking or supporting new ASGM entrants that could help drive expansion. Excluding the FT/FM legacy licensees, the combined output of Fairtrade producer licensees only amounts to 8 kg per year. The lack of new Fairtrade producers meant Fairtrade gold importers had no alternatives to turn to when the ARM licensees chose to prioritise their own scheme over Fairtrade's. This exposes an underlying issue of certification programmes: to what extent should a scheme's managers be responsible for nurturing, as opposed to just overseeing, the supply chain that their certification programme brings into being? Though it may be ideologically convenient to assume a position of complete externality, non-intervention can prove disastrous in practice.

One should also note the lack of enthusiasm for Fairtrade Gold amongst mainstream UK consumers who, as the sales figures showed, proved stubbornly content to buy standard (unethical?) gold products, despite Fairtrade's market surveys that prophesied a groundswell of interest in ethical gold (Fairtrade 2015). Fairtrade's marketing decision to focus their promotion exclusively on the wedding ring sector never made any significant headway. It is worth noting it was a niche discretionary purchase - a luxury watch aimed squarely at the high-net-worth consumer - that turned out to be the breakthrough commercial ethical gold product.

Fairmined gold is even more niche in the UK and the Fairmined scheme would be unviable if it was reliant on UK manufacturer licensees. As noted earlier, UK jewellers allied to the FT/FM Gold programme elected to support Fairtrade's successor scheme. But as the Fairmined programme is now predominantly supported by refiners and manufacturers located elsewhere, it is no longer dependent on the UK jewellery trade.

Have these ethical gold programmes had any significant impacts to date on the overall structure of global gold supply chains?

Due to some unexpected twists of fate, Fairmined gold is now embedded in the RJC's international chain-of-custody system and is being purchased by four of the world's largest gold refiners through the SBGI. Chopard's successes have proved the viability of ethical gold as a selling point in the luxury goods sector and the SBGA has drawn in many high-end watchmakers and luxury jewellers. The cumulative exports of Fairmined gold have now reached tonnages, rather than kilogrammes.

However, it could be proposed that ethical gold programmes have been beneficiaries of wider social pressures rather than generating direct impacts. In particular, the publication of the OECD guidance on mining due diligence (OECD, 2016) and passing of associated non-conflict mineral legislation in the US and EU (which triggered corresponding legislation in Switzerland) provided multiple openings for ASGM-focused certification schemes. This growing requirement to demonstrate due diligence in gold sourcing provides a need that ethical gold schemes are well equipped to answer.

Perhaps, the main impact of ethical gold programmes has been more subtle: their capacity to critique and disrupt conventions of practice by stimulating debate and providing a focus for dissent. For all its inherent flaws, the ill-fated FT/FM gold programme acted as a catalyst in that it explored the consequences of alternatives and provided a bridgehead for ARM to move into international markets. The strength of the current Fairtrade Gold programme is a consequence of the lessons ARM learnt through participating in the FT/FM gold partnership and its involvement in the development and management of the first certification programme.

Have any of the artisanal and small-scale gold miners that are the supposed beneficiaries gained anything from the existence of these schemes?

Currently the benefits are restricted to the mining communities in that formed the Alliance for Responsible Mining, together with the Fairmined licensees in Mongolia, Fairtrade licensees in Africa, and the recently announced licensees in Brazil. Though definable achievements, these are a drop in the ocean in the context of global ASGM. Fairtrade stated in 2015 there were around 16 million artisanal and small-scale gold miners operating across 70 countries (Fairtrade Foundation, 2015). Despite claims made at the 2011 launch that FT/FM gold held the potential to support this global workforce, this was never realised. There is a serious underlying problem with certification schemes as currently construed: miners can only start to benefit once they have achieved certification. This process takes cohesion, time, resources, and just as importantly, a social context that aligns with the demands of the scheme's criteria. Most ASGM operations do not have all of these; some have none. The lack of sufficient support for the majority of those wanting to take the journey towards certification is currently the missing piece of the puzzle. That ARM has identified certification as the primary obstacle to expansion and created the CRAFT programme to overcome this barrier is therefore a highly significant development.

#### Funding

This work was supported by the Arts and Humanities Research Council through the 2008 Doctoral Award Scheme; United Kingdom Research and Innovation's Global Challenges Research Fund Institutional QR Allocation to the Royal College of Art ; United Kingdom's Research and Innovation's Strategic Priorities Fund Institutional QR Allocation to the Royal College of Art ; and the Royal College of Art's Research Development Fund [PO/RC/97].

#### **Declaration of Competing Interest**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

#### References

- Anexpo, 2019. 'Colombian artisanal gold panners part of international incentive scheme to promote responsible mining'. SBGA (accessed 29/01/2022) (https://www.swiss bettergoldassociation.ch/sites/default/files/2020-04/Press%20Release%20Bareque ros%20-%20lstmina%2C%20El%20Choco%2C%20Colombia%20-%2009.12.2019. pdf).
- Ardant, P., 1965. Le néo-colonialisme: thème, mythe et réalité'. Rev. Fr. De. Sci. Polit. 15–5, pp837–pp855.
- ARM, 2021. 'About the Alliance for Responsible Mining'. ARM (https://www.responsi blemines.org/en/who-we-are/history-2/) (accessed 15/07/2021).
- ARM/Resolve, 2021. 'CRAFT'. ARM (https://www.craftmines.org/en/) (accessed 26/08/2021).
- Barreto, M.L., Schein, P., Hinton, J. & Hruschka, F., 2018. The Impact of Small-Scale Mining Operations on Economies and Livelihoods in Low- to Middle-Income Countries. PACT Global UK and Alliance for Responsible Mining.
- BBC Radio 5, 2011. 'Up All Night: Bolivian Fairtrade Gold Gets Royal Seal of Approval', broadcast on 15 February 2011.
- Bernstein, P.L., 2004. The Power of Gold. New York and Chichester: John Wiley. Besler, C., 2019. 'Chopard's First In-House Flying Tourbillon Is Made With Ethically Mined Gold'. The Robb Report, April 30 2019. (https://robbreport.com/style/watc h-collector/chopards-first-flying-tourbillon-watch-comes-in-a-fairmined-gold-case-2 848109/ (accessed 24/08/2021).
- Better Gold Initiative, 2021. The Responsible Gold Initiative A project of the Swiss Cooperation. BGI. (https://ororesponsable.org/sobre-bgi/acerca/) (accessed 24/08/ 2021).

Bishop, K., 2011. 'Take some responsibility'. Prof. Jewel. 2 (3), 22-26.

Bishop, K., 2016. 'I Do' campaign hits the road to promote Fairtrade gold'. Retail Jeweller, 30 September 2016. (https://www.retail-jeweller.com/news-and-insight /i-do-campaign-hits-the-road-to-promote-fairtrade-gold-30–09-2016/) (accessed 23/08/2021).

- Bloomfield, M.J., 2017. Dirty Gold: How Activism Transformed the Jewelry Industry. MIT Press, Cambridge, MT.
- Bowes, J., 2011. The Fair Trade Revolution. Pluto, London, pp. 125-139.
- Brun, A., Karaosman, H., 2020. 'Luxury Supply Chain Management'. Pierre-Yves Donzé, Véronique Pouillard, and Joanne Roberts. The Oxford Handbook of Luxury Business. Oxford University Press.
- Bryan, S., 2010. The Gold Standard at the Turn of the Twentieth Century. Columbia University Press, New York.
- Butler, S., 2017. 'Comic Relief and Fairtrade back ethical gold mining in east Africa'. The Guardian, Sunday 1 Oct 2017. (https://www.theguardian.com/business/2017/oct/ 01/comic-relief-and-fairtrade-back-ethical-gold-mining-in-east-africa) accessed (23/ 08/2021).
- Capano, S., 2008. A Guide to the London Precious Metals Markets. London: London Bullion Market Association and the London Platinum and Palladium Market.
- Catchpole, L., 2018. 'Cred Jewellery imports biggest ever Fairtrade gold bar'. Jewellery Focus Tuesday 3 April 2018. (https://www.jewelleryfocus.co.uk/22368-cred-jewelle ry-imports-biggest-ever-fairtrade-gold-bar/ (accessed 27/08/2021).
- Choyt, M., 2018. Fairtrade/Fairmined Gold In The US/UK. 18 Sept 2018. (https://www.reflectivejewelry.com/news/ethical-jewelry-expose-fairtrade-fairmined-gold-in-us -uk/ (accessed 26/08/2021).
- Clarke, J., 2011. 'Fairtrade gold to protect miners'. The Independent. Mon 14 February 2011. (https://www.independent.co.uk/news/uk/home-news/fairtrade-gold-prot ect-miners-2213874.html) (accessed 25/08/2021).
- Clifford, M., 2014. 'Future strategies for tackling mercury pollution in the artisanal gold mining sector: making the Minamata convention work'. Futures 62, 106–112.
- Corbey, R., 1993. 'Ethnographic showcases, 1870-1930'. Cult. Anthropol. 8 (3), 338-369.
- Davies, A., 2015. 'Escapement Watch Review: The Chopard LUC Tourbillon QF Fairmined'. Watchtime, 15 January 2015. (https://www.watchtime.com/blog/e scapement-watch-review-the-chopard-luc-tourbillon-qf-fairmined/) (accessed 24/ 08/2021).
- DeMarco, A., 2020. 3 Jewelry Shows That Are Surviving The Coronavirus Pandemic. Forbes, Sept 1, 2020. (https://www.forbes.com/sites/anthonydemarco/2020/09 /01/3-jewelry-shows-that-are-surviving-the-coronavirus-pandemic/?sh=2e8aa6fe 71ed) (accessed 30/01/2022).
- Doak, A., 2014. 'Chopard wants to start a revolution in Colombia'. FT Spec. Rep.: Watch. Jewel. 6 (2014), p8.
- Donzé, P., 2015. History of the Swiss Watch Industry: from Jacques David to Nicolas Hayek. Peter Lang, Bern.
- Echavarria, C., 2008. The Golden Vein: A Guide to Responsible Artisanal and Small-Scale Mining. Alliance for Responsible Mining.
- Eichengreen, B., 1985. The Gold Standard in Theory and History. London: Methuen Faimali, C., 2012. The RJC recognition: A step on the way to further inclusion of ASM. Colombia: Alliance for Responsible Mining, (https://www.responsiblemines.org/en/ 2010/06/the-rjc-recognition-a-step-on-the-way-to-further-inclusion-of-asm/) (accessed 23/08/2021).
- Fairtrade Foundation, 2012. Every Piece Tells a Story. Fairtrade, London.
- Fairtrade Foundation, 2015. Fairtrade Gold: an industry briefing. Fairtrade.
- Fairtrade Foundation, 2016. 'Gold Miners get a Fairtrade deal thanks to Comic Relief'. Fairtrade Foundation, 7 March 2016. (https://www.fairtrade.org.uk/media-centre/ne ws/gold-miners-get-a-fairtrade-deal-thanks-to-comic-relief/) (accessed 23/08/ 2021).
- Fairtrade Foundation, 2017. 'Introducing World's first Fairtrade gold from Africa'. *Fairtrade Foundation* (https://www.fairtrade.org.uk/media-centre/news/introducin g-worlds-first-fairtrade-gold-from-africa/) 2017 (accessed 23/8/2021).
- Fairtrade Foundation, 2021. Fairtrade Gold New Licensee Overview. Fairtrade Foundation. (https://www.fairtrade.org.uk/wp-content/uploads/2021/08/Fairtra de-Gold-New-Licensee-Overview-Aug-2021.pdf) (accessed 25/08/2021).
- Faulkner, R., 2019. 'Cred closes its doors'. Retail Jeweller 27 November 2019. (https://www.retail-jeweller.com/news-and-insight/cred-closes-its-doors-27–11-2019/) (accessed 27/11/2019).
- Foulkes, N. 2019. 'Baselworld: moment of truth for revamped watch fair'. Finaincial Times, March 1 2019. (https://www.ft.com/content/64c86738–3e8c-11e9-9499-2 90979c9807a) (accessed 30/01/2022).
- Frampton, A., 2017. 'CRED Jewellery UK: "committed to raising standards". In: Gardetti, Miguel Angel, Girón, María Eugenia (Eds.), Sustainable Luxury and social Entrepreneurship Vol II: more stories from the pioneers. Routledge, London and New York, pp. 33–54.
- Glasmeier, A.K., 2000. Manufacturing Time. Guilford, New York and London.
- Graff, M., 2018. 'What Is the Future of Jewelry Trade Shows?' National Jeweller. May 29, 2018. (https://www.nationaljeweler.com/articles/2740-what-is-the-future -of-jewelry-trade-shows) (accessed 30/01/2022).
- Green, T., 1985. The New World of Gold. George Weidenfield & Nicholson, London. Gusterson, H., 1997. 'Studying up revisited'. PoLAR: Political Leg. Anthropol. Rev. 20
- (1), 114–119.
  Hailes, S., 2016. 'September marks nationwide push to promote Fairtrade gold'. Professional Jeweller, 30 August 2016. (https://www.professionaljeweller.com/se ptember-marks-nationwide-push-to-promote-fairtrade-gold/) (accessed 23/08/
- 2021). Handfield B, Robert, Nichole, E. L., 1999. Introduction to Supply Chain Management. Prentice Hall, Upper Saddle River, NJ.
- Hilson, G., 2008. "Fair trade gold": anticedents, prospects and challenges'. Geoforum 39, 386–400.
- Hilson, G., Zolnikovb, T.R., Ortizc, D.R., Kumahd, 2018. 'Formalizing artisanal gold mining under the Minamata convention: previewing the challenge in Sub-Saharan Africa'. Environ. Sci. Policy 85, 123–131.

#### P. Oakley

- IndustriALL, Construction, Forestry, Mining and Energy Union, United Steelworkers, Earthworks, MiningWatch Canada, 2013. More Shine than Substance: How RJC certification fails to create responsible jewelry.
- Kopytoff, I., 1986. 'The Cultural Biography of Things: commoditization as process'. In: Appadurai, A. (Ed.), The Social Life of Things: Commodities in Cultural Perspective. Cambridge University Press, Cambridge, pp. 64–91.
- Lamb, H., 2008. Fighting the Banana Wars and Other Fairtrade Battles. Rider, London. LBMA, 2021. About the LBMA. (https://www.lbma.org.uk/about-us/about-the-lbma) (accessed 25/08/2021).
- Liu, M., 2015. 'Chopard's Caroline Scheufele on its use of ethically sourced gold', Financial Times, 23 Oct 2015. (https://www.ft.com/content/48548f6a-7332–11e5bdb1-e6e4767162cc). (accessed 21/08/2021).
- Luning, S., de Theije, M., 2014. 'Global gold connections: ethical consumption and the beauty of bonding artisans'. In: Barendreght, B., Jaffe, R. (Eds.), Green Consumption. Bloomsbury, London.
- Maldar, S., 2011. Fairtrade and Fairmined Gold. Fairtrade, London.
- Markl, X., 2017. 'Hands-On Chopard L.U.C XPS Twist Qualité Fleurier Fairmined Original, Luxurious and... Ethical'. Monochrome, 11 April 2017. (https://monochro me-watches.com/chopard-luc-xps-twist-qualite-fleurier-fairmined-review-price/) (accessed 24/08/2021).
- Martino, E., 2012. RJC Recognition of Part A of the Fairtrade and Fairmined Standard. (htt ps://www.responsiblemines.org/en/2010/06/rjc-recognition-of-part-a-of-the-fa irtrade-and-fairmined-standard/), (accessed 23/08/2021).
- Miller, J., 2020. 'Rolex joins Baselworld defections that cast doubt on watch fair's future'. Reuters, April 14 2020. (https://www.reuters.com/article/us-mch-gro up-baselworld-idUSKCN21W24R) accessed (30/01/2022).
- Nader, L., 1969. 'Up the anthropologist: perspectives gained from studying up'. In: Hymes, D. (Ed.), Reinventing Anthropology. Vintage Books, New York, pp. 284–311.
- Nkrumah, K., 1974. Neo-Colonialism The Last Stage of Imperialism. Panaf, Bedford. O'Callaghan, G., 1993. The Structure and Operation of the World Gold Market. International Monetary Fund, Washington, DC.
- Oakley, P., 2015a. 'Introducing Fairtrade and Fairmined Gold: An attempt to reconfigure the social identity of a substance'. In: Drazin, Adam, Kuechler, Susanne (Eds.), The Social Life of Materials. Bloomsbury, pp. 155–174.
- Oakley, P., 2015b. 'Ticking Boxes: (re)constructing the wristwatch as a luxury object'. Lux.: Hist., Cult., Consum. 1 (2).
- Oakley, P., 2019. 'Ethical Gold: Why Manufacturing Methods Matter'. The Goldsmiths' Company Jewellery Materials Congress. The Goldsmiths' Company,, London. OECD, 2016. OECD Due Diligence Guidance for Responsible Supply Chains of Minerals
- from Conflict-Affected and High-Risk Areas: Third Edition. OECD Publishing, Paris.
- PA Media, 2021. Fairtrade Foundation, I Do Campaign. PA Media. (https://pa.media/pr-se rvices/assignments/case-studies/fairtrade-foundation-i-do-campaign/) (accessed 23/08/2021).
- Professional Jeweller, 2014a. 'Vipa launches eco gold from Coodmilla in UK'. Professional Jeweller, 15 Jan 2014. (https://www.professionaljeweller.com/vipa-la unches-eco-gold-from-coodmilla-in-uk/) (accessed 26/08/2021).
- Professional Jeweller, 2014b. 'Forecast: Alan Frampton, CRED Jewellery'. Professional Jeweller, 3 March 2014. (https://www.professionaljeweller.com/2014-forecast-alan -frampton-cred-jewellery/) (accessed 25/08/2021).
  Professional Jeweller, 2011. 'Fairtrade Foundation responds to Dispatches doc'.
- Professional Jeweller, 2011. 'Fairtrade Foundation responds to Dispatches doc'. Professional Jeweller, 29 June 2011. (https://www.professionaljeweller.com/fairt rade-foundation-responds-to-dispatches-doc/) (accesed 25/08/2021).
- Retail Jeweller, 2013. 'Brown & Newirth launches Fairtrade gold collection'. Retail Jeweller, 14 Oct 2013. (https://www.retail-jeweller.com/news-and-insight/brown-n ewirth-launches-fairtrade-gold-collection-14–10-2013/) (accessed 23/08/2021). Ruysschaet, D. (Ed.), 2015. Gold in Switzerland: Certification Schemes as the New Gold
- Sartre, J.-P., 2001. Colonialism and Neocolonialism. Psychology Press, Hove.

Rush, SWISSAID Genève,

- Seccatore, J., Veiga, M., Origliasso, C., Marin, T., De Tomi, G., 2014. 'An estimation of the artisanal small-scale production of gold in the world'. Sci. Total Environ. 496, 662–667.
- Smithers, R., 2015. Campaign aims to raise awareness of Fairtrade gold. The Guardian, 14th January 2015. (https://www.theguardian.com/environment/2015/jan/14/ca mpaign-aims-raise-awareness-fairtrade-gold) (accessed 23/08/ 2021).
- Spiegel, S., Keane, S., Metcalf, S., Veiga, M., 2015. 'Implications of the Minamata Convention on mercury for informal gold mining in Sub-Saharan Africa: from global policy debates to grassroots implementation'. Environ., Dev. Sustain. 17 (4), 765–785.
- Swiss Better Gold Association. 2021b. Swiss Better Gold Initiative Phase III. SBGA. (https://www.swissbettergold.ch/new-at-sbga/swiss-better-gold-initiative-phase-iii) (accessed 25/08/2021).
- Swiss Better Gold Association. 2021a. 'About Us'. SBGA. (https://www.swissbettergold. ch/about-us). (accessed 24/08/2021).
- Swiss Confederation, 2019. Better Gold Initiative for Artisanal and Small-Scale Mining. (https://ororesponsable.org/wp-content/uploads/2019/09/BGI-FACT-SHEET-2019-English.pdf) (accessed 25/08/2021).
- Swiss Confederation, 2021. Swiss Better Gold Initiative. (https://www.swissbettergold. ch/sites/default/files/2021-07/Factsheet%20Swiss%20Better%20Gold% 20Initiative%20Third%20Phase 1.pdf) (accessed 24/08/2021).
- Taylor, R., 2011. The Pioneers: Working with Fairtrade Gold', *Professional Jeweller*, 20 July 2011. (https://www.professionaljeweller.com/the-pioneers-working-with-fairt rade-gold/) (accessed 25/08/2021).
- The Jewellery Editor, 2014. 'L.U.C. Tourbillon Qualité Fleurier Fairmined watch'. *The Jewellery Editor*. (http://www.thejewelleryeditor.com/shop/product/chopard-luc-t ourbillon-qualite-fleurier-fairmined-watch/) (accessed 24/08/2021).
- Tubb, D., 2020. Shifting Livelihoods: gold mining and subsistence in the Chocó. University of Washington Press, Colombia. Seattle.
- UNITAR & UN Environment, 2018. Handbook for Developing National ASGM Formalization Strategies within National Action Plans. UNITAR & UN Environment.
- United Nations Environment Program, 2012. Analysis of Formalization Approaches in the Artisanal and Small-Scale Gold Mining Sector Based on Experience in Ecuador,
- Mongolia, Peru, Tanzania, and Uganda. United Nations Environment Program. United Nations Environment Program, 2013. Mercury: Time to Act. United Nations Environment Program.
- United Nations Environment Programme, 2017. Minamata Convention on Mercury: texts and annexes. United Nations Environment Programme.
- Valerio, G., 2011. The Soul of Gold'. Jeweller 1, 58–59.
- Valerio, G., 2013. Making Trouble: Fighting for Fair Trade Jewellery. Lion Hudson, Oxford.
- Van Halem, V., 2014. 'Chopard L.U.C Tourbillon Qualite Fleurier Watch with Fairmined Gold Hands On'. A Blog To Watch 1 May 2014. (https://www.ablogtowatch.com/ch opard-l-u-c-tourbillon-qualite-fleurier-watch-fairmined-gold-hands/) (accessed 24/ 08/2021).
- Webster, S., 2015. Goldstruck: a life shaped by jewellery. Salma.

2011. ARM and RJC announce their collaboration. (Accessed 22 February 2022).

**Dr Peter Oakley** is Reader in Material Culture in the School of Arts and Humanities at the Royal College of Art. His expertise spans the creative industries, heritage sector and analytical chemistry. His research interests range from the preservation and presentation of mining heritage sites to the social influence of precious metal assaying technologies and the development and impact of the notion of ethical gold. Dr Oakley is currently PI for two funded projects: *Ethical Gold and Government Policy* and *Thai Textiles*. He was also PI for the recent AHRC funded project: *Sustainable Materials in the Creative Industries* (AH/V005510/1).