



# The organization of the human organ trade: a comparative crime script analysis

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## Abstract

This study fills critical knowledge gaps into the organization of organ trade utilizing crime script analysis. Adopting a situational crime prevention approach, this article draws from law enforcement data to compare the crime commission process (activities, cast and locations) of 2 prosecuted organ trade cases: the *Medicus case* and the *Netcare case*. Both cases involved transnational criminal networks that performed kidney transplants from living donors. We further present similarities and differences between illegal and legal living donor kidney transplants that may help guide identification and disruption of illegal transplants. Our analysis reveal the similar crime trajectories of both criminal cases, in particular the extensive preparations and high degree of organization that were needed to execute the illegal transplants. Offenders in the illegal transplant schemes utilized the same opportunity structures that facilitate legal transplants, such as transplant units, hospitals and blood banks. Our results indicate that the trade is embedded within the transplant industry and intersects with the transport- and hospitality sector. The transplant industry in the studied cases was particularly found to provide the medical infrastructure needed to facilitate and sustain organ trade. When compared to legal transplants, the studied illegal transplant scripts reveal a wider diversity in recruitment tactics and concealment strategies and a higher diversity in locations for the pre-operative work-up of donors and recipients. The results suggest the need for a broader conceptualization of the organ trade that incorporates both organized crime and white collar crime perspectives.

**Keywords** Organ trafficking · Organized crime · White collar crime · Crime script analysis · Situational crime prevention · Organ trade

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## Introduction

The growing scarcity of human organs has led to an illegal organ market that is proliferating globally (Moniruzzaman, 2019; Columb, 2020). This market fulfils the demand that legal organ procurement systems fail to fulfil (Yousaf & Purkayastha, 2015). Although reliable figures of the trade's scope are lacking, the World Health Organization (WHO) has estimated that approx. 5000 illegal transplants are performed annually (WHO, 2007). The organ trade is reported to rank in the top 5 of the world's most lucrative international crimes with an estimated annual profit of \$840 million to \$1.7 billion (May, 2017). While illegal organ transplants have been reported to take place in countries across the globe, knowledge of the trade's operational features remains scarce (Pascalev et al., 2016). Furthermore, all organ trade cases that have been exposed to date, reveal that legal institutions including blood banks, hospitals, clinics and their staff were directly or indirectly involved in facilitating illegal transplants (Ambagtsheer, 2019; Columb, 2017a; De Jong, 2017; OSCE, 2013). Nonetheless, the popular discourse depicts organ trade as an underground, mafia-like crime that exists separately from the medical sector and other legal industries (Council of Europe, 2014; López-Fraga et al., 2014). Consequently, attention is diverted away from the complicity of legal businesses and their staff.

At the time of writing, only 16 convictions involving organ trade have been reported to the case law database of the United Nations Office on Drugs and Crime, which is far less than would be expected based on global estimates of the problem (UNODC, 2022). The Organization for Security and Co-operation in Europe (OSCE) has reported 9 additional cases (OSCE, 2013). All reported cases had cross-border features and most involved the facilitation of living donor kidney transplants. Charges included e.g. fraud, brokering, trafficking in human beings for the purpose of organ removal (THBOR), severe bodily injury, organized crime, assault, unlawful exercise of medical authority and abuse of authority (OSCE, 2013; UNODC, 2022). A closer look at these cases reveals that successful convictions of hospitals, medical staff and other legal actors are virtually absent (Ambagtsheer, 2019, 2021; OSCE, 2013). Law enforcers report having limited awareness and knowledge of how and where to identify and disrupt illicit transplant activities (Ambagtsheer & Weimar, 2016a; Capron et al., 2016).

The underlying study aims to fill knowledge gaps into the organization of the organ trade utilizing crime script analysis (CSA). CSA involves the deconstruction of a crime commission process using a step-by-step approach. It highlights the sequence of decision points the offender goes through, as well as the resources required at each step to successfully commit the offence (Cornish & Clarke, 2002). For each stage, the crime script identifies the actors, the actions they need to carry out to successfully further the commission of the crime, and the opportunities they need to have available to do so (Borrion, 2013). Furthermore, CSA enables the identification of disruption points (Wortley & Townsley, 2016). CSA has been applied to a wide range of offences (Dehghanniri & Borrion, 2019), but has not yet been applied to the organ trade.

This study is the first to utilize law enforcement data to deconstruct and compare the crime commission process of 2 prosecuted organ trade cases: the *Netcare*-and *Medicus* case. Both cases involved transnational criminal networks that performed illegal kidney transplants from living donors. These cases were also selected because law enforcement authorities involved in the investigation and prosecution of these cases were willing to host the research team during on-site visits and they provided access to case materials. Comparing criminal cases allows for a richer understanding of the ways in which organ trade is organized and provides insight into the differences and similarities of the modus operandi of criminal groups and the social and geographic contexts within which they operate. This study addresses the following questions: What are the stages in the crime commission process of organ trade networks? Who are involved in the facilitation of illegal organ transplants? Where is the crime prepared and carried out? To identify underlying opportunity structures, we also address occupational factors, transplant resources and the wider legal, medical, and geo-political context within which the illegal transplant operations in both cases took place. Finally, to improve identification of illegal transplant activity, we explore where and how illegal transplants divert from legitimate transplants and identify disruption points.

This article first describes what is known about the organ trade, including its organizational features. Then, we present the theoretical and methodological framework. Next, to highlight where and how illegal transplants divert from legitimate transplants, we present a script of a legitimate living donor kidney transplant procedure. Subsequently, we present the crime scripts and highlight the scenes, cast and locations of the studied cases. We also highlight how and where the scripts overlap and diverge. Finally, we identify the opportunities that facilitated the illegal transplant schemes, we explain how and where criminal transplant trajectories differ from legal transplant scripts and we offer recommendations for disruption of the crime.

## The human organ trade

Organ trade constitutes the sale and purchase of organs for financial or material gain (WHO, 2010). Organ trade becomes human trafficking if an individual is threatened, coerced, deceived or otherwise exploited for the removal of his/her organs (UNODC, 2016). THBOR was first prohibited in the 2000 United Nations Trafficking in Persons Protocol (hereafter, Palermo Protocol) (United Nations, 2000). This definition includes three key elements: 1) an action being recruitment, transportation, transfer, harboring or receipt of persons; 2) a means by which that action is achieved: threat or use of force, or other forms of coercion, abduction, fraud, deception, abuse of power or abuse of a position of vulnerability, and the giving or receiving of payments or benefits to achieve consent of a person having control over another person; and 3) a purpose of the intended action or means: exploitation. All three elements must be present to constitute trafficking in persons (United Nations, 2000).

In 2014 the Council of Europe established a new convention against 'Trafficking in Human Organs' which calls for a broad prohibition of virtually all commercial dealings in organs. Accordingly, sales that occur with the consent of donors are

considered to be ‘trafficking’ regardless of the circumstances involved (Council of Europe, 2015). At the time of writing, this convention has been ratified by 14 states (Council of Europe Treaty Office, 2022). Payments for organs and THBOR are prohibited in almost all countries (Amahazion, 2016; UNODC, 2016). Iran is the only country that has adopted a semi government-controlled kidney transplant program that rewards living donors for their kidney donations (Fry-Revere, 2014). Despite an almost-universal ban, the trade<sup>1</sup> occurs in all corners of the world, inflicting harm on the world’s most vulnerable populations (Columb, 2017b; Tong et al., 2012).

Organ trade is driven by an ever-increasing demand for organs. The trade in living donor kidneys is the most commonly reported form of organ trade (Tong et al., 2012). Due to the ageing of populations and the growth of diabetes and vascular diseases, the number of people with organ failure is growing exponentially (ISN, 2017). Of all organs, kidneys are highest in demand (Shafran et al., 2014). Approximately 10% of the world’s population suffers from chronic kidney failure (Rees, Paloyo, et al., 2017). An estimated 2–7 million deaths occur annually because patients suffering from kidney failure lack access to adequate treatment (Rees, Paloyo, et al., 2017). Over 200.000 patients are registered on kidney transplant wait lists worldwide (ISN, 2017). Roughly 75.000 (38%) of these patients receive a kidney transplant annually (Council of Europe, 2019a). The total number of transplants performed worldwide is estimated to be less than 10% of the global need (Council of Europe, 2019a). Average wait times are 3–5 years and annual mortality rates are estimated to lie between 15–30% (Council of Europe, 2019a).

Because of the shortage of deceased donor kidneys, living kidney donation has become the most important alternative to fulfill demand. The need to increase the living kidney donor pool has been recognized by the global transplant community (LaPointe et al., 2015). Due to advancements in transplant technology and excellent results in living kidney donation, the living donor pool has expanded over the last 3 decades from genetically related donors to spouses, friends, acquaintances, neighbors and anonymous donors (Matas et al., 2000; Slaats et al., 2018). By the end of 2018, living kidney donors accounted for 37% of all reported kidney transplantation worldwide (Council of Europe, 2019a). The worldwide increase in legitimate living donor kidney transplants has coincided with an illegal trade in living donor kidney transplantations.

Despite growing attention for the organ trade, scholarly enquiry into this issue remains scarce. Existing research predominantly describes the detrimental outcomes associated with kidney sales on the black market (Budiani-Saberi et al., 2014; Lundin, 2015; Tong et al., 2012; Yea, 2010). Only few studies focus on other aspects of organ trade such as organ purchases, organ brokering and other organizational features (Ambagtsheer & Van Balen, 2020; Van Balen et al., 2016; Columb, 2017a; Pascalev et al., 2016).

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<sup>1</sup> In this article, we use ‘organ trade’ as an umbrella term to denote payments for organs, organ trafficking and human trafficking for the purpose of organ removal.

## Organ trade's organizational features

The OSCE was the first organization to offer insight into the organ trade's operational aspects (OSCE, 2013). Analyzing data of 11 criminal cases, the OSCE highlighted the instrumental role of international brokers. These brokers lead the criminal network, identify transplant surgeons and locate hospitals and clinics. They hire local brokers to recruit donors and recipients. The recruitment process involves blood testing and cross-matching donors and recipients. The OSCE further identified 'minders' as playing a vital role in escorting donors and recipients, informing and instructing them about the transplant process and taking care of travel and accommodation. Other facilitators include nephrologists, anesthesiologists, nurses, medical facilities and administrative staff (OSCE, 2013). The OSCE also emphasizes the trade's coercive and fraudulent nature (OSCE, 2013). Its report underpins the crime's cross-border dimensions, highlighting that recipients and donors are often recruited from countries other than the countries where the transplants takes place (OSCE, 2013).

De Jong (2017) deconstructs the trade through a human trafficking frame, analyzing its activities according to the 'acts' (recruitment, transport, transfer, harboring) and 'means' (coercion, fraud, etc.) as defined in the Palermo Protocol (De Jong, 2017; United Nations, 2000). She depicts the crime's organizational model as highly sophisticated, involving flexible combinations of criminal networks and actors that join forces to facilitate illegal transplants on a global scale (De Jong, 2017). Columb corroborates the loose and fluid structure of organ trade networks, but points out that the organ trade is better understood as an informal economic activity that is embedded within the transplant industry as opposed to a human trafficking offence (Columb, 2020; Columb, 2015). He concludes, amongst others, that the expansion of the transplant industry and the emergence of the organ market are interlinked (Columb, 2020). The organ market constitutes a subsystem of the transplant industry where the lines between the 'legitimate' and the 'illegitimate' are blurred (Columb, 2020).

While these studies offer new insights into the trade's organization, no studies exist that systematically deconstruct the trade's crime commission process in a grounded way and that highlight physical, social and medical factors that facilitate and sustain organ trade. Crucially, a theoretical and methodological approach is lacking that conceptualizes the criminal stages of the organ trade process, deconstructs the locations where the crime is prepared and conducted and helps to understand the trade's underlying opportunity structures. The next paragraph presents the theoretical and methodological framework that guides this study.

## Theoretical and methodological guidance

### Situational crime prevention and crime script analysis

This study adopts a situational approach to crime. A situational crime prevention approach understands crime as being shaped by the interplay between the physical

and socio-economic environment, the routines of actors and the combination of facilitators and limitations, which combined determine the opportunity for crime (Van de Bunt & Schoot 2003; Clarke, 1995; Von Lampe, 2011). We define ‘opportunity’ as access to a suitable environment in order to pursue certain goals (Cloward & Ohlin, 1960). The criminological opportunity theories grounded in a situational approach (e.g., routine activity, rational choice theory) offer a useful framework to systematically capture and understand the modus operandi of organized crimes using CSA (Kleemans et al., 2012; Von Lampe, 2011; Levi & Maguire, 2004; Lord et al., 2017).

CSA helps to understand criminality as rational, goal-oriented and purposive behavior. Furthermore, it allows for a detailed identification and understanding of a criminal activity into functionally, spatially, and temporally defined events (Cornish, 1994). Criminal involvement includes a sequence of stages in which a potential offender chooses to desist from or continue with crime (Bie et al., 2015; Brantingham & Brantingham, 1993). CSA enables an in-depth examination of these different stages or ‘scenes’, which may reveal procedural aspects of criminal activity and underlying opportunity structures (Bie et al., 2015). ‘Scenes’ can consist of different ‘tracks’ that constitute the different ways in which criminal behaviors can be accomplished. By understanding the crime’s procedural aspects, intervention points can be identified (Lord et al., 2017).

In this study, we utilize CSA to identify opportunities for organ trade through the deconstruction of scenes, actors (‘cast’) and locations (Cornish, 1994). CSA further helps to explore convergence of legal and illegal structures, in particular opportunities for co-offending (Felson, 2006; Von Lampe, 2011). Organ transplants require the involvement of specialized medical staff including nephrologists, anesthesiologists and transplant surgeons. Illegal organ transplants involve collaboration of these occupations with recruiters, brokers and minders to recruit paid donors and recipients. Organ trade thus involves a range of ‘legal’ and ‘illegal’ actors who co-offend to recruit donors and recipients, perform the nephrectomy (the removal of the kidney from the donor) and the transplantation (the implantation of the kidney into the body of the recipient) and distribute profits (De Jong, 2017; Ambagtsheer, 2017; Columb, 2020). Applying CSA to organ trade within a situational crime approach can help reveal the social, medical and legal infrastructures that networks rely upon to sustain and conceal illicit transplant activity. Furthermore, it can shed light on the trade’s intersections with the medical sector and other legal industries. Utilizing CSA within a situational crime prevention framework also guides the identification of measures that can help prevent or disrupt organ trade activity (Edwards & Levi, 2008; Von Lampe, 2011).

## Data sources and analytical strategy

Data was gathered under auspices of the ‘HOTT project’, a research project funded by the European Commission, that aimed to increase knowledge, raise awareness

and improve responses to THBOR (Ambagtsheer & Weimar, 2016b; HOTT Project, 2012-2016). Data pertaining to the *Netcare –and Medicus* cases was collected in South Africa, Kosovo, United Kingdom and Israel.

The collected materials predominantly consisted of law enforcement data, i.e. charge sheets, indictments, closing statements, judgments, victim and witness testimonies, legislation, international arrest warrants, notes and summaries of court proceedings, defense statements and affidavits. This data was supplemented with 36 anonymous in-depth, semi-structured interviews that F.A. and other team members of the HOTT project held with 45 respondents, most of whom were involved in the investigation and prosecution of these cases. We additionally interviewed offenders' defense lawyers, patients, nephrologists, surgeons, nurses, transplant coordinators, social workers, representatives of international organizations, government officials and human trafficking experts. The case materials and respondents are enclosed as Appendixes 1 and 2.

The data was analyzed using qualitative content analysis. Coding of the data was 'data-driven' (Gibbs, 2007). Qualitative data analysis software (NVivo-QSR 12) was used to classify the data, to construct coding structures and to run coding queries. Because of the crime's complexity and knowledge gaps, we organized our results in accordance with Thompson and Chainey's simplified, universal script which consists of 4 components: 'preparation', 'pre-activity', 'activity', and 'post-activity' (Tompson & Chainey, 2011). First, we (F.A. and R.B) each separately classified the data (totaling 1726 pages) according to the 4 components of this universal script and deconstructed the data into 'scenes'. We performed this procedure separately for each case, thereby generating 4 coding structures (2 for each case). We coded all scenes prior to the entry of the transplant destination country under 'preparation'. All activities that took place after arrival in the destination country prior to the transplants, was coded under 'pre-activity'. The nephrectomies and transplantations were coded under 'activity' and activities that took place after the transplantations were coded under 'post-activity'. To identify underlying social and physical opportunity structures, we coded the actors and location(s) for each scene. Given the cases' transnational dimensions, we coded the places (i.e. airport, hospital, hotel) and the countries where the activities took place under 'location'. To identify broader opportunities for organ trade, we also coded contextual factors that help to explain why the offenders chose these locations. Our grounded approach allowed us to identify overarching themes that emerged from the data which help to further conceptualize and explain our findings.

After completing the first round of coding, we discussed differences in the coded data and fine-tuned scenes. Then, we merged the coding structures into 2 coding schemes (1 for each case) and classified the scenes into scripts during various discussion rounds. During these discussions, we subjected our scripts to Borrión's quality criteria to ensure completeness and accuracy of the scripts (Borrión, 2013). We also asked a colleague (not involved in this study) to verify the clarity of the scripts. To comparatively analyze differences and similarities in the crime commission process between both criminal cases, we conducted matrix coding queries at scene -and script level. The crime scripts are presented in Figs. 2 and 3. The detailed descriptive scripts including tracks and cast are enclosed as supplementary materials.

Finally, to explore which features differentiate the crime scripts from a legal transplant script, we constructed a script of a legitimate living donor kidney transplantation. We developed this script based on transplant protocols and we refined the script during discussion rounds with the transplant team at Erasmus MC's Department of Nephrology and Kidney Transplantation. We then conducted coding queries using NVivo-QSR 12 to identify similarities and differences between the legal transplant script and the crime scripts. The stages of a living donor kidney transplantation are presented in Fig. 1. The detailed script including tracks, cast and locations is enclosed as supplementary material in Appendix 3.

## Limitations

Our analysis revealed gaps in the data. For example, the data did not always specify which actor(s) conducted the identified criminal activities. Of some activities it is also unclear in which locations they took place. These gaps are recognizable by fields in Appendixes 4 and 5 that have been left intentionally blank.

## Terminology

The open-coding analysis generated a variety of actors, many of which were termed differently within and between the criminal cases, despite the cohesiveness of their activities in the various scenes. In particular the terms, 'brokers', 'fixers' and 'recruiters' were interchangeably used without definition. Donors and victims were also denoted differently. For example, in the *Netcare* case, donors/kidney sellers were described as '*suppliers*', whereas in the *Medicus* case they were interchangeably depicted as '*victims*' and '*donors*'. Furthermore, many actors adopted multiple roles. For example, transplant surgeons not only performed transplant operations but also recruited, screened and escorted recipients to the transplant-destination countries. Interpreters simultaneously took on the role of minders/fixers, arranging for transportation and other logistics for recipients and donors next to providing translation services.

To enhance clarity of the terminology used, we created a node attribute list of the actors in which their occupations, activities and double roles were highlighted. We then condensed this list into a table (Table 1), where we define the terms and roles of each actor and highlight which actors took on multiple roles. We adopt many of these terms throughout this study. For example, we refer to organ buyers as '*patients*' or '*recipients*' and to organ sellers as '*donors*'. We specify double roles, by using a '/' between the terms. For instance, transplant surgeons who also escorted patients are denoted as 'transplant surgeon/recruiter'. Interpreters who also arranged logistics are denoted as 'interpreter/fixer'. This table is not intended to present universal definitions of actors in organ trade. Its purpose is to avoid confusion and to clarify what is meant with the various terms used throughout this study.

Throughout this article, we mention the full names of offenders who have appeared in public court records, in the media and/or in publications. For those



who have not appeared in public records, we only mention the occupations/roles as presented in Table 1.

## The legality and illegality of living donor kidney transplantations

An understanding of illegal kidney transplants requires knowledge of how legal living donor kidney transplants are performed and what factors differentiate them from illegal transplants. Given the global expansion of living kidney donation, the transplant community has formulated minimum standards and procedures to ensure autonomy and safety of donors and recipients. For living donors these include medical and psychosocial evaluation, informed consent, voluntariness, long-term follow-up and registries, and the prohibition of using minors as donors (Delmonico, 2005). Universal guidelines affirm that a living donation needs to be performed in a manner that minimizes the physical, psychological and social risk to the donor and that does not jeopardize the public trust within the healthcare community (Council of Europe, 1997; Pruett et al., 2006; Steering Committee of the Istanbul Summit, 2008). The donation decision should further be performed in an environment that enables the potential donor to decide autonomously (Delmonico, 2005; Pruett et al., 2006). The prohibition of payments for organs functions as

**Table 1** Description of actors and their roles

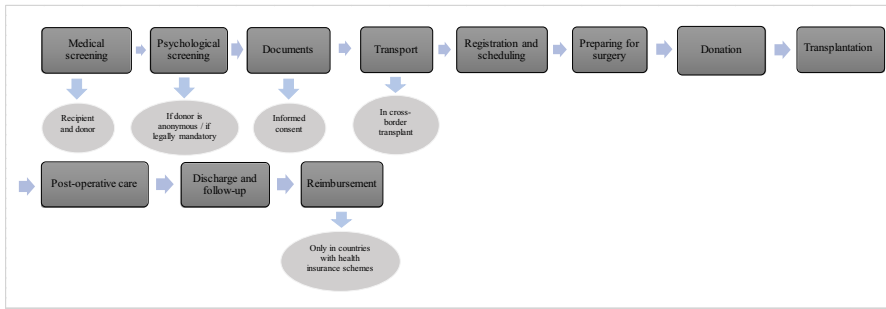
Recipient	The (prospective) recipient of an organ transplant. Also denoted as 'patient' or 'organ buyer'
Donor	The person who donates or sells an organ. Also denoted as 'victim', 'supplier' or 'organ seller'
Recruiter	Solicits / recruits recipients and donors
Escort	Accompanies or 'chaperones' recipients and donors to, from and within countries
Broker	Operates transnationally, handles payments, connecting figure between doctors, recipients, donors and other actors in the scheme
Fixer	Arranges transport, accommodation and other logistics for donors and recipients in transit and destination countries. Also depicted as 'minder'
Driver	Transports donors and recipients from/between hotels, airports, hospitals and other locations
Transplant coordinator	Coordinates transplant logistics, schedules transplants
Nephrologist	Medical doctor who specializes in treatment of kidney disease
Transplant surgeon	Medical doctor who conducts the donor nephrectomy (organ removal) and transplantation
Anesthesiologist	Medical doctor who specializes in perioperative care, develops anesthetic plans and administers anesthetics during surgery
Nurse	Is trained to care for the sick
Matron	A woman in charge of medical arrangements
Medical technician	Assists with medical diagnoses by performing tests for physicians and hospitals in a laboratory setting
Interpreter	Provides translation services between donors, recipients and other actors

a safeguard in this respect, as its underlying rationale is that paid donors cannot freely consent to their organ sale (Council of Europe, 2015, 2019b; Hilhorst & Van Dijk, 2007). The WHO was the first organization to introduce the prohibition of payment for organs in 1987, declaring that “*organs should only be donated freely, without any monetary payment or other reward of monetary value.*” (WHO, 1987; WHO, 2010).

The principle of non-payment for organs is reiterated in numerous international instruments (Council of Europe, 1997; Steering Committee of the Istanbul Summit, 2008) and has been codified into the legislation of (almost) all countries that run transplantation programs (Amahazion, 2016). Compensating donors for the costs of their donation (including medical expenses and lost earnings) is permitted lest they operate as a disincentive to donation (WHO, 2010). Besides receiving payment for organs, it is also forbidden for patients to pay donors or ‘third parties’ in return for an organ, to advertise the sale of an organ and/or to advertise the need for an organ in return for payment (Council of Europe, 2015, 2019b). Third parties can be recruiters, brokers, medical professionals and public officials (Council of Europe, 2019b). As mentioned, payments for organs can lead to THBOR if the trafficking elements are fulfilled (United Nations, 2000). THBOR can be established irrespective of whether a donor has been paid (United Nations, 2000).

Despite these regulations, the illegality of *paying for a transplantation* is not always clear (Ambagtsheer et al., 2012). In countries without established health insurance systems, it is common practice for patients to pay hospitals and clinics directly in return for an organ transplantation. Such payments are not necessarily illegal, in particular if it is not evident that a donor, recruiter and/or broker has been paid or exploited (Ambagtsheer et al., 2012). Transporting an organ or carrying an implanted/transplanted organ is also not illegitimate per se. Organs are -by nature- legal goods. Identifying a patient who is carrying a transplanted organ, even if the origins of the organ are unknown, will likely be insufficient to establish a criminal case. In order to prove a criminal act, it must be established that the organ has been obtained through illegal payments and/or exploitation. Proving payments and/or exploitation is especially difficult if a patient crosses borders with a transplanted organ (Ambagtsheer & Van Balen, 2020; Ambagtsheer et al., 2012). As will be illustrated, the criminal networks involved in *Netcare* and *Medicus* took advantage of jurisdictional loopholes by operating transnationally.

Despite internationally agreed standards, legal regulations that govern living kidney transplantations differ significantly between countries (Lopp, 2013). For example, some countries such as Germany and Israel only allow living kidney donors who can demonstrate a close emotional relationship to their intended recipient (Lopp, 2013). South Africa’s regulations require genetically non-related kidney donations to be approved by a ministerial committee (Ambagtsheer, 2019, 2021). The USA, The Netherlands and the United Kingdom by contrast do not require a relationship between prospective living donors and recipients (Lopp, 2013). These countries accept different types of living donations, including anonymous kidney donation and paired kidney exchanges (Klerk, 2010; Rees et al., 2009; Roth et al., 2004;



**Fig. 1** Script of a legitimate living donor kidney transplant

Slaats et al., 2018).<sup>2</sup> In recent years, some countries have started exploring global kidney exchanges (Ambagtsheer et al., 2020; ENCKEP, 2017; Rees, Dunn, et al., 2017). In global living donor kidney exchanges, incompatible donors and recipient pairs travel from low income countries to high income countries where they are matched to other incompatible pairs (Rees, Dunn, et al., 2017). In many countries it is accepted practice to accept living donors from abroad. In the USA for instance, 100–150 living donor kidney transplants are performed every year, utilizing donors who do not reside in the USA (Al Ammary et al., 2019). Most of these donors are friends or relatives of the recipient who live abroad (Shukhman et al., 2020). The transplant community accepts this practice as a legitimate activity as long as there is evidence of a personal relationship (Shukhman et al., 2020; Steering Committee of the Istanbul Summit, 2008).

The varieties between domestic transplant regulations illustrate that the boundaries between ‘legal’ and ‘illegal’ living donor kidney transplants are far from clear and that they are contingent on the national and legislative context within which they take place. Notably, not all countries conduct organ transplantations. Some governments, including Kosovo, prohibit transplantation altogether (Ambagtsheer, 2019). These disparities preclude the development of a uniform, universal script of a living kidney donation and transplantation procedure. Despite these differences, there are agreed upon standards and procedures that a living donor kidney transplant procedure should follow. Figure 1 presents the stages of a legitimate living donor kidney transplant procedure.

## Cast and locations

The cast of a legal transplant procedure generally involves a large multidisciplinary team consisting of nephrologists, immunologists, transplant surgeons, anesthesiologists, nurses, research nurses, nurse practitioners, transplant coordinators, social workers, dieticians, physiotherapists, pathologists, infectiologists, virologists,

<sup>2</sup> A paired exchange takes place if a willing prospective donor cannot donate his/her organ to his/her intended recipient due to blood type incompatibility or other medical barriers. This pair is then linked to another pair with the same problem (Rees et al. 2009; Roth et al. 2004; de Klerk 2010).

bacteriologists, radiologists, researchers and lab workers. locations of living donor kidney transplants include hospitals, (outpatient) medical clinics and transplant centers. The detailed script of a living donor kidney transplant is presented in Appendix 3.

## **Deconstructing the trade in human organs: the crime scripts of the Netcare- and Medicus cases**

Our analysis of the Netcare case yielded 7 sequential preparatory scripts (*conception; planning; recruitment; payments; medical screening, falsifying documents; transport*), 6 pre-activity scripts (*escort and accommodation; medical screening; coordination and scheduling; falsifying documents; translation; preparing for surgery*), 2 activity scripts (*donation; transplantation*) and 4 post-activity stages (*post-operative care; discharge; transport; payments/reimbursement*). The analysis of the Medicus case yielded 7 preparatory scripts (*conception; planning; recruitment; payments; medical screening; scheduling; transport*), 5 pre-activity stages (*escort and accommodation; falsifying documents and instructions; introductions; payments; preparing for surgery*), 2 activity scripts (*donation; transplantation*) and 4 post-activity stages (*post-operative care; documents and discharge; payments/reimbursement; transport*).

At first glance, findings reveal the similar script-level trajectories of both cases, in particular the extensive preparations that were needed to execute the schemes. Nonetheless, there are also notable differences. Below, we present the script of each case and highlight differences and similarities.

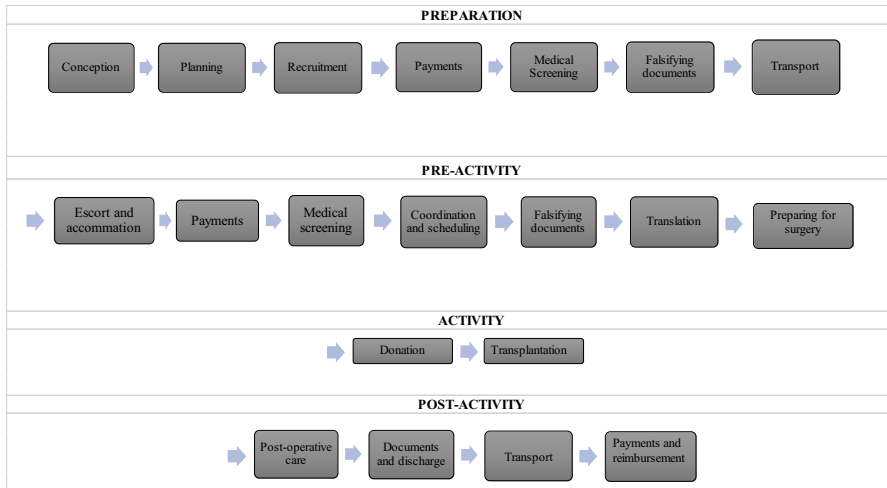
### **The Netcare case**

In 2001, an Israeli businessman (Ilan Perry), depicted as the ‘*main broker*’ by the case’s investigators and prosecutors, proposed a kidney transplant scheme to a private hospital group in South Africa (Netcare Ltd.). His proposal involved transplanting Israeli citizens at Netcare’s hospitals in Cape Town, Johannesburg, and Durban. Between 2001 and 2003, 224 Israeli patients were found to have traveled to South Africa for illegal kidney transplantations. The donors were predominantly young men in their 20 s who were recruited in Israel, Romania, and Brazil (Ambagtsheer, 2021; De Jong, 2017; Scheper-Hughes, 2011). Later, a second broker (Sushan Meir) joined the scheme, who also supplied recipients and donors. Thus, with the arrival of this broker, two networks co-existed, forming the ‘*Israeli transplant scheme*’ (Allain, 2011; Scheper-Hughes, 2011; Sidley, 2005). The script of this scheme is presented in Fig. 2.

### **Preparation**

#### **Conception and planning**

Perry and Meir colluded with transplant coordinators in at least 5 hospitals, as well as with Netcare’s CEO (Friedland), with Netcare’s legal advisor and with



**Fig. 2** Crime script of the Netcare case

other medical staff to make use of these hospitals' transplant resources. Resources included operating theatres, a blood bank, surgeons, medical assistants and other personnel.

Concealment emerged as a prominent theme during the offenders' planning and deliberations, which involved various tactics to conceal the transplants' illegitimacy. Early deliberations took place between Netcare's national transplant coordinator (Belinda Rossi), Friedland, Netcare's legal advisor and '*parties in Israel*' to identify legislative loopholes. Rossi traveled to Israel to present South Africa's transplant regulations, meetings were held with South Africa's Department of Health officials and Netcare's legal advisor was consulted on how to circumvent South Africa's transplant laws:

*As it was high risk due to the non-South African citizens, I discussed it with Friedland. It was high risk in the sense that we would have to take the parties' word and at face value. The volumes they promised made it worth the risk. Friedland wanted to know if there was any way we could prove the donors/recipients were related. I said no. I showed him the documents I had received from Perry and he told me to go to [Netcare's legal advisor] to get it properly worded. (Testimony Belinda Rossi, Notice of Motion between Applicants and Prosecutor, December 2011; para. 85, pp. 85-86)*

After Netcare's legal advisor was consulted, a protocol was drawn up for the Israeli transplant scheme in which consent forms were forged to make it appear that donors and recipients were related even though they were not. By doing so, the offenders circumvented the requirement of the ministerial committee that required recipients and donors to be related. This process not only served to conceal the scheme's illegality, but also helped to embed the scheme within South Africa's medical infrastructure.

## Recruitment

Recruitment of donors and recipients formed a significant part of the preparation stage and was conducted transnationally through close collaboration between recruiters, brokers, transplant surgeons and other medical staff. Donors were either recruited via advertisements in newspapers or they heard about the opportunity to sell their kidney from former kidney sellers. Initially, the donors were recruited in Israel and Romania, but later, Brazilian kidney suppliers were recruited because their kidneys could be obtained at a much lower cost. While the Israeli and Romanian donors were promised \$20,000 for their kidneys, the Brazilian donors were promised between \$3,000 and \$8,000. Most donors were recruited in Brazil by 2 retired military officers (Ambagtsheer, 2021; De Jong, 2017; Scheper-Hughes, 2011).

## Payments and reimbursements

Payments took place throughout all stages of the crime commission process. Patients paid Perry/his company up to \$120,000 prior to their travel and transplant. Perry, and later also Meir, subsequently paid Netcare. Netcare in turn disbursed payments to various actors in the scheme, including the transplant surgeons and the blood bank. Netcare had an account at Nedbank that was designated for the Israeli transplant scheme. One of Netcare's transplant coordinators/interpreters handled this account. Occasionally, additional payments were made directly in cash to the surgeons by Perry, his company, or his agents. Perry also paid an escort/fixer (Rod Kimberley) and a nephrologist. Kimberley paid low-tier offenders in the scheme, including the interpreters. Kimberley additionally covered the costs of recipients' and donors' accommodations and he gave donors pocket money upon arrival in South Africa as an advance to their kidney payment. All donors received the promised amount in cash after their operations.

In addition to payments, gifts were given to medical staff to mitigate their doubts and concerns about the legality of the Israeli transplant program. As one respondent stated:

*The Israeli guys came and they would always kind of entertain us. [T]hey would come, you know, the businessman [...] and professor Shapira the doctor, and the translators. And they always kind of took us out for meals, to nice places or, you know, do nice things with us. [W]e went out for dinner one evening and they just gave me a lot of money in my hand, saying 'we want you to have this money to go to a conference. We want to sponsor you to go for a conference, because you are helping us now. This is our way.'* (Social Worker, former Netcare employee)

In addition to payments for their kidney, donors received additional payments from their recruiters if they solicited new prospective kidney sellers, thereby becoming recruiters themselves.

## **Medical screening and scheduling**

Recipients and donors underwent preliminary blood group and tissue-typing tests in their home countries. Perry hired recruiters in Brazil who arranged for the donors' medical screening, their blood tests and their travel to South Africa.

## **Transportation**

Transportation of donors and recipients took place before and after the transplantations. Donors and recipients were frequently chaperoned by recruiters/brokers and transplant surgeons. The offenders traveled to and from Israel in the preparatory stages. Airports, planes, and cars served as vital travel hubs and modes of transportation.

## **Pre-activity**

### **Escort, accommodation, medical screening and scheduling**

Upon arrival in South Africa, donors and recipients were accompanied by interpreters/escorts who took care of their visas and travel bookings, accommodated them in apartments and hotels, took them on safari and other sight-seeing tours, escorted them to and from the hospital and assisted them with other daily logistics. Cross-matching procedures were performed by staff of South Africa's National Blood Bank to ensure compatibility between donor and recipient pools. Subsequently, the transplant operations were scheduled.

### **Falsifying documents and translation**

Israeli recipients and donors were instructed to sign documents in Israel before travelling to South Africa that falsely stated that they were related. Other recipients and donors signed false consent forms upon arrival in South Africa.

## **Activity**

This stage involved the kidney removal (donation/nephrectomy) and the transplantation. It contained the least number of tracks. It also occurred within a short timeframe, usually within the span of one day. The activity stage is thus the least elaborate script of the cases' crime trajectory.

## **Post activity**

### **Post-operative care, documents, discharge, reimbursement of costs**

Organ trading schemes are characterized by their rapid discharge times, inadequate medical screening and lack of post-operative care and follow-up of donors and

recipients (De Jong, 2017; Ambagtsheer, 2017; Tong et al., 2012). Donors in the Netcare case were discharged from the hospitals already after 2 days. Whilst some were reported to stay in South Africa up to 3 weeks after discharge during which they received post-operative care, others were '*sent back on the next available flight*' immediately after their release from the hospital. While most donors did not receive follow-up treatment in their home countries, some Brazilian donors were brought to local clinics by police officers for follow-up care during the investigation.

Before returning to Israel, recipients received discharge letters and documentation that provided information for their doctors in Israel about their medication regimen. Medical professionals in South Africa collaborated with the patients' doctors in Israel to ensure follow-up treatment. The recipients' transplants were reimbursed post-operatively by their health insurance companies in Israel. Until 2008 it was common practice for Israeli health insurance companies to compensate transplants performed abroad, regardless of their illegitimacy (Ambagtsheer, 2017). In 2008, Israeli authorities banned the practice of insurance companies covering the costs of overseas living kidney donor transplants (De Jong, 2017; Ambagtsheer, 2017; Orr et al., 2014; Scheper-Hughes, 2011).

## The Medicus case

The Medicus Clinic was established in 2004 in Pristina, Kosovo, as a private urology clinic and was owned by a Kosovar urologist, Lutfi Dervishi and his son, Arban Dervishi. Lutfi Dervishi wanted to perform kidney transplants in his clinic and came into contact with Yusuf Sonmez, a Turkish transplant surgeon, at a urology conference in Istanbul. By contacting Sonmez, Dervishi tapped into a network of Israeli and Turkish recruiters, brokers and surgeons that had been facilitating illegal kidney transplants in hospitals and clinics across Eastern and Central Europe for many years (OSCE, 2013; Sanal, 2004; Scheper-Hughes, 2004). From March through November 2008, the network recruited 24 donors in Israel, Turkey, Moldova, Russia, Ukraine, Kazakhstan, and Belarus and flew them to Kosovo for the removal of their kidneys at the Medicus clinic. The donors were matched to 24 recipients, leading to 48 illegal transplant operations. Most patients were recruited in Israel with the help of an Israeli transplant surgeon, Zaki Shapira. Other recipients came from Ukraine, Turkey, Poland, Canada, and Germany. The script of this scheme is presented in Fig. 3.

## Preparation

### Conception and planning

While the Israeli transplant scheme in the Netcare case was embedded within South Africa's transplant infrastructure, Kosovo lacks a national transplant programme. Thus, the offenders in the Medicus case had to conduct more extensive preparations than offenders in the Netcare case. An international urology conference in Istanbul



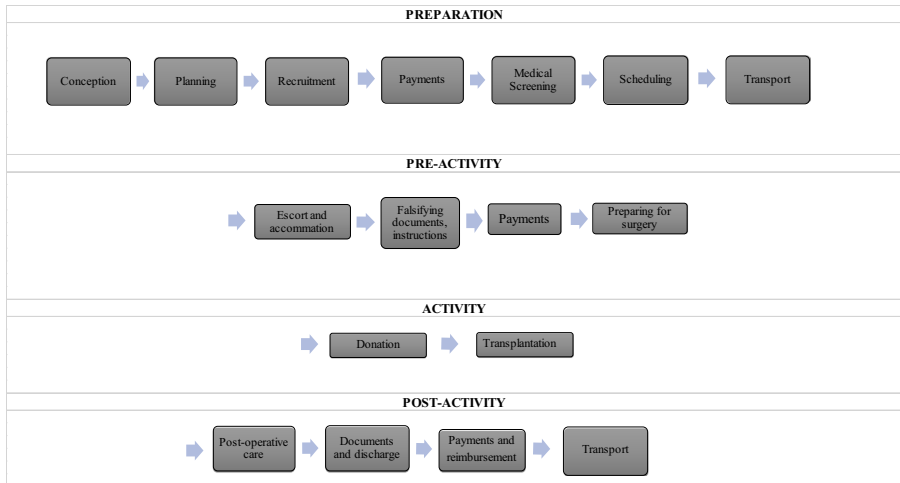


Fig. 3 Crime script of the Medicus case

functioned as a vital location for Lutfi Dervishi and Sonmez to connect and colude. Their preparations involved e-mail and phone communications, the purchase of equipment, medications, and other resources, transporting these to Kosovo and recruiting medical staff (e.g., anesthesiologists, nurses, technicians). The recruitment of staff also included the application for a working license for Sonmez to conduct transplants in Kosovo:

*Dear Lutfi, [...] I understood you want from the Turkish Medical Association my "doctor card". This proves that I do my job as a doctor in Turkey. And meanwhile I will try to send you a paper which I will ask to the notary to translate into English a paper that I am working as a doctor. [...]. I do all this stuff next week and will send you by e-mail. The patients are already waiting. All the best, Yusuf.* (Basic Court Judgment, 29<sup>th</sup> April 2013, p. 99).

Regular meetings took place between Lutfi Dervishi, Sonmez, Moshe Harel (a broker), Sokol Hajdini (the lead-anesthesiologist), Arban Dervishi and government officials to apply for a license to conduct transplants in the Medicus Clinic. Similar to the Netcare case, offenders in the Medicus case employed various tactics to give the scheme an appearance of legality. The processes through which illicitly obtained organs take on the veneer of a licit transaction are also known as '*organ laundering*' (Manzano et al., 2014). The issuing of a transplant license for a clinic that is not legally mandated to perform transplants is an example thereof. Whilst it has not been established that Dervishi's application for a transplant license was successful, the Ministry of Health provided him with a 'confirmation of license approval'. The offenders also used this document to convince and recruit hesitant recipients and donors whom they falsely informed that the transplant procedures were legal.

## Recruitment

Donors and recipients in the Medicus case were also recruited transnationally through close collaboration between the various offenders. Patients were recruited transnationally via online advertisements or through word of mouth from other patients in dialysis clinics. The phone numbers of recruiters/brokers were known and shared amongst patients in these clinics. Patients met their recruiters in their homes, in café's and in shopping malls where they received information about the transplant costs and procedure. In both cases patients signed contracts with 'medical service companies' that were owned by the brokers/recruiters. Some patients were recruited by transplant surgeons in Turkey and Israel. These surgeons were their first point of contact. They recommended the patients to travel to Kosovo, South Africa, and other countries for transplantation, as illustrated by an Israeli indictment that charged Shapira, an Israeli transplant surgeon who was also involved in the Netcare case, for brokering illegal kidney transplants in Kosovo:

*[Shapira] was responsible for examining the "Medicus" Medical Clinic and examining its suitability for the execution of the transplants. On that basis, he used to meet with potential [r]ecipients; he would explain to them the transplant process, referred them to carry out medical examinations, examined the medical documents of the [p]atients and [d]onors and authorized the execution of the illegal transplant with respect to the medical condition of the [p]atients and the suitability of the [d]onor. In some of the cases, [he] would accompany the [p]atients during their hospital stay in Kosovo. (Tel Aviv-Jaffa Magistrate Court Indictment, para. 17).*

Donors were recruited via newspapers –and online advertisements in Israel, Turkey, Moldova, Russia, Ukraine, Kazakhstan, and Belarus and were promised between \$10,000-\$30,000 for their kidney. This type of 'passive' recruitment is a common tactic in organ trading schemes. Posting advertisements and using subtle ploys instead of actively or forcibly recruiting patients and donors into transplant schemes renders exploitation less evident and therefore more difficult to prove by law enforcers (De Jong, 2017). Donors met their recruiters in parks and at bus stations in their home countries. Some were introduced to former kidney sellers to mitigate their doubts and concerns about their kidney sale.

## Payments and reimbursements

Payments in the Medicus also case took place throughout all stages of the crime commission process. Patients in the Medicus case paid up to \$108,000 for their transplants in installments. Their first payments were made prior to their travel to Kosovo to recruiters/brokers, transplant surgeons and to their escorts. They carried their second installments with them on the plane and paid these at the Medicus Clinic, either before or after their transplant to Harel, Arban Dervishi and to other offenders.

Recipients' payments were used to (partially) pay the donors after their operations. The remaining profits were distributed between the recruiters/brokers, transplant doctors and other offenders. Contrary to donors in the Netcare case, none of the Medicus' donors received the promised amount. Some did not receive payment at all but were promised payment only if they recruited new prospective kidney sellers. Withholding payments to kidney sellers in order for them to recruit new prospective kidney sellers is a tactic in organ trafficking schemes to sustain the transplant program (De Jong, 2017). Contrary to other types of (trafficking) crimes where victimization can reoccur over a longer period of time, donors in living donor kidney trading schemes become 'disposable' after their kidney sale, which increases the need for frequent recruitment cycles to guarantee a continuous flow of donors.

### Medical screening and scheduling

Recipients and donors underwent preliminary blood group and tissue-typing tests in their home countries and underwent additional 'confirmatory' blood tests during their transits in Istanbul. These tests took place in cars, in hotel rooms, in hotel lobbies and in medical clinics under the supervision of escorts. These tests served to cross-match the patients and donors in order to find a transplant match. Subsequently, the surgeries were scheduled and further travel arrangements were made. While the data in the Netcare case contains gaps pertaining to screening and pre-operative work-up of Israeli recipients, the Medicus case revealed extensive communications by phone and email between recipients/donors and their transplant surgeons and recruiters. This communication involved exchange of medical information, confirmations that donors and recipients had been found and scheduling their transplant operations. Recruiters frequently referred patients to Shapira for recipients' pre-operative work-up.

### Transportation

Transportation of donors and recipients took place both before and after the transplantations and they were frequently chaperoned by recruiters/brokers and transplant surgeons. Sonmez traveled regularly to and from Kosovo in order to perform transplants. In this case, airports, planes, and cars also served as vital travel hubs and modes of transportation. Istanbul functioned as an important transit city.

Offenders devised various strategies to avoid detection during transit and travel. They provided recipients and donors with false invitation letters and instructed them to inform customs at the airport in Pristina, that the purpose of their visit was to undergo heart treatments at the Medicus Clinic. A broker who regularly escorted recipients and donors to Pristina falsely informed customs that he was traveling to Kosovo for his elevator business. Sonmez claimed that he traveled to Kosovo to correct previously conducted transplant operations for recipients suffering from complications.

## Pre-activity

### Escort, accommodation, medical screening and scheduling

The script of the Medicus case diverges from Netcare's script at this stage. In the Medicus case, pre-transplant screening and cross-matching occurred before donors' and recipients' travel to Kosovo. The patients' and donors' duration of stay in Kosovo was therefore much shorter than those involved in the Netcare case. Upon arrival in Kosovo, patients were transferred directly to the Medicus Clinic. Donors were either accommodated in hotels or brought directly to the clinic. Operations would either occur on the same day of donors' and recipients' arrival in Pristina or the day after. The differences in scripts between both cases are explained by the absence of a transplant surgeon in Kosovo and the presence of a transplant infrastructure in South Africa. The scheduling of Sonmez's transport and transplant operation dates in Kosovo therefore coincided with those of the recipients and donors.

### Falsifying documents and translation

In the Medicus case, donors and recipients were instructed to sign so-called '*Deeds of Donation*' and '*Kidney Donation Clearance Forms*' upon arrival in Kosovo that declared that they were related, that the donation was altruistic and voluntary and that they had appeared before an ethical committee. The purpose of this committee was to show that the donors were donating their kidneys for altruistic reasons or to relatives. No proof however was found that this committee existed.

A difference between the cases is that in the Netcare case Hebrew and Portuguese interpreters were hired to provide translations between donors/recipients and medical staff. Recipients and donors were thus informed about what they were signing. Due to the lack of translation in the Medicus case, most of the recipients and donors reported that they did not understand the content of the forms that they signed.

## Activity

The cases diverge with respect to the locations and legal embeddedness. Contrary to the Medicus case where transplants were organized in one clinic that was not licensed to conduct transplants, transplants in South Africa were facilitated in at least 5 hospitals across the country that were legally mandated to perform transplants. The short timeframe of the main activity (donation/transplantation) differentiates living donor kidney trading schemes from e.g. sex -and labor trafficking schemes, where victimization and profit-making can re-occur with regards to the same victim over longer periods of time (Hiah & Staring, 2016; Leclerc et al., 2011; Savona et al., 2013).

## Post activity

### Post-operative care, documents, discharge, reimbursement of costs

Donors were discharged up to 5 days after their nephrectomy and escorted back to their home countries. They reported considerable physical and psychological trauma as a result of their nephrectomies:

*When B.B. awoke from the anesthesia, he suffered from acute pain due to an infection from the surgery and from serious bleeding. After being hospitalized for several days, on a date which was coordinated in advance as a result of his medical condition, B.B. was released from the “Medicus” Medical Clinic while he was suffering from an infection in his blood. B.B. did not receive any explanation about the possible complications, the necessary treatment and lifestyle after the removal of a kidney, and he was released on his way without any care for any medical treatment whatsoever following the surgery. (Testimony by an anonymous donor-victim, in: Tel Aviv-Jaffa Magistrate Court Indictment, para. 17)*

Other donors similarly reported a deteriorated medical state following the operation due to improper functioning of the remaining kidney and post operative complications. Many reported regret and did not receive information about the risks and long-term follow-up that is required after a kidney donation. Recipients in both cases generally received better care than their donors although they also reported complaints. In the Medicus case, some patients reported suffering from graft rejection and post-operative infections. Several patients had to be hospitalized upon return to Israel. All recipients in the Medicus case received notarized receipts, which allowed them to declare their transplant costs from their insurance companies in Israel.

## A weak legal environment, geopolitical fragility and corruption create opportunities for organ trade

The modus operandi of the studied networks cannot be adequately understood without also taking into account the broader legal and geopolitical contexts within which the networks operated (Borrion, 2013). We identified 3 overarching themes that explain why the studied networks chose South Africa, Kosovo and Israel as the geographic locations for the organization of cross-border illegal transplants.

At the time when Netcare’s activities were exposed, South Africa’s legislation governing organ trade was old and ill-equipped to address the relatively new trade in living donor kidneys. The 1983 Human Tissue Act for instance does not prohibit the purchase of organs. Although it prohibits the sale of organs, it is ambiguous about whether institutions are prohibited from receiving payments that derive from illegal transplants. This allowed financial proceeds derived from illicit transplants to flow to Netcare. South Africa also lacked a prohibition of THBOR at the time when the

case came to the attention of law enforcement as a result of which the case was neither regarded nor prosecuted as a trafficking case (Ambagtsheer, 2021).

Israeli recipients were recruited because, at the time, Israeli health insurance companies reimbursed the costs of transplants performed abroad regardless of the transplants' illegitimacy. It is far more cost-effective for insurance companies to cover the costs of a kidney transplant than to cover dialysis costs (Mohnen et al., 2019). This provided an opportunity for recruiters to solicit large groups of patients who were able to pay high sums for their transplants (Orr et al., 2014). In addition, at the time, Israeli transplant laws did not include penalties for brokering overseas transplants (Ambagtsheer, 2021). The activities in the Netcare case are thus explained by a weak legal and regulatory environment and jurisdictional loopholes (Ambagtsheer, 2021). This weak environment created an opportunity for the offenders to embed their scheme within South Africa's and Israel's medical institutions and to obtain vast profits.

The weak legal environment also served as an opportunity for organ trade because of the reduced risk of penalties. Due to the absence of adequate legislation, South African prosecutors had no choice but to draw up a mix of assault, racketeering, money laundering- and human tissue act charges from various acts, most of which contained mild penalties (mostly fines). The Netcare case resulted in relatively low sentences for peripheral players and a permanent stay of prosecution of the main accused (Ambagtsheer, 2021). Perry was investigated for tax fraud in Israel but released because of the jurisdictional loopholes in Israeli anti-organ brokering laws. Despite these problems, the Netcare case constituted the first (and so far, only) reported conviction of a hospital chain for wittingly facilitating illegal transplants. In 2010, Netcare Ltd. Entered a plea sentence agreement and paid a fine of 4 million Rand together with a confiscation order of 3.8 million Rand (approx. €800.000) (Allain, 2011).

The activities at the Medicus Clinic must be understood within the context of the postwar vacuum that arose in Kosovo after the 1999 Yugoslav War. After the implosion of the Yugoslav regime, illicit economies proliferated to fill the gaps in Kosovo's economy (Proksik, 2013). The power vacuum that was left behind after the retreat of the Yugoslav forces, was filled by structures of the Kosovo Liberation Army (KLA). The KLA played a dominant role in the formation of organized criminal networks. Many of these networks obtained political influence with many of its former leaders acquiring governmental positions. Many continue to hold government positions in Kosovo today (Proksik, 2018). A number of these 'political elites' have repeatedly been accused of either being directly involved in organized crime (including trafficking crimes) or maintaining close relationships with criminal networks (Proksik, 2013). Throughout our study, Lutfi Dervishi was said to form part of this elite.

Kosovo's corrupt, post-conflict environment arose as a prominent theme during our research, which explains the establishment of the illegal transplant scheme despite that transplants are prohibited in Kosovo. This fragile environment has hampered the prosecution of not only the Medicus case but also many other serious crimes in Kosovo (Proksik, 2018). What's more, prosecutors of the Medicus case reported delays and others problems in cross-border collaboration

during the case's investigation because many countries don't recognize Kosovo as a sovereign state (Ambagtsheer, 2021; Ambagtsheer & Weimar, 2016b). In 2013, the Basic Court found proven that 48 illegal transplant operations took place at the Medicus Clinic. It sentenced Lutfi Dervishi to eight years imprisonment and a €10,000 fine and Arban Dervishi to seven years and three months in prison and a €10,000 fine, both on charges of THBOR and organized crime. It additionally found Lutfi Dervishi and other medical doctors guilty of unlawful exercise of medical activity. The lead-anesthesiologist and other accused medical doctors also received prison sentences. The court further ruled that the identified victim-donors were to be given compensation for psychological and physical damages for the amount of €15,000.

Since 2013, the Medicus case has been subjected to numerous appeals and retrials. In 2015, the Court of Appeals modified the Basic Court decision, reducing the number of proven transplants to seven and acquitting some of the defendants. In 2016, the Supreme Court ruling overturned the original verdict on the basis of procedural irregularities and ordered a retrial. In May 2018 the Basic Court confirmed its earlier convictions, sentencing Lutfi Dervishi to seven years and six months in prison and a 8,000 euros fine, and sentencing the lead-anesthesiologist to a one year imprisonment (Balkaninsight., 2018). At the time of writing, case proceedings are still ongoing. The defendants have been released on bail, most of whom have fled the jurisdiction.

The foregoing demonstrates that organ trade offenders can take advantage of a weak legal environment, geopolitical fragility and corruption to organize illegal kidney transplants. These findings suggest that eliminating corruption, strengthening legislation and preventing regional conflict may act as deterrents for organ trading schemes. However, these opportunities should also be assessed in light of some limitations. First of all, the identified opportunities are unlikely to apply to all organ trade cases. Empirical research has shown that not all forms of organ trade are transnational or organized and do not always take place in fragile or corrupt settings (Ambagtsheer & Van Balen, 2020; Van Buren et al., 2010; Fry-Revere, 2014). Different opportunities and facilitators may exist for various types of organ trade, which illustrates the need for more rigorous and comparative research on this topic. In addition, tightening legislation against organ trade does not necessarily act as a deterrent against organ trade. Recent empirical research in Egypt has found that the criminal trajectories of organ trade networks became more sophisticated, hidden and violent as a result of stricter legislative controls, in particular in the absence of enforcement (Columb, 2020). The strengthening of legislation should thus always be assessed in light of the possible risks that may arise for victims and should be accompanied by dedicated enforcement (Ambagtsheer & Weimar, 2016a). By contrast, the tightening of legislation by Israeli authorities against health insurance companies covering the costs of illegal transplants abroad, resulted in a significant drop in "transplant tourism" (Greenberg, 2013), which indicates the possible strong deterrent effect of this policy. Since the Netcare and Medicus cases have been exposed, other countries have strengthened their legislation against organ trade (Council

of Europe Treaty Office, 2022; Columb, 2020). These changes are likely to have refined the crime trajectories of organ trading schemes.

## Recognizing and disrupting illicit transplant activity

The above findings indicate that preventing organ trade may be rather difficult if this activity occurs within weak and fragile contexts (Von Lampe, 2011). Given the value of disruption in CSA (LeClerc & Savona, 2016), it may be more useful to explore opportunities for disruption rather than prevention of organ trade. In order to aid recognition of illicit transplant activity, it may be worthwhile to explore differences between legal and illegal transplant schemes. Our comparison of the crime scripts with a legitimate kidney transplant scheme resulted in a number of insights that are helpful for state -and non-state actors to recognize illicit transplant activity.

First of all, legitimate transplant schemes contain a lower number of scripts, in particular during the preparation stages, but contain more elaborate tracks than illegal transplant schemes, particularly pertaining to medical screening and pre- and post-transplant care. Legitimate transplant scripts further diverge from illegal scripts regarding their rigorous informed consent – and psychological screening procedures. Legitimate transplants also involve a lower diversity in the locations where transplants are prepared and carried out (most are clinics and transplant centers) and they contain larger, multidisciplinary transplant teams (see Appendix 3). Offender-networks in criminal scripts by contrast involve a lower variety of medical personnel. Complicit medical staff collude with escorts, minders, recruiters and brokers. A key feature of the studied crime scripts is their transnational nature and their focus on profit-making and concealment. Brokers in particular function as vital connectors across different jurisdictions. Furthermore, offenders demonstrate a high variation in their roles and activities. Crime scripts thus contain higher levels of permutations and flexibility than legitimate transplant schemes: they present more tracks that consecutively lead to profitable transplants. Illicit transplant scripts further reveal a larger diversity in recruitment -and concealment strategies and a larger diversity in locations for the pre-operative work-up of donors and recipients than licit transplant schemes.

The need for concealment and profit-making in illicit transplant schemes enhances the risk of deception, fraud, and lack of appropriate medical care of patients and donors. To avoid detection, donors and recipients particularly run the risk of a rapid discharge time which increases the likelihood of medical complaints. The need for frequent recruitment cycles further enhances the risk of coercion, in particular when payments to donors are withheld and enhances the risk of deception during the recruitment stages if donors and recipients are (falsely) informed that the transplants are legal and without medical risk. While in both cases trafficking elements were reported (De Jong, 2017), exploitation in the Medicus case was particularly excessive: all of the identified donors were found to be victims of coercion, deception and fraud (Ambagtsheer, 2021).



Comparison of the scripts further revealed that offenders in the illegal transplant schemes utilized the same opportunity structures that facilitate legal transplants, in particular transplant units, hospitals, dialysis clinics, blood banks, hotels and airports. These locations may thus function as potentially vital points to train staff into recognizing and disrupting dubious transplant activity. The Medicus case for example came to the attention of law enforcement due to suspicions raised amongst airport customs, which demonstrates the importance of alerting airport personnel into recognizing suspicious transplant activity (Ambagtsheer, 2021). Our results further show that hotels serve as potentially vital locations for the recognition of the pre-operative transplant works-ups (i.e. blood tests).

The Netcare case came to the attention of law enforcement because a whistleblower working for a medical facility contacted the police (Ambagtsheer, 2021; Ambagtsheer & Weimar, 2016b). This illustrates the potential for implementing anonymous reporting mechanisms for transplant staff. While barrier models, indicators and recommendations for the identification and reporting of illegal transplant activity by state and non-state actors have been developed over the last few years (Ambagtsheer & Van Balen, 2020; Capron et al., 2016; Caulfield et al., 2016; De Jong & Ambagtsheer, 2016; Martin et al., 2016), organ trade-reporting mechanisms within hospitals and other locations are still largely absent (Ambagtsheer & Weimar, 2016a). Furthermore, it remains unclear in many jurisdictions whether medical professionals can legally report illicit transplant activity without facing repercussions for violating their secrecy oath and privilege of non-disclosure (Ambagtsheer & Van Balen, 2020). In the absence of clear guidelines on this issue, transplant professionals –when confronted with suspicious transplant activity– remain reluctant to report potential organ trade and trafficking cases (40, 94).

## **Conclusion: implications for situational crime prevention of organ trade networks**

In sum, the studied crime scripts elucidate complex and sophisticated criminal decision-making processes in the organization of cross-border illegal kidney transplants. We found little evidence of opportunistic decision-making in our data. The organization of transnational kidney transplants requires strategic and long-term planning and medical know-how, particularly for the testing and cross-matching of pools of donors and recipients. The medical industry in the studied cases was found to be crucial in providing the infrastructure and expertise needed for organ trade networks to facilitate and sustain illegal organ transplants. Brokers played a key role in the studied networks by adopting multiple tasks and by filling up structural holes across jurisdictional borders).

Our research makes a number of theoretical and practical contributions to situational crime prevention in the context of organ trade. Our findings show, for example, that (organized forms of) organ trade, like other forms of smuggling and trafficking, can be characterized as a transit-crime that relies on the same social and physical opportunity structures that are utilized for the organization of legal activity (Kleemans et al., 2013, 2018). We identified a range of legal facilitators

including hospital lawyers, notaries and accountants who colluded with medical staff and brokers to ‘launder’ and conceal illegitimate transplant activity. A medical conference served as a crucial social setting for offender-networking (Felson, 2006). As such, similar to other grey markets (Huisman, 2019), and in correspondence with prior organ trade research (Columb, 2020), we found no clear legal/illegal divide in the studied organ trade schemes. In addition, like other smuggling and trafficking crimes, organ trade cannot be reduced to one particular point in time and space. The crime’s physical and social dimensions as well as its targets change over time depending on the specific objectives within each stage of the crime-commission process. For example, in the preparation phase, the donors and recipients are the main ‘target’ whilst in the activity stage this shifts to the organ that is transplanted. This finding has significant practical implications for identification and disruption of illicit transplant activity.

Finally, opportunities for organ trade cannot be understood without taking into account the broader societal and geopolitical context within which illicit transplant activity takes place (Edwards & Levi, 2008). While more research is needed on why organ trade offenders choose specific geographic locations for their crimes, this study suggests the importance of an environment of (medical) impunity for offenders to embed and sustain organ trade activity. From a practical perspective, applications of the situational crime prevention model, in particular its notion of guardianship (Edwards & Levi, 2008), will have little effect if organ trade networks consistently choose fragile or corrupt states for the organization of illegal transplants. As the *Medicus* case illustrated, preventative or disruptive measures will particularly have little effect in places where the political and medical elite are closely intertwined. A previous study on the investigations of these cases, revealed that whereas law enforcement efforts led to some degree of disruption, the organ trade networks displaced their activities to other regions (Ambagtsheer, 2021).

To conclude, our results challenge public perceptions of organ trade operating as an underground organized crime that is run by mafia-like criminals and ‘rogue’ doctors. While more research is needed to obtain a fuller depiction on how organ trade is organized, our results indicate the need for a broader conceptualization of organ trade that incorporates -but does not necessarily distinguish between- organized crime and white collar crime perspectives (Friedrichs, 2009; Huisman, 2019). Currently, no such approach to organ trade exists. Combining these perspectives can help guide future research into corporate complicity, organizational crime and occupational offending in organ trading schemes. The role of the medical sector in providing opportunities for organ trade particularly warrants more research attention (Huisman & van Erp, 2013; Von Lampe, 2011).

Despite our grounded approach, knowledge gaps remain in the crime scripts that require more in-depth research. Furthermore, a limitation of CSA is that it places more emphasis on physical opportunity structures than on the social embeddedness of crime (Van de Bunt et al., 2014). Our data indicated the existence and significance of social and professional ties between the offenders. This warrants a network approach to acquire a better understanding of the structure of organ trade networks (De Vries, 2018), in particular its embeddedness within the transplant industry. Finally, a limitation of our study is that only 2 cases were studied that took place

some time ago. Subsequent strengthening of laws against the organ trade will likely have altered the organization of organ trade networks. It must be borne in mind that our results are not generalizable to other organ trade cases.

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**Data availability** The datasets generated and analysed during this study are not publicly available due to the sensitive and personalized information contained therein. All data was analyzed on the premise of anonymity. Anonymized data can be made available by the corresponding author on reasonable request and only if those (respondents, law enforcement authorities, etc.) who provided the data consent to this data being shared with third parties.

## Declarations

**Conflict of interest** The authors have no conflicts of interest to disclose.

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